# The 21st Century: Asia Becomes Urban

*It is expected that in the coming years, most Asian countries will undergo a similar fast-paced urbanisation that Latin America experienced in the last half century. Despite the ills that have accompanied this process of urbanisation, the world, as this article argues, appears to have coped relatively well with the large-scale increase in urban population of recent years; it is equally possible for urbanising economies in Asia to replicate the experience of developed economies. For this to happen, it is essential that all aspects of city management, including the fostering of a professionalised workforce, are strengthened. This, in turn, would increase the creditworthiness of city governments and help attract the investment necessary for vital urban infrastructure projects. In an increasingly interconnected world, decentralised governance would ideally assist the practice of prudent macroeconomic and trade policies essential for ensuring a continuous access to international capital markets.*

**Rakesh Mohan, Shubhagato Dasgupta**

It is a privilege and honour to be asked to deliver this opening address at the World Bank's Annual Urban Symposium. It is a particular pleasure for me since I started my professional life here in the World Bank's Urban and Regional Economics Division of the then development economics department.

In 2003, professor Jeff Sachs focused on African cities. It is appropriate now to draw particular attention to Asia, where most of the urbanisation is expected to occur in the next 30 years. The paper places the phenomenon of urbanisation in its historical context with a brief discussion of the role and impact of urbanisation in the progress of civilisation. It reviews the trends in urbanisation globally as well as in select regions of the world. It then shifts attention to the unprecedented magnitude of urbanisation that is expected to take place in Asia over the next 30 years, dwelling on the important role that urbanisation in Asia is going to play in these coming decades. It analyses the progress made thus far, and then identifies the key challenges and the new approaches that would be needed to meet these emerging challenges.

## I
## Urbanisation: A Recent Phenomenon

Widespread all pervading urbanisation is a truly 20th century phenomenon. Although cities have always existed, even cities such as Memphis, Babylon, Thebes, Athens, Sparta, Mohen-ja-daro and Anuradhapura that existed in antiquity, there is little evidence of widespread urbanisation in the early years of civilisation. Rome was perhaps the first settlement to reach one million people in BE; only in 1800 AD did London become the second city to reach this population size.

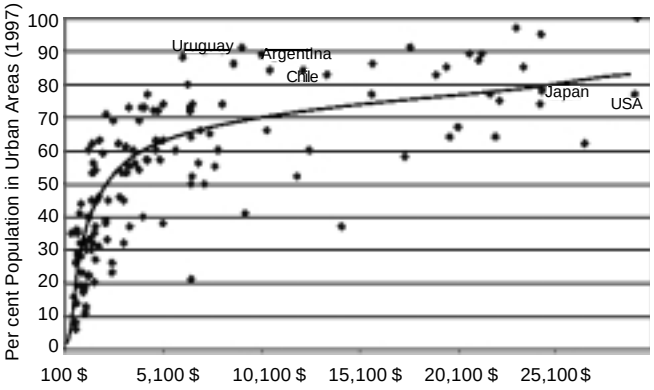
In 1800, only 2 per cent of the world's population was urbanised. By the year 1900, out of a total world population of close to 1.5 to 1.7 billion, only 15 per cent of the population, about 250 million, lived and worked in urban areas, a number lower than the total urban population of India alone today. By the year 1950, the proportion of urban to total global population had risen to 30 per cent, with Europe, North America and Oceania having the highest levels of urbanisation. By the year 2000, 2.8 billion people lived in urban areas equalling approximately 49 per cent of the world's population. So the pace of urbanisation witnessed in the 20th century has been truly unprecedented, and it is a wonder that the world has coped as well as it has. We are now at a turning point in human history: the number of people living in cities is about to exceed those in the countryside. Although this paper concentrates mainly on the economic aspects of urbanisation, the social, cultural and other consequences of this epochal development will be equally important.

The last 50 years have been truly remarkable in terms of the number of people who have been successfully absorbed in cities in an incredibly short time period by historical standards. While the world's urban population grew by approximately 500 million between 1900 and 1950, it grew by 2.1 billion in the next 50 years; and is expected to grow by a similar magnitude in just the next 30 years. The speed of urbanisation in Latin America in the second half of the 20th century has been spectacular, vaulting from a just over 40 per cent urbanisation level to 75 per cent by the end of this period which was also a period of rapid population growth and demographic transition. As may be seen (Table 1) the focus of change is now in Asia with the urban population expected to double in the next 30 years or so. This phenomenon of such rapid urbanisation is indeed unprecedented and it has changed human geography beyond recognition. In the process the complexion of development objectives and processes has also undergone significant change.

In the last two centuries, cities have consistently provided the environment for institutional and technological innovation, and have often been referred to as 'engines of economic growth'; 'agents of change' and 'incubators of innovation'. Between 1960

**Figure 1: Urbanisation and Economic Growth**

GNP per capita and urbanisation levels; each dot represents a nation




*Source:* Mario Palase, Pemala Echevarria and Mila Freira (2002).

and 2000 world output went up fourfold, while urban population almost tripled, making the world from 33 per cent urban to 47 per cent urban in 40 years (Table 2).

The 21st century will therefore be an urban century. This sets it apart from the 20 centuries that have gone before it. For the first time in human history, more people will live in cities than in the countryside. This trend of increasing urbanisation is also expected to continue with all regions of the world becoming predominantly urban within a couple of years. The urban situation will get more pronounced as the century unfolds. As in the last 50 years, developing countries will be urbanising at a much more rapid pace than developed countries.

A review of the regional dynamics of urbanisation reveals interesting developments (Table 3). There has been a dramatic shift of the fulcrum of urban population away from Europe and North America to the developing regions of the world. During the period 1950-2000, the growth rate of urban population in Europe and North America was about 1.5 per cent. The share of Europe and North America in global urban population declined from about 53 per cent in 1950 to 27.5 per cent in 2000 and is expected to decline further to about 17 per cent by 2030. Africa has experienced consistent high growth in its urban population which grew at an annual rate of 4.4 per cent during 1950-2000, and its share in global urban population is expected to rise to 16 per cent by 2030 (from 4.3 per cent in 1950). Latin America has now become predominantly urban, surpassing urbanisation levels in Europe and will almost be at par with North America by 2030. Interestingly, Asia is where almost half of urban population of the world lives and soon it will have the majority of the world's urban population.

It is now well established that the acceleration of urbanisation generally takes place with corresponding acceleration of economic growth (Figure 1). Urbanisation is promoted by (i) economies of scale in production particularly in manufacturing; (ii) the existence of information externalities; (iii) technology development, particularly in building and transportation technology; (iv) substitution of capital for land as made possible by technological developments. Information asymmetries contribute to agglomeration economies. As economics of scale in production begin to take hold larger size plants become necessary, thus contributing to the need for larger settlements of people. The services needed by the rising agglomeration of people gives rise to an even greater number of people living together: thus cities are born and this is how they grow. As technology develops and capital is substituted for land, taller buildings become possible, intensifying population densities further. Similarly, technology development in transportation, enabling faster speeds, enables people to live at greater distances thus contributing to the expansion of city size. The existence of agglomeration economies gives rise to continuing accretion of people in a settlement, thus promoting city growth. These linkages become more prominent with economic growth thereby promoting the acceleration of urbanisation. With the growing importance of industry and services in developing countries, urbanisation has proceeded apace over the last 50 years.

