

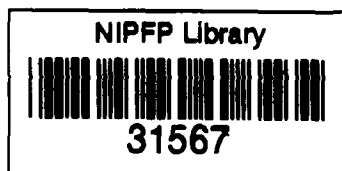
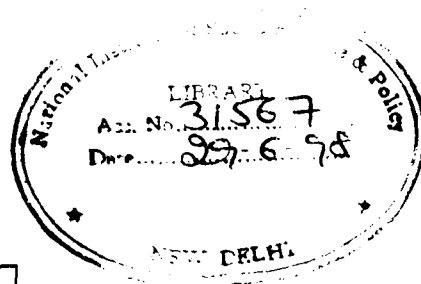
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**Sustaining India's Megacities**

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## SUSTAINING INDIA'S MEGACITIES

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### INTRODUCTION

Let me begin this chapter with a brief quote from a recent book entitled *Mega-City Growth and the Future*:

Mankind's future will unfold largely in urban settings. As the world moves into the twenty-first century, it will mark a demographic divide, passing from an age when most of its population resided in rural areas to one in which most will be urban residents. This is essentially due to the rapid urban growth occurring in developing countries which, over the next 20 years, must absorb nearly one billion *additional* urban residents, as many as they had *in total* in 1990. A major challenge for mankind is, therefore, an informed response to such unprecedented urban growth and the intel-

ligent management of urban settlements, which, in the future, will serve as the abiding place of the majority of mankind.

A particular problem is posed by the emergence of a number of urban agglomerations of a scale unprecedented in human history. This century began with perhaps a dozen cities claiming 1 million residents or more. By the year 2000, there will be several hundred cities of that size. Among them, it is estimated there will be twenty-eight cities with populations exceeding an arbitrary threshold of 8 million, thereby qualifying as megacities. The world's largest metropolitan area, that of Tokyo, will encompass nearly 30 million people. However, the vast majority of the megacities, and the most rapidly growing ones are to be found in the developing countries. There they serve simultaneously as national and regional engines of economic growth, centres of technological and cultural creativity, homes for the poor and deprived, and the sites and sources of environmental pollution.

Only recently have cities of this size been conceptualized as a distinct phenomenon deserving special consideration because of the unique characteristics posed by their size, the impacts on their inhabitants, and the enormous problems they present of management. As a result, the world still has little systematic, as opposed to anecdotal, knowledge and experience to draw upon. Particularly in the case of megacities in the developing world, as noted by Janice Perlman (1989): "no precedent exists for feeding, sheltering, or transporting so many people ... nor for removing their waste products, or providing clean water". (Fuchs et al. 1994)

This applies as much to India as to other countries that have witnessed in recent years the emergence of cities of phenomenal proportions. Like other developing countries, India's megacities,<sup>1</sup> defined here as cities with a population of one million and above, are growing at moderate-to-high rates both in terms of population and economic importance and transforming themselves functionally and physically. They are at the centre of the country's economic growth and progress. Their growth, especially in the 1980s and 1990s, represents a range of opportunities that are propelled not only by the economic and social processes operating within the national boundaries but equally by the new set of production frontiers that are in motion globally. The global forces have heightened the role and importance of megacities and have given rise to new urban forms and structures. At the same time, most of them face serious problems of poverty, deteriorating environmental quality, and infrastructural deficiencies, raising doubts about their capacity to

sustain and contribute to the country's economic growth. This chapter discusses the place of megacities in India's emerging economic scenario and outlines what a future agenda for them might be.

### MEGACITIES IN THE PROCESS OF INDIA'S URBANIZATION

Urbanization in the sense of more and more people living in the urban areas is by far the most important social change that has taken place in India in recent times. From a modest base of 25.8 million in India, the number of urban dwellers has risen to 217.6 million in 1991, signalling a phenomenal eightfold increase in urban population over the period 1901–91. In recent years, approximately 6–7 million persons per year have been added annually to the country's total urban population. Moreover, the urban population is doubling itself at a faster rate than at any time in the past. It took, for instance, all of history up to the beginning of the twentieth century for the urban population to reach 25 million, about forty-three years for it to increase from 25.8 million to 51.6 million, and another twenty-six years for it to double once again. It now takes twenty years for the urban population to double. Given the current rates of growth, the urban population is estimated to take no more than seventeen years to double, and reach a staggering total of over 310 million persons by the year AD 2000, and nearly 500 million persons by AD 2020.

