India's Decelerating Urbanization and Its Consequences for Country's Socio-Economic Development

The rapid urbanization and a high rate of urban population growth in the developing countries during fifties and sixties of the past century attracted the attention of a large number of social scientists and policy makers. By that time most of the developed countries had already achieved a high level of urbanization. The western model of development found increasing urbanization an integral part of the development in which cities remained as the engines of national socio-economic growth. On the basis of western experience urbanization is considered a finite process, a cycle through which nations go in their transition from agrarian to industrial society (Davis, 1972). A basic feature of this transition is the profound switch from agricultural to non-agricultural employment. The two important hallmarks of the industrial society are the concentration of more and more economically active population in manufacturing and service sectors and since both manufacturing and service activities have higher productivity they absorb more manpower by paying higher wages and hence population agglomeration. In such a framework it was expected that many of the developing countries many of which got independence during fifties, would follow the western strategies of economic development and consequently the western path of urbanization. During fifties and sixties of the twentieth century a large number of developing countries indeed experienced a very rapid growth in their urban population, particularly in their capital or few leading cities, resulting into high degree of primacy. Many scholarly writing on world urbanization in the fifties predicted that, if the pace of increase that obtained between 1950 and 1960 were to remain the same, by 1990 the fraction of the world's people living in cities of 100,000 population or larger would be more than half and most of them will be residing in developing countries (Davis, 1972). Many scholars and governments in the developing countries considered this rapid growth of urban population and high primacy (concentration of population and activities in the leading cities) as a major impediment in realizing their development goals (U.N., 1983) of equitable development. Several explicit and implicit policies were adopted by governments of many developing countries to slow down the urban growth particularly the population growth in large cities, by focusing on reducing the migration to these cities from rural areas. The latest data on world urbanization,

however, shows that at the beginning of the twenty-first century, a number of developing countries do not have even one third of their population in urban areas. Besides, there is a noticeable slowing down of the rate of urbanization as well as rate of urban population growth in the past two three decades in most of the developing countries. The latest census of India (2001) also confirms this slowing down of urbanization in India. In this paper an attempt is made to analyze the trend of urbanization in India and in major states and the probable reasons for the slow down of urbanization and its socio-economic implications.

There has remained a great academic interest in the Indian urbanization process. A number of scholars have analyzed India's urban experience, particularly in the post independence period (Bose, 1978; NIUA, 1988; Mohan Rakesh, 1996). Though detailed and final population data by rural urban classification are yet to be released for 2001 census, the provisional population data for rural and urban areas as well as for individual urban centers have been either published or put on the census website for most of the states of India. From this sketchy data, it is hard to have a very detailed analysis of the changes in the country's urbanization scene for the latest census decade and underlying reasons of decelerating urbanization. Nevertheless using the available data we have tried to focus on some of the important aspects of country's urbanization process in the past 30 years and have highlighted some of the issues that demand serious attention from planners and policy makers.

Level and Tempo of Urbanization:

Table-1 presents trend in some demographic indicators of the urbanization process in India during the past 100 years. Definitional changes adopted by different Indian censuses to define a place as urban, however, should be kept in mind while interpreting this data. The major changes in the definition of urban in India took place between 1951 and 1961 as a result of which 810 towns of 1951 were declassified as rural in 1961. From 1961 onwards the definition of an urban place in Indian census[*] has remained more or less stable. A quick glance at this table shows that,

[*] *Indian Census defines towns and cities primarily in terms of forms of local self-government. All places with a municipality, corporation, cantonment board, or notified area committee are considered urban centers. Other settlements which do not satisfy the preceding criterion but fulfill the following conditions are also considered urban in the Indian census 1) having a minimum population of 5,000; 2) having at least 75 percent or more male working population engaged in non-agricultural activities and 3) having a density of population of at least 400 persons per sq. km. In addition to these, some places that do not*

there has been a steady increase in the size of country's urban population in the past 100 years. The urban population of the country has increased by more than 10 times from 26 million in 1901 to 285 million in 2001 (Figure 1). India now not only has the second largest urban population of the world; the size of its urban population exceeds even the total population of each country of the world except China and India. In 1901 nearly 11 percent of the country's population lived in urban areas. This proportion increased to 17 percent in 1951 and about 28 percent in 2001, a two and a half times increase in the proportion urban in 100 years. India now holds a very unique urban scenario, a country with swelling urban population but without much urbanization. In 1990 there were only 10 out of the 27 countries of East and South East Asia that had a level of urbanization below that of India (Gupta, 1996).