**Table 2: Global GDP and Growth in Urban Population**

| | 1960 | 1970 | 1980 | 2000 |
|---|---|---|---|---|
| World GDP (constant 1995 $ trillion) | 7.9 | 13.5 | 19.5 | 34.3 |
| Share of agriculture in world GDP | – | – | 6.5 | 3.9 |
| Share of industry in world GDP | – | – | 38.0 | 20.8 |
| Share of services in world GDP | – | – | 55.5 | 66.3 |
| World population (mm) | 3020 | 3675 | 4428 | 6053 |
| Per cent of urban population | 33.3 | 36.5 | 39.3 | 46.7 |

*Source:* World Bank databases.

**Table 3: Global Urbanisation Trends**

| Region | Level of Urbanisation (Per Cent) 1920 | 2025 |
|---|---|---|
| World Total | 19 | 61 |
| Less developed regions | 10 | 57 |
| – Africa | 7 | 54 |
| – Asia | 9 | 55 |
| – Latin America | 22 | 85 |
| More developed regions | 40 | 85 |
| – Europe | 46 | 83 |
| – North America | 52 | 85 |
| – Oceania | 47 | 75 |

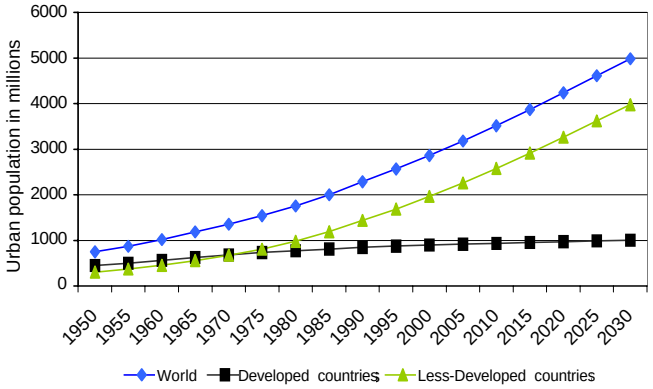
*Source:* UN, 2002.

**Table 1: Urban Population Growth across the Globe**

| Region | Urban Population | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | In Millions | Per Cent of Total | In Millions | Per Cent of Total | In Millions | Per Cent of Total | In Millions | Per Cent of Total |
| | 1900 | | 1950 | | 2000 | | 2030 | |
| Africa | | | 32 | 14.7 | 295 | 37.2 | 787 | 52.9 |
| Asia | | | 244 | 17.4 | 1376 | 37.5 | 2679 | 54.1 |
| Latin America and Caribbean | | | 70 | 41.9 | 391 | 75.4 | 608 | 84.0 |
| Oceania | | | 8 | 61.6 | 23 | 74.1 | 32 | 77.3 |
| Europe | | | 287 | 52.4 | 534 | 73.4 | 540 | 80.5 |
| North America | | | 110 | 63.9 | 243 | 77.4 | 335 | 84.5 |
| *Global Total* | ~250 | ~15 | 751 | 29.8 | 2862 | 47.2 | 4981 | 60.2 |
| Increase | | | 501 | 14.8 | 2111 | 17.4 | 2119 | 13.0 |

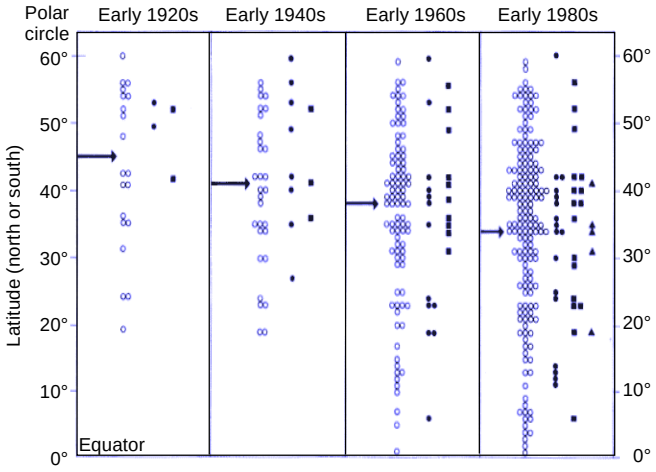
*Source:* United Nations, 2002.

**Figure 2: Growth in Urban Population – 1950 to 2030**




*Source:* UN 2002.

**Figure 3: Centre of Urban Population Moving South**




*Source :* www.isl.uni-karlsruhe.de/vrl/ResEng/2000/global_trends/urbanization/index.htm

India's urbanisation has also been linked with economic growth in the 1990s. It appears that cities and states with faster industrialisation and economic growth are indeed growing faster. From about 23 per cent of India's population being urban in 1981, this ratio increased to 29 per cent in 2001. Correspondingly, while India's industrial and service sectors contributed about 70 per cent of GDP in 1981, by 2001, these sectors accounted for just under 80 per cent of India's GDP. At the sub-national level, the more urbanised states such as Tamil Nadu, Maharashtra and Karnataka have recorded higher growth rates. Further, at the city level in India, larger cities in these faster growing states have grown rapidly – Chennai in Tamil Nadu (manufacturing and services), Bangalore in Karnataka (industries, services, information technology), Hyderabad in Andhra Pradesh (information technology), Pune in Maharashtra (manufacturing and services), and Chandigarh and Ludhiana in Punjab (manufacturing and services).

## II
## Urbanisation – Retrospect and Prospects

Nearly half of the world today is urban, and the world's urban population is now growing by 60 million persons per year, about three times the increase in the rural population. In 2000, world population reached 6.1 billion, and is continuing to grow at an annual rate of 1.2 per cent, or 77 million people per year. Developing countries are urbanising at a faster pace than what developed countries had to cope with in the past. The pace of urbanisation in developing countries is now expected to be more than double that of developed countries. In 1950, 17 per cent of the population in developing countries was urban; in 2020 this population is expected to grow to 54 per cent (Figure 2).

The urban population in developing countries overtook that in developed countries sometime in the early 1980s (Figure 2). Today the urban population in developing countries is much higher than that in developed countries, leading to intensive demand for resources and skills for the efficient management of cities. This massive urbanisation is taking place at much lower income levels than that witnessed in developed countries. This urbanisation is also happening in regions which have different energy requirements (as brought out in Figure 3). The centre of urban population is progressively moving from the predominantly northern latitudes of developed countries to the southern ones of developing countries; that is, the mean latitude of global urban population has been steadily moving south. This is in line with the faster rates of urbanisation in developing countries. Figure 3 shows that in 1920s, the mean latitude of all cities with population above one million was 44 degrees; by the 1980s this had already shifted down to 34 degrees – implying a strong southward movement of urbanisation. The potential energy requirements for airconditioning will therefore rise and could well be above those for heating on a per capita basis. Similarly, the requirements for other urban services such as water supply and sanitation, solid waste management and urban public transport will also rise inexorably.

By 2030, Asia alone will have about 2.7 billion urban people accounting for over 50 per cent of its total population. All the other regions of the world will have a combined urban population of about 2.3 billion.