This process of urbanization involving an addition of over 100 million persons within a period of two decades (1971–91) has been accompanied by important changes in the distribution pattern of the urban population in the country (see Table 3.1). *First, the weight of the different size classes of cities in total urban population has shifted in favour of large cities.* In 1901, the share of settlements with a population of over 100,000 in total urban population was 26.0 per cent; by 1991, this share had risen to 65.2 per cent, heralding what would seem to be one of the most significant changes in the pattern of habitation in the country (Table 3.2). Even during the relatively short period of 1971–91, the share of these cities in total urban population increased from 57.2 to 65.2 per cent. *With this change, India is no longer a country that lives in villages and small towns; rather, it has acquired the com-*

Table 3.1  
Urbanization Trends in India

Year	Urban Population		Growth Rate (%)	
	Total (million)	Ratio of Total Population	Decennial	Annual Exponential
1902	25.80	10.80	—	—
1971	109.11	19.91	—	—
1981	159.46	23.34	46.14	3.83
1991	217.17	25.72	36.47	3.10

Source: Census of India 1991, Provisional Population Totals: Rural–Urban Distribution (Paper 2).

*plexion of a country that has an extensive network of large urban settlements.*

*Second, the number of megacities, that is, cities with a population of over one million, has risen dramatically in recent decades.* In 1901, there was only one city with a population of over one million (Calcutta), which accounted for 5.84 per cent of the country's total urban population. In 1971, the number of cities in this category was nine, and their share in urban population, 25.5 per cent. By 1991, the number had increased to twenty-three and the population share to a little over 32 per cent (Table 3.3). Given the existing distribution of cities in the different size categories and given that there is no evidence of a self-limiting factor which would regulate city size, it is estimated that the number of such cities will increase to at least forty-nine by the turn of the century, representing yet another major shift in the pattern of habitation in the country.

*The megacities of India have registered moderate-to-high growth rates (Table 3.4). Many of them, especially Calcutta, Bombay, Bangalore, Madras, and Delhi have acquired over the decades the characteristics of regional primate cities.* More important is the fact that these cities have come to wield enormous economic power and strength. According to various estimates, the contribution of urban areas to the country's gross domestic product (GDP) is estimated to be around 55 per cent, having risen from 29 per cent in 1970–71 and 41 per cent in 1980–81. There exists clear evidence of the increasing importance of the macro-economy of megacities. A very recent study shows that output

Table 3.2  
Percentage Distribution of Urban Population,  
by Size Class of Settlements

Census Year	Size Class of Cities						
	>1 Million <sup>a</sup>	>100,000 <sup>b</sup>	50,000–100,000	20,000–50,000	10,000–20,000	5,000–10,000	<5,000
1901	5.84	26.0	11.3	15.6	20.8	20.1	6.1
1971	25.51	57.2	10.9	16.0	10.9	4.5	0.4
1981	26.41	60.4	11.6	14.3	9.5	3.6	0.5
1991	32.54	65.2	10.9	13.2	7.8	2.6	0.3

<sup>a</sup> Also included in the size class of over 100,000 persons.

<sup>b</sup> Includes population of all settlements having a population of 100,000 persons.

Source: *Census of India 1991, Provisional Population Totals: Rural–Urban Distribution (Paper 2)*.

Table 3.3  
Cities Having a Population Greater Than One Million, 1901–91

Census Year	Number of Urban Agglomeration/Cities	Population (million)	Ratio of Population of Urban Agglomeration to	
			Total Population	Urban Population
1901	1	1.51	0.63	5.84
1911	2	2.76	1.10	10.65
1921	2	3.13	1.25	11.14
1931	2	3.41	1.22	10.18
1941	2	5.31	1.67	12.02
1951	5	11.75	3.25	18.81
1961	7	18.10	4.12	22.93
1971	9	27.83	5.08	25.51
1981	12	42.12	6.16	26.41
1991	23	70.66	8.37	32.54

Sources: Census of India 1991, *Provisional Population Totals: Rural–Urban Distribution* (Paper 2).

per worker is greater in metropolitan areas than other urban and non-urban areas (Prud'homme 1994).