The statistics about the annual exponential growth rate of urban population and rate of urbanization (average annual rate of change in percent urban) in India during past hundred years shows that urban population of India grew by less than 1 percent per annum up to 1921. In the next three decades there was a continuous acceleration in the growth rate of country's urban population from 1.7 percent per annum during 1921-1931 to 3.5 percent per annum during 1941-51. During 1951-61 the growth rate of urban population declined slightly mainly because of the declassification of a number of towns due to definitional changes. In the next two decades i.e. during 1961-71 and 1971-81 there was a steady acceleration in the growth rate of urban population. After peaking up at 3.8 percent per annum during 1971-81, the rate of urban population growth has decelerated in the subsequent two decades i.e., during 1981-91 and1991-2001. The trend in the rate of urbanization also remained fluctuating. But never before, India has registered a deceleration either in the growth rate of its urban population or rate of urbanization for two consecutive decades. The process of urbanization in post Independence period was the fastest during 1971-81. The size of urban population increased from around 109 million in 1971 to around 160 million in 1981, an addition of nearly 50 million people. The number of urban centers increased from 3126 in 1971 to 4029 in 1981, an addition of 903 urban centers. The level of urbanization increased from around 20 percent to 23 percent and country recorded an average

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satisfy these three criterion are also classified as urban, if they have distinct urban characteristics such as major project colonies, areas of intensive industrial development, railway colonies, university campus, important tourist centers etc.

annual growth rate of urban population of 3.8 percent per annum. The rate of urbanization also speed up from 1.06 percent in 1961-71 to 1.72 in 1971-81. The results of the 1991 census regarding urban population growth and rate of urbanization, however, were far below the expectation. In spite of a near closeness of the projected and enumerated total population in 1991, the size of enumerated urban population was far below the projected urban population for 1991. The United Nations projected India's urban population in 1990 about 230 million (medium variant). The Expert Committee also projected India's urban population in 1991 around 230 million (Registrar General Of India, 1988). Thus enumerated urban population of India in 1991 was about 13 million short of the projected urban population in 1991.

The average annual growth rate of urban population during 1981-91 declined to about 3.1 percent compared to 3.8 percent during the previous decade, though the growth rate of total population remained more or less stable. The rate of urbanization also declined from 1.72 percent to 1.02 percent per annum during the same period. The level of urbanization according to 1991 census remained around 26 percent nearly 1 to 1.5 percentage point lower than what was projected. This slowing down of the pace of urbanization became a matter of hot debate among the scholars. Initially the onus of this decline was passed on the data error, more particularly on the under enumeration of the urban population in 1991 census. More detailed studies, however, showed that the recorded slow down of the urbanization was genuine and could not be attributed solely to under enumeration, though it was accepted that urban population of 1981 was slightly overstated due to the wholesale administrative notification of towns in some states (Mohan Rakesh, 1996). Again this slow down of urban population growth rate was supported by the fact that a large number of states as well as urban centers at all levels experienced this slow down. Later on more detailed studies attributed this slow down due to identification of relatively fewer new towns, decline in the volume of rural to urban migration and increasing concentration of population in the rural areas adjacent to large urban centers (Premi, 1991; Gupta, 1996). Nevertheless, most of the scholars considered this slow down in urbanization only temporary-phenomena and commented that it "would be a mistake to presume that urbanization will continue to be slow during 1990s and beyond" (Visaria, P., 1997, Mohan Rakesh, 1996). It was also expected that an extensive reclassification of localities or large villages as towns would become necessary during the 1990s. But the data available in provisional 2001 census shows that

the trend of this slowing down of urbanization has continued even during 1991-2001decade. The average annual growth rate of urban population during 1991-2001 has declined to around 2.7 percent. Similarly the rate of urbanization has also declined to 0.8 percent per annum.

It is interesting to see that the rate of rural population growth for the country as a whole during all three decades since 1971 has remained more or less stable and there is a steady decline in the urban rural growth differentials over the past three decades (Table 3). The projections of urbanization prepared prior to the 1991 Census envisaged that by 2001 the share of urban population in the country would reach about one-third, very close to the level observed in the two most urbanized states of India in 1981 (Maharashtra and Tamil Nadu). Later on the projections for 2001 were modified in the light of the results of the 1991 census. According to the Planning Commission, by 2001 census about 30.5 percent of the Indians would be residents in urban areas (India, Planning Commission, 1992). But the level of urbanization as per 2001 census is nearly 2.5 percentage points below than what was projected by Planning commission for 2001.