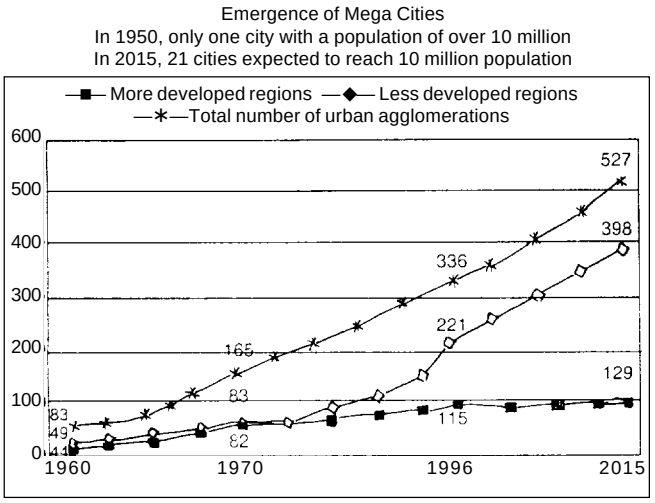
Six of the 10 countries with the largest urban populations are in Asia. Urbanisation in Bangladesh has been among the fastest in the world (5.6 per cent during 1950-2000). The only African country in the top 10 list, Nigeria, has also urbanised very rapidly in the past 5 decades (World Urbanisation Prospects, 2001). Interestingly, by 2010, Lagos is projected to become the third largest city in the world [UNCHS 2001].

Moving to city level urbanisation trends, the growth of urban agglomerations in developing countries has far exceeded that in developed countries. In 1950, there was only one city with a population of over 10 million people : New York City. In 2000 there were 17 cities with a population above 10 million, 22 cities with population between 5 and 10 million; 402 with a population of 1 to 5 million; and 433 in the 0.5 to 1 million category (Figure 4). An important characteristic of urbanisation in Asia has been the emergence of mega-cities – large multi-nuclear urban agglomerations of more than 10 million people. There were no such agglomerations in Asia in 1950, two in 1975 and by 2000, 10 of the 17 global megacities were in Asia, and it is expected that 12 out of the 21 mega cities in the year 2015 will be in Asia.

Of the 21 cities expected to reach 10 million plus by 2015, 17 of them will be in developing countries. Of these 17 cities, 11 of them will be in developing countries in Asia and will include Dhaka, Mumbai, Delhi, Jakarta, Kolkata, Karachi, Shanghai, Metro Manila, Beijing, Istanbul and Tianjin.

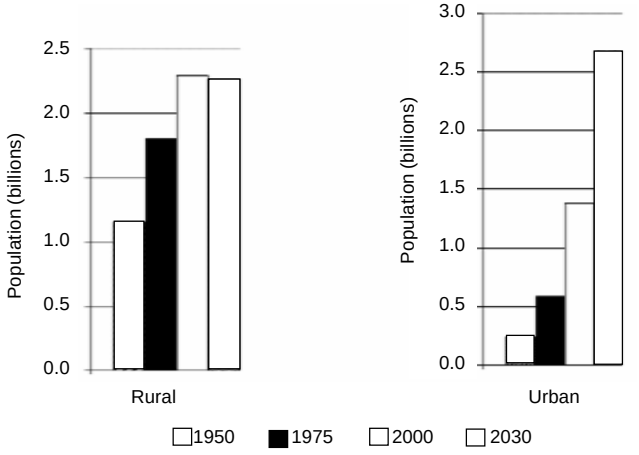
Therefore, while thinking and thought processes related to urbanisation were dominated by the growth of urbanisation in

**Figure 4: Emergence of Large Cities**




*Note*: Urban agglomerations with > than 1 mn population.
*Sources*: UN 2002. www.isl.uni-karlsruhe.de/vrl/ResEng/2000/global_trends/urbanization/index.htm

**Figure 5: Growth in Urban and Rural Population in Asia over the Years**




*Source*: UN, 2002

Latin America between 1950 and 2000, the 21st century will be the 'Asian urban century'

## III
## Asia Becomes Urban

Presently the highest rates of economic growth are being witnessed in Asia, and hence high urban growth. This is particularly noticeable in China and India, which today have the largest rural populations but are urbanising rapidly. Even in other Asian countries where a large number of cities are witnessing high rates of economic growth, the growth in their urban population is also going to be higher. Of the 10 most populous countries, six are in Asia (Table 5). Even as more than two billion people will be added to Asia's population in the next 30 years many of these countries will still be rapidly urbanising. This phenomenon is now becoming so prominent that even popular news magazines are beginning to take note (*Newsweek*, 2003). This is also reflected in Figure 5 which shows that rural population in Asia is expected to decline, in absolute terms, during 2000-2030 (yet another unprecedented event), while urban population will almost double during the same period.

The historical pattern of urbanisation suggests that countries tend to urbanise very slowly until they attain urbanisation levels of around 25 to 30 per cent. The pace of economic growth and overall development then quickens, with rapid structural shifts occurring in the economy, away from agriculture to industry and services. The pace of urban growth between urbanisation levels of 25 to 30 per cent and 55 to 60 per cent has typically been observed to take place in a very short historical time frame of 25 to 50 years. This happened in European countries and North America at different times in the late 19th century and early 20th century, and in Latin America during the latter half of the 20th century. During this rapid phase of urbanisation, the demand for urban infrastructure investment is massive and countries have usually been observed to need external savings to supplement available domestic resources to finance such investment. So far, the world has been able to cope with such demands as the scene of urbanisation has shifted from one region to another and the overall magnitude of increase in urban population has been manageable. What is new in the next 25 to 30 years is that three of the world's most populous countries, China, India and Indonesia, with combined total population of about 2.5 billion

**Table 4: Emergence of Mega Cities**

| Population of Cities with 10 million or More Inhabitants | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1950 | | 1975 | | 2000 | | 2015 | |
| New York | 12.3 | Tokyo | 19.8 | Tokyo | 25.2 | Tokyo | 27.2 |
| | | New York | 15.9 | Sao Paulo | 18.3 | Dhaka | 22.8 |
| | | Shanghai | 11.4 | Mexico city | 18.3 | Mumbai | 22.6 |
| | | Mexico | 10.7 | New York | 16.8 | Sao Paulo | 21.2 |
| | | Sao Paulo | 10.3 | Mumbai | 16.5 | Delhi | 20.9 |
| | | | | Los Angeles | 13.3 | Mexico City | 20.4 |
| | | | | Kolkata | 13.3 | New York | 17.9 |
| | | | | Dhake | 13.2 | Jakarta | 17.3 |
| | | | | Delhi | 13.0 | Kolkata | 16.7 |
| | | | | Shanghai | 12.8 | Karachi | 16.2 |
| | | | | Buenos Aires | 12.1 | Lagos | 16.0 |
| | | | | Jakarta | 11.4 | Los Angeles | 14.5 |
| | | | | Osaka | 11.0 | Shanghai | 13.6 |
| | | | | Beijing | 10.8 | Buenos Aires | 13.2 |
| | | | | Rio de Janerio | 10.8 | Metro Manila | 12.6 |
| | | | | Karachi | 10.4 | Beijing | 11.7 |
| | | | | Metro Manila | 10.1 | Rio de Janerio | 11.5 |
| | | | | | | Cairo | 11.5 |
| | | | | | | Istanibul | 11.4 |
| | | | | | | Osaka | 11.0 |
| | | | | | | Tinajin | 10.3 |

*Source*: UN, 2002.