There exists other evidence of the linkage between urbanization and economic development. According to the 1991 census, 63 per cent of the total manufacturing employment, 65 to 66 per cent of employment in transport, storage, and communications, and trade and commerce, and nearly 58 per cent of employment in construction are concentrated in the urban areas. *The share of megacities in the country's GDP and employment in such sectors as manufacturing, transport, construction, and services is estimated to be at least 70 to 75 per cent of the total for the urban areas.* It is explained by different forms of scale, agglomeration, and specialization economies. Recent studies have also found the following:

- that returns to labour are higher in the largest cities
- that while per capita returns to labour and capital rise with city size, the costs of providing overhead capital tend to fall
- that metropolitan expansion has always been an integral part of the process of economic development.

Table 3.4  
 Cities Having a Population Greater Than One Million in 1991  
 (in Descending Order of Their 1991 Population)

City	1981		1991		1981-91
	Population	Ratio to Total Urban Population	Population	Ratio to Total Urban Population	Population Change (%)
Greater Bombay	8,243,405	5.17	12,596,243	5.79	52.8
Calcutta	9,194,018	5.77	11,021,918	5.06	19.9
Delhi	5,729,283	3.59	8,419,084	3.87	46.9
Madras	4,289,347	2.69	5,421,985	2.49	26.4
Hyderabad	2,545,836	1.60	4,344,437	2.00	70.6
Bangalore	2,921,751	1.83	4,130,288	1.90	41.4
Ahmedabad	2,548,057	1.60	3,312,216	1.52	30.0
Pune	1,686,109	1.06	2,493,987	1.15	47.9
Kanpur	1,639,064	1.03	2,029,889	0.93	23.8
Lucknow	1,007,604	0.63	1,669,204	0.77	65.7
Nagpur	1,302,066	0.82	1,664,006	0.76	27.8
Surat	913,806	0.57	1,518,950	0.70	66.2
Jaipur	1,015,160	0.64	1,518,235	0.70	49.6
Kochi	685,836	0.43	1,140,605	0.52	66.3
Vadodara	744,881	0.47	1,126,824	0.52	51.3
Indore	829,327	0.52	1,109,056	0.51	33.7
Coimbatore	920,355	0.58	1,100,746	0.51	19.6
Patna	918,903	0.58	1,099,647	0.51	19.7
Madurai	907,732	0.57	1,085,914	0.50	19.6
Bhopal	617,018	0.42	1,062,771	0.49	55.4
Visakhapatnam	603,630	0.38	1,057,118	0.49	75.1
Ludhiana	607,052	0.38	1,042,740	0.48	71.8
Varanasi	797,162	0.50	1,030,863	0.47	29.3
Total	50,721,402	31.81	70,996,726	32.63	39.97 or 40.00
Total urban population in India	159,462,547		217,611,012		36.5

Note: Population for the year 1981 is for the jurisdiction that prevailed in 1981 and has not been adjusted for the 1991 set-up. In other words, the 1991 population includes components attributable to the inclusion of new areas in the urban agglomeration or expansion of jurisdiction of the 1991 census.

Source: *Census of India, 1991, Final Population Totals* (Paper 1, vols. I and II).



Table 3.5  
Distribution of Foreign Direct Investment (Approved), by State,  
August 1991 to August 1994

Major States	Number of Approved Proposals	Proposed Investment (Rs. million)	Ratio of Investment to Total	1991 Level of Urbanization (%)
Maharashtra	311	4,640.2	19.3	38.7
Delhi	174	3,066.2	12.7	89.9
Gujarat	90	1,960.1	8.1	34.4
West Bengal	64	1,304.5	5.4	27.4
Tamil Nadu	161	1,147.8	4.8	34.2
Andhra Pradesh	103	359.6	1.5	26.8
Karnataka	101	277.8	1.2	30.9
Other states/ territories	371	3,179.2	13.2	—
Location unspecified	1,164	8,151.3	33.8	—
Total	2,539	24,086.7	100.0	25.7

US\$1 = Rs.31.50 (approximately).