State Wise Pattern and Trend of Urbanization and Urban Growth:

The urban scene of India cannot be understood properly without understanding the spatial dimension of urbanization and urban growth. Table 2 provides trend in the level of urbanization during 1971-2001 for 17 major states of India, having a total population of 5 million or more in 2001. The data relate to undivided states of U.P., Bihar and Madhya Pradesh due to non-availability of data separately for Uttaranchal, Jharkhand and Chattisgarh, newly carved states from U.P., Bihar and Madhya-Pradesh respectively. Till 1991, Maharashtra was the most urbanized state of India. In 1981, Tamil Nadu followed Maharashtra in the level of urbanization. In 1991, however, Gujarat replaced Tamil Nadu as the second most urbanized state of the country after Maharashtra. The result of the 2001 census with respect to level of urbanization, however, is a great surprise as Tamil Nadu surpassed both Maharashtra and Gujarat and became the most urbanized state of the country. With only 10 percent of its population living in urban areas, Himachal Pradesh remains the least urbanized state of the country. Nevertheless, with few exceptions the regional pattern of urbanization has remained quite stable over past 30 years. The western and southern states have always remained relatively more urbanized than northern,

central and eastern states. All the four southern states i.e. Tamil Nadu, Karnataka, Kerala and Andhra Pradesh and two western states of Maharashtra and Gujarat generally had the level of urbanization higher than the national average whereas in northern states only Punjab and in eastern states only W. Bengal have that distinction. These state wise differentials in the level of urbanization are found to be closely following the spatial diversity in industrial and agricultural development (NIUA, 1988).

There is no consistent trend in the state wise differentials in the rate of urbanization during the last three decades. During 1971-81 Orissa registered the highest rate of urbanization (4 percent per annum). In some less urbanized states also (U.P., Bihar, M.P., Haryana, and Andhra-Pradesh) the rate of urbanization was between 2-3 percent per annum. The more urbanized states registered relatively lower rate of urbanization. In the next decade Kerala registered the highest rate of urbanization (4 percent per annum). In general, the rate of urbanization during this decade also was relatively higher in the less urbanized states and vice-versa. However, with the exception of few states (Himachal Pradesh, Kerala), the rate of urbanization declined significantly in most of the states during 1981-91 decade. During 1991-2001, Tamil Nadu has experienced the highest rate of urbanization (2.8 percent per annum) followed by U.P. (almost 2 percent per annum). This exceptionally high growth rate of the urban population in Tamil Nadu is because of the administrative declaration of a large number of rural settlements as urban in 2001. Kerala has registered a negative rate of urbanization during 1991-2001. In most of the states the rate of urbanization during latest census decade has further declined compared to previous decade.

Since rate of urbanization does not tell anything about the level of urban or rural population growth rates, in **Table 3** we present the average annual growth rate of urban and rural population as well urban rural growth differentials for the 17 states for 1971-81, 1981-91 and 1991-2001 periods. The growth rate of urban population for states during 1991-2001 varied from around 4-5 percent per annum in Haryana and Tamil Nadu to as low as 0.8 percent per annum in Kerala. Andhra-Pradesh, W. Bengal, and Bihar were the other states that registered the urban growth rate lower than national average. The trend in the urban population growth rates shows that urban population growth rates have declined continuously during the next two decades in most of the

states. Tamil Nadu, Punjab and Haryana are the only states that have experienced acceleration in their urban growth rates during this period. In general economically developed states have registered lower urban growth rates compared to economically backward states with low and moderate levels of urbanization. For example, during 1971-81 period, out of the seven states that registered growth rate of urban population above the national average (3.8 percent per annum) 5 were economically backward states (Orissa, Uttar-Pradesh, Bihar, Madhya-Pradesh, and Rajasthan) and only two (Haryana and Karnataka) were economically developed states. This pattern has continued even during 1981-91 and 1991-2001.

It is significant to note that many of the states that have registered higher growth rates of urban population have also registered higher growth rate of rural population. During 1971-81 Rajasthan, Himachal Pradesh, Bihar, Gujarat, Assam, Haryana, West Bengal and Uttar-Pradesh registered the average annual growth rates of rural population higher than the national average. Some of these states (Bihar, Himachal Pradesh, Rajasthan and Uttar-Pradesh) also registered acceleration in their rural population growth rate during 1971-81 compared to earlier decade. During 1981-91, Assam, Bihar, Madhya-Pradesh, Uttar-Pradesh, and West Bengal not only registered growth rate of rural population above the national average but also experienced acceleration in it. The acceleration of rural population continued even during 1991-2001 in Bihar, Rajasthan and Uttar-Pradesh. In addition to these three states, growth rate of rural population also accelerated in Gujarat, Jammu& Kashmir and Kerala during 1991-2001. Thus we see that many of the economically backward states that have experienced relatively higher growth rate of urban population have also experienced higher growth rate of rural population. One very important reason for their higher growth rates of population in rural and urban areas is their continuing higher natural increase rates both in rural and urban areas.