**Table 5: Out of the 10 Most Populous Countries Six are Asian**

| Country | 1950 | | 2000 | | 2030 | |
|---|---|---|---|---|---|---|
| | Per Cent | Popu-latio (mn) | Per Cent | Popu-latio (mn) | Per Cent | Popu-laion (mn) |
| China | 12.5 | 555 | 35.8 | 1275 | 59.5 | 1485 |
| India | 17.3 | 357 | 29.0 | 1009 | 40.9 | 1409 |
| US | 64.2 | 158 | 77.2 | 283 | 84.5 | 358 |
| Brazil | 36.5 | 54 | 81.2 | 170 | 90.5 | 226 |
| Indonesia | 12.4 | 79 | 41.0 | 212 | 63.7 | 283 |
| Nigeria | 10.1 | 30 | 44.1 | 114 | 63.6 | 220 |
| Pakistan | 17.5 | 40 | 33.1 | 141 | 48.9 | 273 |
| Mexico | 42.7 | 28 | 74.4 | 99 | 81.9 | 135 |
| Japan | 50.3 | 84 | 78.8 | 127 | 84.8 | 121 |
| Bangladesh | 4.3 | 42 | 25.0 | 137 | 44.3 | 223 |

*Source*: UN, 2002

will be undergoing this process simultaneously, with Pakistan and Bangladesh not much far behind. The magnitude of the increase in urban population in Asia in this period will be unprecedented and will undoubtedly give rise to unforeseen problems as well as opportunities.

The draft on physical, human and financial resources will be immense. But, fortunately, the economic demographics of these countries appear very favourable. Their economic growth is rapid (Table 6), reinforced further by the beneficial economic effects of urbanisation. The combination of demographic transition and high income growth is also leading to high household savings rates, potentially providing substantial resources for the investment that will be needed by these countries. To a certain extent, the income disparity between urban and rural areas typical during this transition helps in the maintenance of high savings rates. In India, for example, average annual household income in cities such as Chandigarh and Delhi ranges between US$ 3,500 and US$ 3,750, as compared with the national average of US$ 1,550 per annum [NCAER 2002]. The overall domestic savings rate in China was 41.4 per cent in 1996, 26.2 per cent in Indonesia, and 25 per cent in India. The massive infrastructure investment programme currently underway in China illustrates the kind of development that will take place in other urbanising countries in Asia.

This advantage, however, is somewhat mitigated by the fact that public sector savings have been low. As shown in this table, real growth in the 1990s has been concentrated in the Asian economies, particularly India and China, which have been among the fastest growing countries. However, as reflected in the state of public finances of some of Asia's larger countries, the availability of resources to meet increasing urban demands have been scarce. Further, at lower levels of government, the revenues of municipal governments in Asian countries remain significantly lower than those in developed countries. In Europe and US, on an average, municipalities obtain about US$ 2,900 per capita in revenue per year whereas in Asia, on average, municipalities secure about US$ 150 per capita in revenue per year. Urbanisation in Asia in the next few decades will occur under circumstances where fewer resources will be available to meet greater needs. The sheer numbers of urban residents in Asia that governments have to cater to are mind-boggling and this will continue to grow. Governments have to focus not only on new added infrastructure, but also on upgradation of existing facilities.

This leads to the crucial issue of how urban infrastructure would be funded under such strained public funds circumstance? How will the requirements of long-term funds be met? Will public private partnership projects in infrastructure be able to meet the gaps left by diminishing public spending possibilities?

## IV
## We Have Coped Well

The popular view of towns and cities in developing countries, and of the urbanisation process, is a negative one, despite the benefits it brings. For many, the emergence of such cities connotes environmental degradation, the generation of slums, rampant urban poverty and unemployment, loss of control and traffic chaos. But what is the reality? Given the unprecedented increase in urban population over the last 50 years from 300 million in 1950 to 2 billion in 2000 in developing countries, the wonder really is how well the world has coped, and not how badly. In general, the urban quality of life has improved in terms of availability of water and sanitation, power, health, education, telephones, and the like, while poverty has fallen. These improvements must be viewed against the fact that they have been achieved in the presence of rapidly increasing population, under difficult fiscal situations, and with strained human resources for the emerging needs of public management.

However, in most developing countries especially those in Asia, urbanisation is still often viewed as a disease, and a trend that needs to be reversed. Urban areas, instead of being seen as generators of opportunity, are often seen as entities that are unruly, chaotic and problematic. Most coverage in the press highlights the issues of environmental degradation, inequity, slums, unemployment, poverty and chaos.

As presented in Table 7 a large number of urban residents have been provided with improved water in Asia's largest countries. Although in some countries such as China, Indonesia and Philippines, the access to improved water in terms of percentage of total urban population seems to have declined from 1990 to 2000 in absolute numbers, millions of additional citizens have actually been provided improved services. Although the definition of urban areas as well as the concept of improved water services varies across the different countries referred to in the following tables, the increase in access is documented by each country within their own definitions as presented here. In the four countries taken together, an additional population of approximately 262 million has been provided with improved access to water in urban areas during the 1990s, which is a population greater than most countries today.These countries in Asia have made significant progress in the provision of sanitation services too, together providing for an additional population of more than 293 million citizens within a decade. In this parameter there has been a consistent increase in the percentage of urban population covered in all the countries (Table 8).

What has been most remarkable is the expansion of telecom facilities in Asian cities in the last decade. As presented in Table 9, telephone mainlines have increased manifold between

**Table 6: GDP Growth Rates and Budget Balance in the Last Decade**

| Country | Per Capita Income $ | | Real GDP Growth (Per Cent) | Overall Budget Balance | |
|---|---|---|---|---|---|
| | 1991 | 2002 | 1991- 01 | 1991 | 2001 |
| US | 25725 | 31977 | 3.2 | -4.6 | 1.3 |
| Singapore | 18566 | 27254 | 7.9 | 8.7 | 5.2 |
| China | 377 | 942 | 10.1 | -2.3 | .. |
| India | 321 | 494 | 5.5 | -5.5 | -4.7 |
| Indonesia | 832 | 1060 | 4.1 | 0.4 | -1.2 |
| Pakistan | 459 | 527 | 4.0 | -7.6 | -4.7 |
| Philippines | 1060 | 1195 | 2.9 | -2.1 | -4.0 |

*Source*: World Bank, Database 2003.

**Table 7: Improvement in Access to Water in Urban Asia**

| Country | Per Cent of Urban Population with Access to Improved Water | | Additional People Provided (Million) 1990 to 2000 |
|---|---|---|---|
| | 1990 | 2000 | |
| China | 99 | 94 | 115 |
| India | 88 | 95 | 107 |
| Indonesia | 92 | 90 | 27 |
| Philippines | 93 | 91 | 12 |
| Korea, Rep | | 97 | |

*Source:* World Bank database, 2003

1980 till 2000, led by an increase of more than 81 million new lines. This excludes the huge progress in the penetration of mobile phone connections which itself has seen an incredible boom in the last decade.

Looking at per capita consumption of electric power in urban areas both as a measure of increase in consumption as well as additional power availability, it is encouraging that in many Asian countries both power production capacity and per capita consumption have increased substantially over the last two decades. Investment in power production is typically expensive and lumpy. Yet, the situation has improved significantly in Asian cities.

This general improvement in access to urban infrastructure and services in the Asian cities can also be observed in other sectors such as health services, education and housing. Looking at the change in poverty levels too is revealing; in terms of both nutrition levels and life expectancy most of the Asian urban areas have seen consistent progress. However, in income poverty terms the experience has been mixed, bringing to the fore the importance of macroeconomic management of a country, and its relevance for urban poverty reduction. In India, a steady macroeconomic environment and economic growth in the 1990s has led to steady improvement in income poverty levels as presented (Table 11).