For reasons of higher productivity, megacities have attracted significant shares of foreign direct investment (FDI) committed for India over the period 1991–94. While city-specific breakdown of FDI is not available, 53 per cent of the total FDI is estimated to have accrued to the more urbanized states comprising Maharashtra, Delhi, Gujarat, West Bengal, Tamil Nadu, Andhra Pradesh, and Karnataka. Delhi with a population of 10 million (4.6 per cent of the total urban population) but a pronounced urban character accounts for 12.7 per cent of such investments (Table 3.5). The low-urbanized states and states which have a thin network of cities have not attracted proposals for foreign investments, a strong indication of the role that the more urbanized states and larger cities are able and likely to play in the globalization process of the Indian economy.

#### NEGATIVE ASPECTS OF URBAN AND METROPOLITAN GROWTH

Increased productivity of cities, however, has not solved the massive problems of service shortages, poverty, and environmental degrada-

tion; it has also raised serious doubts about their sustainability. A few examples would illustrate this point.

*Most Indian cities have serious problems of the availability and adequacy of shelter, infrastructure, and basic services.* According to a recent estimate (1988–89), 14.68 per cent of urban households live in slums, and another 29 per cent live in temporary and semi-temporary structures. Significantly, the percentage of such households is noticeably higher in metropolitan cities and megacities, which indicates that some problems mount with city size. Nearly 12 per cent of the country's total urban population have no access to water supply, and 57 per cent do not have access to sanitation. According to the 1991 Census, even primary education has bypassed 49.03 million persons or 26.9 per cent of the total urban population of over six years of age, putting them in the category of illiterates. Although recent years have seen a marked improvement in the availability and spread of services, the absolute number of people without access have either remained unchanged or risen.

Poverty is widespread and severe in Indian cities. Depending on the source of the estimate, anywhere between 20.1 and 40.1 per cent (or between 41.70 million and 83.35 million) are poor as their current expenditure levels do not allow them to obtain 2,100 calories per capita/day and other essential goods and services, which is considered essential to stay above the poverty line. *According to the Planning Commission's Report of the Expert Group, the number of the urban poor has*

Table 3.6  
Inaccessibility to Shelter and Services

Shelter and Services	%
Households without adequate shelter	
Living in slums (1988–89)	14.68
Living in temporary and semi-temporary shelters (1988–89)	28.92
Urban population without services	
Water supply (1988)	11.76
Basic sanitation (1988)	56.10
Education ( $\geq 6$ years) (1991)	26.90

Source: Ministry of Urban Development, *Sarvekshna* (National Sample Survey Organization); *Census of India* (1991).

Table 3.7  
Urban Population Living below Poverty Line, 1987–88

Percentage (%)		Number (million)	
Official Estimate	Expert Group Estimate	Official Estimate	Expert Group Estimate
20.1	36.5	41.70	83.35

Source: Planning Commission, *Report of the Expert Group on the Estimation of Proportion and Number of Poor*, New Delhi (1993).

*risen from 60.12 million in 1973–74 to 83.35 million in 1987–88, and for the first time, urban poverty incidence as measured by the head-count index has outstripped the incidence of rural poverty.* The severity of poverty is compounded by the fact that the poor, apart from having insufficient incomes, run a number of varied risks, such as living in high-risk structures and peripheral lands, risk of eviction, health risks (for example, dependence on questionable sources of water), and environmental risks. Such risks are higher in megacities.

Most cities are exposed to air and water pollution, and problems posed by inadequate solid and liquid waste management, large-scale use of low-grade domestic fuels, and occupation of environmentally sensitive lands. In Bombay, both suspended particulates and nitrogen oxides have exceeded the levels specified by the World Health Organization. Emissions of oxides, nitrogen, and carbon monoxide have increased in line with the motorization of traffic. In Delhi, levels of suspended particulates remain very high, and although the concentration of nitrogen oxides is below the norms, it has doubled between 1981 and 1987.

Although all urbanites are affected, the urban poor are the most vulnerable to both traditional and modern hazards, since squatter settlements often lack water and sanitation systems, and are often located in the most undesirable areas of cities on flood plains, steep hillsides, or adjacent to toxic and hazardous industries. As Leonard and Petesch (1990) have noted:

Environment degradation — flooding, mudslides, fuelwood shortages, unhealthy water supplies, hazardous wastes and contaminated air — now represents one of the most formidable constraints on productivity of the

Table 3.8  
Mean Concentration of Pollutants in Selected Megacities

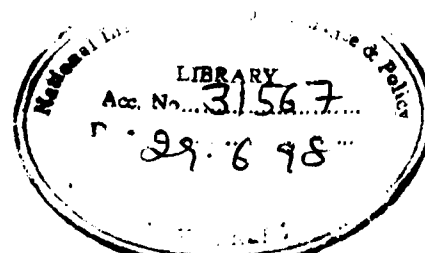
City	SO <sub>2</sub>	NO <sub>x</sub>	SPM
Bombay	33.4	30.9	199
Delhi	12.8	45.6	259
Madras	12.0	12.0	144
Calcutta	73.6	39.8	496
Ahmedabad	20.9	36.6	254

Source: Central Pollution Control Board, *National Ambient Air Quality Statistics of India*.

urban poor, threatening the physical security of people and their possessions.

Owing to the existence of various kinds of regulations, norms, and standards such as the ratio of saleable land to land for public use, minimum size of plots and density standards, most cities in India have found it difficult to use urban land in an efficient and economic manner. In one of the states in India, specified minimum plot sizes and infrastructure standards at levels established under the Regulation of Building Operations Act of 1958 were affordable only by households at or above the 95th percentile of urban income distribution. In several cities, the Master Plans include zoning regulations that require an unusually high proportion of the total planned area for non-residential purposes and low residential densities. Yet another aspect of the inefficient use of land is that the regulations and various forms of specifications have tended to work against the more flexible and appropriate designs.

As a result of the increase in urban population and its impact on the volume and pattern of demand on different types of goods and services, the relationship between cities and natural systems has become precarious, particularly with respect to two vital resources, namely, groundwater and fuelwood. Recent evidence shows that most Indian cities have moved farther to meet their fast-increasing water requirements as the aquifers within their own jurisdictions are found to be either overstretched or contaminated. For several cities including Delhi, transporting water from neighbouring regions and states has meant not only enormous cost but also recurrence of interjurisdictional conflicts and tensions.



In Ahmedabad, a city with a population of 3.3 million and which registered an increase of 88 per cent in its population between 1971 and 1991, groundwater levels have declined in many areas to 310 feet from a level of 150 feet in 1970, and in other areas, from 115 to 120 feet in 1970, and from 250 to 275 feet in 1990. It is estimated that as a result of population pressures on groundwater, the water-table in this city is declining at a rate of 2 to 2.5 metres per annum. This has meant for Ahmedabad (a) a reduction in the per capita availability of water, (b) an increase in the cost of pumping, and (c) depletion of groundwater on an unprecedented scale. Recent surveys of water supply in other cities show similar trends — indiscriminate draw of water, drastic reduction in the per capita availability of water, and decline in water levels.

Another important resource which has been seriously affected by the process of urban population growth is forests around cities. Bowonder's widely quoted study (1985) of deforestation and fuelwood use shows that the forest areas in a 100-kilometre radius of nine of India's principal cities fell sharply between the mid-1970s and the early 1980s. In less than a decade, the loss of forest area varied from a modest 15 per cent around Coimbatore to a staggering 60 per cent around Delhi. As in the case of water supply, as forest cover around cities recedes, the cost of transporting fuelwood to cities has risen, and raised alarm in respect of the availability of fuel even for cooking purposes. Moreover, the urban-rural fuelwood market flow is expected to increase the rate of fuelwood extraction because of the *public good* view of forests and open access to them.

Most city administrations in India are in a financial crisis, not being able to generate enough resources to meet their rising expenditure on services. Recent studies show that only a few municipal administrations are able to put into practice principles such as a user charge for recovering the costs of services that they offer. Effectively, it has meant large-scale subsidization of civic services which, in turn, has increased the dependence of city administrations on higher levels of government. A recent study has estimated that financial transfers from higher levels account for 35 to 36 per cent of the total resources of city governments (Mathur 1992). Recovery of costs even in the case of services such as