In the case of Indonesia, the macroeconomic crisis of 1998 leading to the devaluation of the currency and other fiscal constraints has had a severe impact on the poverty levels in the country (Table 12).

These data, sketchy as they are, do indicate that progress in the provision of essential urban services has been significant. Unlike the popular view that urbanisation causes deprivation, urbanisation has been relatively well addressed in Asian cities and has led to an increase in living standards and quality of life of its residents. Given the (i) vast increase in urban population in these countries, (ii) low per capita income, (iii) constrained fiscal circumstances of governments, leading to low expenditure on urban infrastructure, and (iv) the existence of weak local governments in most urban areas, the progress achieved is indeed quite noteworthy. In all probability the quality of life in developing Asian urban areas is significantly better than the situation witnessed in the 18th and 19th centuries in European cities, which had grown under similar circumstances, but perhaps at higher prevailing income levels. We may also recall that they did not have to cope with mega cities during their phase of rapid urbanisation. These achievements have probably been enabled by the availability of better technology and systems now.

This analysis makes a strong case for acknowledging the fact that Asian countries and developing countries in general, have coped well with the phenomenon of urbanisation. Thus, there is nothing to fear from the rapid urbanisation expected in the next 20 to 30 years, and beyond. We know that we can indeed cope with the ongoing unprecedented Asian urban challenge. However this not a call for complacency but is a fact that should give us confidence for the future. The Asian financial crisis of 1997 was a grim reminder that reversals can indeed take place with the emergence of macroeconomic imbalances.

## V
## Asian Urbanisation: New Challenges

Over the last two decades, most growth sectors in the national economies in Asia have been largely based on activities located in urban areas. Most countries in the region are deregulating and creating an enabling environment for investments, including foreign investment, and as can be expected, the focus of this investment has been in the cities. The increasing economic integration of national economies has obliged cities in many countries to take their own economic environments more seriously. This is particularly true in smaller countries that have a higher degree of city primacy as in the Asian tigers of the 1990s. However, this new wave of Asian urbanisation involves countries

**Table 8: Improvement in Sanitation Facilities in Urban Asia**

| Country | Per Cent of Urban Population with Access to Improved Sanitation Facilities | | Additional People Provided (Million) |
|---|---|---|---|
| | 1990 | 2000 | 1990 to 2000 |
| China | 57 | 68 | 130 |
| India | 44 | 61 | 96 |
| Indonesia | 66 | 69 | 23 |
| Philippines | 85 | 93 | 15 |
| Korea, Rep | | 76 | 29 |

*Source*: World Bank database, 2003.

**Table 9: Improvement in Access to Telephone Mainlines in Urban Asia**

| Country | Per Cent of Urban Population with access to Telephone mainlines (per 1,000 people) | | | Additional Telephone Lines Installed (Million) |
|---|---|---|---|---|
| | 1980 | 1990 | 2000 | 1980 to 2000 |
| China | 2 | 5.9 | 112 | 50.7 |
| India | 3 | 5.9 | 32 | 9.5 |
| Indonesia | 2 | 5.9 | 32 | 2.8 |
| Philippines | 9 | 10.0 | 40 | 1.5 |
| Korea, Rep | 71 | 309.6 | 477 | 16.6 |

*Source*: World Bank database, 2003.

**Table 10: Improvement in Electric Energy Availability Per Capita in Urban Asia**

| Country | Electric Power Consumption (kWh per capita) | | | Additional Units Generated in Billions |
|---|---|---|---|---|
| | 1980 | 1990 | 2000 | 1980 to 2000 |
| China | 253 | 424 | 827 | 80.4 |
| India | 130 | 254 | 355 | 21.8 |
| Indonesia | 44 | 156 | 384 | 10.5 |
| Philippines | 355 | 342 | 477 | 1.7 |
| Korea, Rep | 859 | 2202 | 5607 | 28.5 |

*Source:* World Bank database, 2003

**Table 11: Urban Poverty in India in the 1990s**

| | Urban in (Per Cent) | |
|---|---|---|
| | 1993-94 | 1999-2000 |
| Andhra Pradesh | 17.8 | 10.8 |
| Karnataka | 21.4 | 10.8 |
| Kerala | 13.9 | 9.6 |
| Maharastra | 18.2 | 12.0 |
| Tamil Nadu | 20.8 | 11.3 |
| All-India | 17.8 | 12.0 |

*Source*: Deaton and Drèze, 2002.

**Table 12: Urban Poverty in Asia in the 1990s**

| Country | Year (Per Cent Population below Poverty Line) | | | |
|---|---|---|---|---|
| China | - | - | 1996 (<2) | 1998 (<2) |
| India | 1990 (38) | 1992 (33.7) | 1994 (30.5) | 2002 (12) |
| Bangladesh | 1990 (56) | 1992 (23.3) | 1996 (14.3) | - |
| Indonesia | - | - | 1996 (9.7) | 1998 (17.8) |
| Philippines | - | 1994 (28) | - | 1997 (22.5) |

*Source:* Human Development Report 1996, World Development Report 2001 and Deaton and Drèze, 2002.

that have the largest rural populations, China and India. With China and India urbanising rapidly the Asian urban century is truly here to dominate global development, particularly given the fact that Asia's competitive strengths in the future lie in sectors that are largely urban in nature, in manufacturing (especially in countries such as China, Bangladesh, India, Taiwan, Korea) and in services sectors such as information technology and information technology enabled services/business process outsourcing services in countries like India, Singapore, and the Philippines. Asia's urban workforce is relatively productive but requires improved urban infrastructure to grow and sustain its competitive edge. A recent survey of 165 firms in five cities by Mario Polese, Pamela Echeverria and Mila Freire (2002) exposed the multiple effects of poor services. Although the cities were mainly Latin American the conclusions would be the similar if conducted in Asian cities.

Since most cross border investment takes place in urban areas and since the growth sectors of most economies are specific segments of services and manufacturing activities that are mainly prevalent in urban areas, greater attention needs to be paid to urban infrastructure provision in Asian cities.

Although large urban infrastructure investments have already been made in Asia in the last quarter of the previous century – cities such as Bangkok, Seoul, Shanghai and Beijing have been truly transformed – there will be continuing need for such investments over the next 25 to 30 years, and beyond. In countries such as, India, Indonesia, Pakistan and Bangladesh, this will place great strain on scarce public resources in the presence of still low (though growing) per capita incomes. The investment needs for the provision of power, water supply, sanitation, sewerage, drainage, solid waste disposal, roads, telecommunication, housing, and other urban amenities for an additional 2.5 billion urban people in only 25 to 30 years will be immense. Such needs will be exacerbated by demands for ever higher standards in the provision of such public services.

To cite specific examples, over three million residents in Dhaka lack potable piped water and close to 75 per cent of the urban population in Delhi live in unplanned settlements (some of which have now become authorised). Although Manila produces more than 6,500 tonnes of solid waste, its landfills can barely manage half of that. In India, no city as yet has a functional sanitary landfill facility although it had been mandated by law more than three years back. In south Asia, there are as yet no cities that have a 24 hour water supply system.