Table 3.9  
Changes in the Closed Forest Cover around Major Cities in India

City	Forest Cover (hectares)		Change (%)
	1972-75	1980-82	
Bangalore	3,853	2,762	-28
Bombay	5,649	3,672	-35
Calcutta	55	41	-25
Coimbatore	5,525	4,700	-15
Delhi	254	101	-60
Hyderabad	40	26	-35
Jaipur	1,534	786	-49
Madras	118	568	-38
Nagpur	3,116	2,051	-34

Source: Bowonder et al., *Deforestation and Fuelwood Use in Urban Centres, India* (Centre for Energy, Environment, and Technology, and National Remote Sensing Agency, 1985).

water supply is no more than 65 per cent of the expenditure incurred on its provision; in others, such as solid wastes, direct and indirect recoveries do not exceed 10 to 12 per cent of expenditure.

Other important services such as electricity have low average cost realization. All State Electricity Undertakings in India are reported to have incurred a loss ranging between Rs.0.0008 per kilowatt-hour (kWh) and Rs.1.5627/kWh, or an average of Rs.02552/kWh on account of the low-cost recovery. Moreover, electricity pricing in the country does not include components of social costs, such as the cost of pollution, resource depletion, mine reclamation, with the result that the welfare loss on this account is extremely high (see World Bank 1993 for estimates on energy production and consumption). These negative aspects associated with the intensity and scale of megacity growth has raised questions about the ability of megacities to contribute to the country's economic growth and progress. Using these characteristics, it is often contended that megacities in India are unsustainable for the following reasons:

- A section of the population of megacities has no access to shelter, infrastructure, and services.

- They consist of people who live below the poverty line, exposed to risks of various kinds, and who bear a disproportionately high cost of environmental degradation.
- They have become uncompetitive in domestic and international markets on account of increasing costs imposed by the non-availability of basic infrastructure and the low quality of the work-force.

These cities are also said to be unsustainable entities for the following reasons:

- Their growth has resulted in resource depletion such as groundwater, fuelwood, and arable land, jeopardizing their availability for future generations.
- They have persisted with unrealistic and unaffordable norms and standards, and service technologies and systems that have lost their relevance.
- They have continued to rely on subsidies, grants, and tax rebates for maintaining themselves.
- They have failed to internalize costs that should be internalized and charge real rather than arbitrarily fixed administrative prices.

Urban scholars have argued that unsustainability and strains as experienced by megacities have little to do with the size of such settlements. Rather, these have come about as a result of misplaced urban strategies and the postulates that underlie them. For example, contemporary urban strategies appear to be based on the following assumptions:

- It is possible to change the city-size distribution of population in favour of medium and small-sized cities and towns, and thereby avoid what is often perceived to be the undesirable and avoidable growth of megacities.
- Increased demand for shelter and services can be met by public sector strategies and interventions. Strategies assume that on account of the nature of the goods and externalities attached, private sector investment is unlikely to flow into these sectors.
- Subsidies and various forms of governmental support are an essential component in the provision of various kinds of shelter, services, and infrastructure. Without subsidies, a significant pro-

portion of urban population may remain deprived of them in low-income countries such as India.

- It is possible to substantially reduce poverty by targeted programmes in fields related to employment, shelter, and services.

These assumptions are at the centre of the current urbanization strategies and in large measure they lie at the root of the many problems that characterize the urban scene in the country.

### **SUSTAINING MEGACITIES IN A GLOBALIZED FRAMEWORK**

With nearly 250 million living in urban areas in 1995, India accounts for nearly 15.5 per cent of the total urban population of developing countries. Of the twenty megacities in developing countries, that is, cities with a population of over 8 million, three of them are in India, and they together account for 18 per cent of their total population.

The past two decades have seen dramatic transformation of the global economy. Choosing between domestic and foreign products, facing a floating exchange rate, and concerning ourselves with the global debt crisis, all reflect aspects of the globalization process. The world economy has changed in fundamental ways, with a new international division of labour, and an accent on globally integrated production and transnational production. The multinational corporations, which rose rapidly during the 1970s, have become common in most countries of the world. Global factories, global manufacturing production, and global financial networks and producer services have given new substance to the global dimension of economic production processes and the way in which countries and cities can contribute to them.