Investment for such urban infrastructure is typically lumpy, and one that has a long payback period. Some services such as water and power can be characterised as private goods and can easily be charged for through user charges, in principle. Others, such as sewerage, streets, solid waste disposal, are more like public goods that have to be provided from public resources. The provision of both requires high levels of resource generation as well as public utility management. Who will pay for these services and how? Will local and national governments have the capacity to raise such resources and invest them efficiently? Will the financial systems in these countries be able to intermediate such resources from services to the users, both domestically and cross border. What will be the extent of need for public private partnerships (PPP), and how will they be managed? How will the poor be served?

These are some of the new challenges facing Asian urbanisation in the 21st century.

## VI
## Elements of a New Approach

The huge challenges that are emerging in Asian cities are expected to be of a higher degree of complexity than the problems witnessed in urban development in the past, both globally as well as in Asia (presented in the earlier sections of this paper). The following section goes on to articulate some elements of a new coordinated approach.

Macroeconomic policies and their correlation to urban demands is an aspect that is not well understood but will become increasingly important in the emerging scenario.

Public policy choices make a huge difference to city dynamics. This section addresses some primary national policies at the macro level that impact urbanisation. The three broad areas that are being addressed because of their direct relevance to urban development are (i) national fiscal policy relating to public investment, taxation and fiscal transfers (ii) external policy of trade and foreign investment and (iii) social sector policy related to education and health.

### National Fiscal Policy

Public investment in key infrastructure is an important ingredient of the macro policy framework of any country that has direct relevance to urban infrastructure development. Public investment policy is a critical macro level issue that sets up conditions for both public and private investment in infrastructure at both urban and regional levels. In the 20th century, it was typically the public sector that funded most infrastructure in most countries. For example, federal and regional governments in developing countries have been funding capital investments in large urban infrastructure projects as in the case of China and Malaysia. In China, the development of the coastal region has been supported over the last two decades by huge public investments. However, fiscal constraints in India, along with other policy rigidities at the city level have resulted in sub-optimal levels of urban infrastructure investment over the last 20-30 years of urbanisation [EGCIP 1997].

There has been a certain level of unwarranted euphoria in the world as a whole, and in Asia in particular, during the 1990s over the potential for private sector investment in infrastructure. This had resulted from certain technological developments in sectors such as power and telecom, in electronic tolling techniques for roads and the like, that enabled easier levy of user charges on service users. Technology made it easier to segregate different kinds of services and to levy user charges on service users, for some services that were earlier regarded as public goods. Coincidentally, developments in the financial sector, both in terms of vastly expanded cross border capital flows, and in new project financing techniques, led to new optimism about the possibility of viable private financing of infrastructure. Third, the existence of fiscal constraints in the presence of large emerging needs led governments to look towards the private sector to solve their financing problems. But the private sector response to new investments has been slow, other than in telecom, some roads and ports, where we have seen considerable improvements. On the other hand, in some countries, notably India, public investment has stagnated [Rakesh Mohan 2003]. In the near future, however, power and airports, in India, might see greater private participation. Urban infrastructure, especially water supply and

sanitation and solid waste management, being driven by the third tier of government have seen tardy progress. The euphoria of the private participation of the early period of the 1990s, has been replaced by a more realistic understanding and consistent effort on the part of governments to provide more conducive infrastructure investment framework.

The massive needs of urban infrastructure investment in Asia over the next 30 years therefore requires new thinking regarding the appropriate mix of public and private funding that will have to be raised; what the sources of these funds will be, and how such large investments will be managed. Public investment will require public resources, hence the need for conducive macro economic and fiscal policies at different levels of government. It is unfashionable today to talk about taxation: but public resources for public investment will have to be raised through taxation or public borrowing. Different countries have different federal fiscal structures. In general, it would be appropriate to fund urban infrastructure investments from local resources, except where the project goes beyond local boundaries. For example, water is often brought to cities over long distances from riverine or other distant water sources. Such public projects then need federal or regional level funding. The key point here is that public investment has to be eventually funded through appropriate levels of taxation, federal, state or local, whereas other projects that are amenable to the levy of user charges can be funded from private sources of funding. In either case, capital costs have to be serviced. Public understanding has to be built up to appreciate that infrastructure, even if it is a public good, is not free and has to be paid for. If capital cannot be serviced by collection of user charges, it has to be done through taxation. Thus, in the US for example, cities service general revenue municipal bonds from local taxation receipts. In India, average urban water charges amount to about Rs 1.5 per kilo litre (US $0.03), whereas the average cost is about Rs 15 per kilo (US $0.33). It is no wonder then that the typical Indian city is poorly served in terms of water supply. The inadequate levy of power tariffs that exist and poor collection leads to unusual annual countrywide losses in India of more than US $7 billion at present.

The investment policy of a government to restrict or permit particular commercial activities impact the extent of urbanisation. For example, in India, now barring a handful of sectors, all manufacturing sectors have been opened up to private (domestic or foreign) investments. However, restrictive guidelines for FDI in real estate and court rulings on the kind of manufacturing activities that can happen on urban areas, has reflected on the supply of housing and urban infrastructure in many existing cities.

Taxation policy, which is a macro level issue has a very strong impact on urban areas. Financing public investments in infrastructure will require a larger revenue base. It is not necessary that higher tax rates would be needed but improved tax administration and better compliance will go a long way in increasing resources for investment in urban infrastructure. User charges in developing countries account for very small proportions of total revenues. This needs to be enhanced considerably and taken directly into the development debate, as in the case of Thailand where fixing of toll charges are a poll issue.

Macro policy of fiscal transfers and increasing decentralisation of powers and finances have a definite long term impact on urbanisation. Decentralisation is the cornerstone of urban development, allowing local levels of government to be active participants in their own growth. In the last few years, many initiatives in Asia have led to cities being empowered to determine their own investments and control their finances. The model followed by China of increasing decentralisation of administration on the costal cities and their regions has gone a long way in increasing the investments into those areas. In India, however, efforts to decentralise to the local level, has yet to be implemented with conviction, though the basic amendment to the constitution has happened in 1994.

To meet the huge requirements of funds arising from the emerging challenges of urbanisation in the future we need a new way of thinking. We need to develop an appropriate mix of sources of funds and find new ways to manage them more effectively.

## Consequences of Globalisation

Openness in macro trade policy leading to lower transaction costs and price equalisation has an impact on investment into urban areas. The internationalisation of production, finance, banking and services, coupled with cheap labour and advances in telecommunications and information technology, has minimised the importance of boundaries in the decision to locate production plants. These times of competition and free trade have benefited the developing world, particularly open economies in Asia mainly the smaller ones in east Asia.

With the intensifying forces of globalisation, healthy urbanisation needs the consistent practice of open economy macroeconomic policies. We need to further develop a better understanding of cities and their economic functions in an international context. In the past, economic function of cities was often linked with the immediate hinterland. Now, more often than not, metropolitan cities are linked more with other metropolitan cities abroad than their immediate hinterland. For example, London and New York act as financial centres for the world as a whole, and their economic linkages are more, perhaps, with Frankfurt, Singapore, Hong Kong and Tokyo than with their immediate hinterlands. The economic health of these cities is then heavily dependent on the quality of telecom, information technology, air transport and other connections with their correspondent foreign cities than with their immediate domestic hinterland. Port cities have always been linked with other port cities through trade, but also with their own hinterlands as conduits for the goods produced there. The new development resulting from new technology is that inland cities such as Bangalore, Hyderabad, Gurgaon and Pune in India are more linked with the US and Europe for their economic functions than their own surroundings. Similarly, the cities in China's coastal special economic zones are more linked with cities abroad than with their hinterland except that the latter act mostly as sources of labour.