The globalization process is having an important impact on the evolution of cities and megacities. An early observation was the recognition of an emerging system of world cities, a kind of urban elite which is shaped in part by the new international division of labour. These cities are also thought to be controlling and co-ordinating global finance.

Parallel to the changes in the global economy, changes have taken place in India's economic policies and macro-economic framework. Industrial licensing, except for a short list of industries relating to se-



curity, strategic, and environmental concerns, has been abolished in all cities with less than one million in population. A flexible location policy has been proposed for cities with more than one million in population which are affected by technological obsolescence and decay, and which consequently require what the 1991 Statement on Industrial Policy calls "industrial regeneration". Initiatives have been taken to assist entrepreneurs to exploit and meet the emerging domestic and global opportunities in order to shift from import-substitution strategies to export-led growth. Steps have been taken to attract foreign investments in high-priority areas and export-related trading houses. Major restructuring is on the anvil in respect of pricing of public utilities so as to reduce the potential dependence of public utility companies on subsidies and other forms of governmental support.

In addition, complementary measures have been taken in the areas of fiscal and financial sectors and overall macro-economic management. Various kinds of fiscal incentives and subsidies have been either reduced or withdrawn, and the expectation is that the process of financial reform that has now begun will lead to integrated financial markets. In line with changes in policies, steps have been taken to simplify administrative procedures and regulations, in order to reduce dependence on the government's detailed planning and management of the economy.

In addition to meeting immediate, short-term objectives such as the correction of fiscal disequilibrium and controlling inflation, these changes in economic policies and procedures are aimed at stepping up economic growth, improving market efficiency and competitiveness, and integrating the Indian economy into global markets. These changes have imparted a new dimension to the role of megacities in the Indian economy, although the precise impact of these changes is still uncertain. For instance, there exists no understanding of the likely impact of export-oriented industrial development, reduction of subsidies, delicensing, and deregulation of a large portion of the industrial sector on the pace and pattern of urban growth and distribution of activities over space. One body of thought has held that the import-substitution policies of the past several decades, reliance on the domestic market as opposed to international markets, provision of urban services and in-

infrastructure at subsidized rates, and licensing and countless regulations tended to favour concentration of activities in capital cities and large market areas. Export orientation could change the pace and pattern of urbanization and may lead to growth of different types of cities. Similarly, delicensing could mean dispersal of economic activities and consequently a more balanced spatial distribution of population.

The effects of economic liberalization on investment flows into shelter, infrastructure, and services are also not clear. Investments in these sectors are influenced by (a) legislation such as the Urban Land (Ceilings and Regulation) Act, and rent control acts, (b) regulations and procedures in respect of transactions in land and shelter, and (c) the application of appropriate pricing (cost recovery, tax rates, and so forth). The new economic policies require that the market should play a dominant role in regulating the demand and supply of such goods and services. Allowing markets to play a dominant role will mean repealing of legislation which hamper freer transactions in land and housing, transparent and simplified regulations and procedures, and economic pricing that would ensure a fair return on investments. Meeting these conditions should lead to a higher degree of sustainability in the functioning of cities and urban markets.

Elimination of subsidies and support is a crucial component of any effort aimed at sustaining megacities. Not only are subsidies and other support difficult to target, they have also led to misallocation, waste of resources, and inefficiency in the infrastructure and service sectors. The new economic policies focus on the gradual withdrawal and elimination of subsidies, which should bring about efficiency and enhance the flow of investments into these sectors.

The process of economic liberalization, which is expected to reinforce the second cycle of reforms, will have major ramifications for cities and the network of city-wide institutions and the financial framework. The central task will be to adjust the frameworks to meet the changing requirements of the national and international economies. It will entail competition between cities. Land, infrastructure, and services, the efficiency with which these can be delivered, the accountability of institutions, and their overall roles will be decisive in determining the competitiveness of cities.

## NOTE

1. Customarily, any city with a population above an arbitrarily established threshold is defined as a megacity. The threshold commonly used is 8 million persons. Such a definition, however useful for demographic purposes, leaves much to be desired as it does not reflect the variety of urban characteristics that are associated with a given population concentration. In a global context, therefore, megacities have come to be defined by their special characteristics such as the spatial impacts of the new emphasis on the production of financial and information services, the ability of cities to attract global investors, new telecommunication technology, and access to the global media.

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