In 1970, the quantum of exports from India ($2 billion) and China ($2.30 billion) were virtually identical; however, in 2003, India's exports were $56 billion as compared with China's exports of $438 billion. A very important factor in the success of China is the scale and magnitude of special economic zones. The five largest such zones in China – Shenzen, Zhuhai, Santou, Ziamen and Hainan – exported $26 billion in 1994, almost 22 per cent of the total exports. Another major contributor to China's success is its investment in infrastructure. The Chinese government has spent $3 billion in the infrastructure alone in Pudong and it is committed to spending $744 billion in infrastructure in 1995-2004. Compare this to the paltry few billions proposed to be spent on infrastructure in India. Probably, the most important factor is the

single-minded dedication of the Chinese government in removing obstacles as and when they came up.

Sectors and activities that are less regulated by the state and operate on market principles prosper on achieving economies of scale leading to greater urbanisation. In India, the rapid expansion of the IT sector is testimony to this fact. India has emerged as a leader among developing countries in providing cross border information technology (IT) services. Although the IT industry in India has more than three decades of history, its take-off into a major software business is a recent phenomenon. The IT industry has grown from US $1 billion (or 0.3 per cent of GDP) in 1990-91, to US $9.6 billion (or 2 per cent of GDP) in 2001. The industry is predicted to grow to $87 billion by the year 2008 (Nasscom-McKinsey study). Out of India's total exports, the share of IT products (mainly software) has increased from 1 per cent in the early 1990s, to 18 per cent in 2001. Key factors in this take-off have been the existence of a skilled, English speaking workforce, and the fact that the software industry was not part of the old regime of licences. While at an earlier stage of development, IT-enabling services (ITES) such as back-office operations, remote maintenance, accounting, call centres, medical transcription, insurance claims, database, and other bulk standards processing, are also expanding rapidly in India. The worldwide ITES market is predicted to grow from the present $10 billion to $180 billion by 2010 and the Nasscom-McKinsey study has predicted that remote services will create 1-3 million jobs by 2010. The southern cities of Bangalore, Hyderabad, Chennai, Mumbai and Pune have emerged as competitive IT hubs. Thus the recent growth of a number of Indian cities is crucially related to the pattern of trade and investment that is emerging in new open economy. Urban development policies therefore have to be framed in this new unfolding economic context.

National governments need to be more aware of the linkages between macro policies and urban development as they have a direct bearing on the pace of economic growth. They need to take into consideration that in the present situation, cities and city regions are sometimes more strongly related to markets and geographies in far away locations than to their immediate vicinity. As an example, Bangalore seems to be more strongly connected to the US and other European countries than its immediate adjoining towns. The same could also inferred for cities like Hydrabad, Pune and Gurgaon. Similarly in China, the Pearl River Delta and the Yangtze River Delta have emerged as global manufacturing hubs, which are very strongly connected to global markets, than local adjoining areas.

A key issue to understand is that in an open economy, the prices of all tradables tend to get equalised: the competitiveness of a city, and hence the welfare of its citizens, is then crucially dependent on the efficiency of its infrastructure and human resources, i e, the prices of the non-tradable services that go into its goods or service exports. In an open economy therefore: (i) quality of infrastructure has to be at par with that in other countries and (ii) similarly, greater attention has to be paid to the quality of labour through education and training and also appropriate technology development activities.

It is no coincidence that the new thriving cities of India are all centres of excellence in terms of education, particularly technical education, technical training colleges, research and development establishments, both public and private, and high tech industrial and service activities.

Social sector policies and investment levels and patterns in institutions of higher leaning also have a deep impact on the location of industries that add punch to the economic growth of cities. Development of human capital, through institutions of higher learning and establishment of research and development (R&D) centres is emerging as a key determinant of the competitiveness of cities and their growth.

It is, therefore, of foremost importance that the national macro policies allow for greater openness to capitalise on opportunities available and to invest in supporting their development by carefully planning social sector investments in training facilities, higher education facilities and research and development facilities and locate them strategically.

The key lesson then is that in the presence of globalisation, the design of conducive open economy macroeconomic policies is crucial for healthy urban development: while we have to think local, we have to act global, much as a competitive firm has to.

## City Management

There has to be a new focus on city management. The traditional city land use plan, which is typically a statutory directive is not the right methodology to address the changing contours of a developing city [Mohan 1994]. Constant change is now the norm, not an exception.

Mega city management is a new emerging area that needs consistent focus of policy makers. Cities are now large and more complex than they have ever been. They often have very large budgets and, depending on the context, these budgets are sometimes bigger than the budgets of many countries and many provincial or state governments. As an example, the New York city budget is larger than that of all states in the US except for two. Fewer than 15 countries have larger budgets. The Greater Mumbai Municipal Corporation budget is larger than that of nine Indian states, and it is about the same as the revenue of India's largest IT companies.

One of the most important issues facing local governments presently is the low prestige of working or being associated with local government. Being the most neglected tier of government no individual thinks of them as key management challenges. There is, therefore, a strong case to restore the prestige of city managers and upgrade the skills of local government staff especially recognising their key role in providing services. The difficulty of the task facing city management in developing countries is the difference in revenues raised by them relative to those in developed countries. In developed countries, the per capita revenue of local governments is just under US $3,000; in Latin America it is US $90; in Asia US $150, and in Africa US $15. Thus city managers in developing countries have to be that much more efficient and innovative in order to make their cities function.

As discussed above, the huge challenge facing Asian cities, would need new ways of planning and managing. The patterns of urbanisation and the cities direct relationship to global economic processes have made cities very important considerations in locating businesses. In this scenario in many cases local city level planning and management innovations are more important that national policies. The effort should also be to decentralise management to the lowest effective level where decisions can be made quickly so as to reduce the decision-making burden on higher functionaries in government. Increased competition in

service delivery through benchmarking standards and new methods of attracting private sector to assist in delivery of services should be approached at a much wider scale.

Thus there has to be a new focus on city management in Asia. The prestige of mayors and legislators has to be increased so that the elected or appointed city managers are those with leadership qualities that inspire trust from citizens and staff alike. Local government staff are typically at the lowest rank in public service in terms of salary structure and competence. This must change so that professionalism is inculcated in city management. National governments are too distracted to bother about city level issues, even if they are mega cities, and even if they are the country's major engines of growth.

The first task in this new pragmatic approach is twofold. For city managers to be effective, the burden on local governments must be reduced; and second they must be strengthened. This can be done by limiting the financial role of city governments to the provision of public goods and services. All services that can be paid for should be decentralised to corporatised public or private sector providers, as appropriate. As far as possible, it is essential to introduce competition to induce efficiency in these corporatised entities. The corporatisation of such service providers would forge direct links between the financing and returns, thereby inducing accountability. Though not easy, methods need to be devised for increased public participation in the design and management of local public services. Finally, and foremost, detailed master planning at city level must be eschewed in favour of strategic city planning.

The growing Asian cities would need to take up the challenge of effective governance by innovation and constant repositioning. This, however, in the Asian context of strong regional and national government would need to be supported by higher levels. Decentralisation, just like local autonomy, is not a new subject in the Asian context. However, in comparison with other regions, especially in Latin America (Peru, Colombia) and in Africa (Senegal, Burkina Faso), decentralisation of powers to local government in the Asian context is still nascent. In a number of cases and prominently in India, it is the central government that has taken the initiative of reviving local governments and adapting institutions, while state legislative assemblies and politicians did not give many signs of enthusiasm, while there were few pressures from the civil society itself.

Financial development for supporting urbanisation processes is critical to economic growth and poverty reduction. Cities need to relook at the various revenue sources available to them and look at their performance in revenue collection itself with a view to identify how the tax base could be spread wider and focusing on developing effective collection systems.

## Financial Development for Urbanisation

The financing of urban infrastructure investment that will be needed over the next 30-50 years in Asia will need much more focused attention. The task is essentially threefold. First, local governments have to be made creditworthy. Second, urban infrastructure projects must be made commercially viable. If these two requirements are met in the context of a developed capital market, the financial resources needed will get generated automatically. However, bond markets in Asian countries are not yet well developed, and even lag behind equity markets in these countries. Hence, third, there is a critical need for attention to be given to the development of financial and capital markets that are able then to cater to the resource needs of rapid urbanisation.

As emphasised repeatedly in this paper, the magnitude of the expected increase in urban population over the next 30 years in Asia will be equivalent to the increase that took place over the last 50 years. The task for resource generation will be accordingly more difficult.

In the past, during the rapid urbanisation phases of some European countries, North America, and Latin America, available domestic savings were inadequate to finance the massive urban investment needs that arose during those periods. Thus large cross border flows were necessary to bring to bear external savings for investment purposes in these countries and regions. At present the two largest Asian countries, China and India have effective savings surpluses that are currently being invested as foreign exchange reserves in developed country securities and banks. Yet huge resource gaps exist for investment in urban infrastructure since city governments are often not creditworthy, and urban infrastructure projects are not commercially viable. Thus, if these two generic problems are solved, the surpluses now being observed in these countries will probably disappear, and there will instead be a draft or external resources.

The strengthening of city management outlined earlier is therefore a must. As this strengthening takes place it will enable the organic connection of city governments with capital markets, both local and international. The key reform needed to make city governments creditworthy on a permanent basis is a revamp of the property tax systems that makes property taxes more buoyant. As cities of all sizes grow, and densify, not only will the number of properties grow indefinitely in every city, but so should the average property value. Hence, a well administered property tax system should yield buoyant property tax revenues on a continuous basis. For the property tax to become more buoyant, urban property markets have to be liberalised : regulations such as rent control and the Indian urban land ceiling controls need to be scrapped or substantially modified, for the urban property market to flourish in a transparent manner. Second, subventions from higher levels of governments will have to continue, but these need to be made less discretionary and more predictable. Third, more and more services need to be decentralised to the private sector if possible, or to corporatised public service providers, or through public private partnerships. As these reforms take root, it would be possible for strengthened urban municipal administrations to become creditworthy and hence be enabled to raise resources for urban infrastructure investment and maintenance.

Urban infrastructure projects are typically messy, complex and difficult to implement. Thus project management skills in Asian cities need to be enhanced. For such projects to be seen as commercially viable there is a need to find all kinds of credit enhancement mechanisms that can then effectively connect lenders and investors with urban infrastructure entities. Since urban infrastructure projects often have positive externalities that, by definition, cannot be captured by the project entities, there is a good case for the government to engage in different kinds of credit enhancement. Some illustrations of possible measures are: (i) *Availability of 'free' equity for project agencies:* Depending on the level of positive externalities, a project agency that is not otherwise commercially viable can become viable if, in principle, the government provides some share of equity that is not to be recompensated. The remaining equity can then receive appropriate market returns, as can the debt, while the project as a whole

may have lower than market financial returns, through high economic rates of returns. A similar role could be played by the provision of 'free' or subsidised debt.

(ii) *Guarantee mechanisms:* Different kinds of risks can be mitigated by different kinds of guarantee mechanisms. Such guarantee mechanisms can be commercially priced, or otherwise, depending on the source of the risk.

(iii) *Appraisal agencies:* The existence of information asymmetries give rise to the reluctance of investors and lenders to invest in urban projects. The government can help in funding professional institutions specialised in such appraisal techniques, who can then build professional credibility and provide project appraisals that are respected, and therefore address information asymmetries effectively.

(iv) *Programmes for staff professionalisation:* National governments and international institutions can invest in directed programmes to upgrade professional staff in local governments and project entities, that can then lead to more efficient governments as well as project executors and maintenance agencies, thereby promoting creditworthiness.

Many such examples can be given for the credit enhancement of local governments and urban project entities. All such measures would help in linking both domestic and international capital markets to the financing requirements of cities.

The US developed a market for municipal bonds to finance urban governments – both for general revenue financing as well as for specific projects. Germany developed 'P fand briefs' that are issued by their mortgage banks to finance their lending for both housing and for municipal and state government lending. In both cases, market development needed different levels of government and regulatory intervention. Such markets will need to be created for the financing of cities in Asia, and we will need to continue the search for new institutions and mechanisms that are relevant for each country in Asia.

## Conclusion

The experience of rapid and massive urbanisation that occurred in the 20th century has been historically unprecedented. It first spread from Europe to North America, and then later to Latin America in the second half of the century. It is now the turn of Asia, and particularly of large countries like China, India, Indonesia, Pakistan and Bangladesh to undergo the kind of fast-paced urbanisation that Latin America did in the last half century. This will pose new challenges in terms of city management and urban infrastructure investment that will need to be made in a relatively short time span of the next 30 years.

While there has been a great degree of criticism regarding the ravages and ills that the urbanisation process has brought in its wake, there must be general understanding that the world has coped relatively well with the huge magnitude of urban population increase that has taken place in the last 50 years. Urban income levels have risen; urban services have continued to expand; and poverty has fallen. This experience should provide us with a great degree of confidence that the rapidly urbanising Asian countries will indeed be able to cope in the next 30 years and beyond. The greater sophistication of financial markets and of various technologies that make it easier to make urban infrastructure investments, to charge for them, and to maintain them, should actually make it easier to cope with the urbanisation that is expected.

For these positive results to take place, we need to strengthen all aspects of city management actively. This will need action at all levels : federal, state and local. City management needs to be professionalised; city governments need to be made creditworthy; and urban infrastructure projects need to be made commercially viable.

Essentially, the growth of urbanisation witnessed in Asia over the last 50 years will be repeated in the next 30 years. The two largest nations China and India have large surpluses both individual as well as governmental which are increasingly invested in countries like the US, in spite of the fact that huge resource gaps exist in urban infrastructure in these countries. The basic problem of investments not flowing into the sector is the fact that local governments are not creditworthy and urban infrastructure projects are not commercially viable.

Strengthening city management will enable connection with capital markets, both national and international. In this context, it is important to develop financial intermediation instruments for credit enhancement to connect lenders and investors with urban infrastructure to borrow both public and private. In this approach, we need to be strategic and develop long-term capital markets as available in Germany and the US for municipal infrastructure. The objective would be to move from a top-down to bottom-up marketisation approach and develop new institutional forms and mechanisms. The practice of prudent macroeconomic and trade policies will be essential for the maintenance of continuous access to international capital markets. EPW

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