The growth rate differentials between rural and urban population across the states also do not show any consistent pattern over the three decades and are similar to that shown by rate of urbanization. For country as a whole there is a steady decline in the rural urban growth differentials from 2 percentage points during 1971-81 to one percentage point between 1991-2001 (Figure 2). Interestingly, in all the less developed states there has been a continuous decline in the difference between rural and urban population growth rates. This is quite consistent with

the fact mentioned above that in less developed states the population growth in both rural and urban areas is mainly because of their higher natural increase rates and urban areas in these states do not offer much opportunities to attract labour from their rural areas. In the economically advanced states, either there has been a decrease during 1981-91 and then increase in the gap between rural urban growth rates or vice versa. Assam is the only state that has experienced a steady increase in the gap between rural and urban population growth rates.

Components of Urban Population Growth:

For formulating realistic policies with respect to urbanization, it is important to have clarity about the components of urban population growth. Urban population growth results from 1) natural increase, 2) rural to urban migration, 3) reclassification, and 4) boundary changes of the existing urban centres. However, it is difficult to calculate the precise contribution of the different components of urban population growth due to problems inherent in the data available. For example, the data on the population added in the urban areas due to boundary changes is often not available. Data are available only on one or two components and share of other components is often estimated as residual.

The estimates provided by Registrar General's Office shows that during 1951-61, nearly 41 percent of the urban growth was because of rural to urban migration. According to these estimates the share of rural to urban migration in urban population growth declined sharply in the subsequent decades and has remained more or less constant during 1961-71, 1971-81 and 1981-91 (18-20 percent). Even after making the necessary adjustments in data by some authors we do not find much difference in the share of different components in India's urban population growth. For example Visaria has also provided the estimates of the components of urban population growth for 1961-71, 1971-81 and 1981-91. These estimates are presented in Table 4. According to his estimates natural increase contributed around 60 percent of the urban growth during 1961-71 and 1981-91. His estimates about the contribution of rural to urban migration during 1961-71 and 1971-81 are quite close to Registrar General's estimates. For 1981-91 period his estimate for the contribution of rural to urban migration is slightly higher i.e. 28 percent compared to 20 percent as given by the office of the Registrar General. All these estimates show that the contribution of the net reclassification of the settlements has declined continuously in

urban growth from 15 percent during 1961-71 to 13 percent in 1971-81 and 9 percent during 1981-91 (Table-4) and this seems to be the most important factor in the slow growth of urban population during 1981-91. For 1991-2001 we have the SRS data about the birth, death and natural increase of the rural and urban population. The natural increase of urban population is 1.44 percent during 1991-2000, which means that almost 55 percent of the urban growth during the latest decade is caused by natural increase and the remaining urban growth is due to rural to urban migration, reclassification and boundary changes.

Distribution of Population and Growth by Urban Size Class:

The other important aspect of Indian urbanization process that has drawn attention of the experts is the top-heavy urban hierarchy and the metropolitan growth. This urban hierarchy of India can be studied by the distribution of urban population and urban centres across different population size categories. Indian census classifies urban centers into six population size categories i.e. class I cities (population 100,000 or more), class II towns (population 50,000-99,999), class III towns (population 20,000-49,999), class IV towns (population 10,000-19,999) class V towns (population 5,000-9,999) and class VI towns (population < 5,000). Since distribution of urban centers by population is not yet available for all the states for the 2001 census, in Table 5 we present the distribution of urban centers and urban population by size class for 1961, 1971, 1981, and 1991. In this table all the constituent units of an urban agglomeration are considered as one urban center. Of the 3690 urban centers in 1991, 296 were class I cities. There is a steady increase in the number of class I cities as well in the share of their population to country's total urban population. These cities together possessed nearly half of the country's urban population (51 percent) in 1961. In 1991 they possessed around two third (65 percent) of country's total urban population. In contrast the proportion of urban population in most other size class categories has remained fluctuating or declining. This changing pattern of urban concentration is often seen as an outcome of the faster growth rate of larger cities and declining or stagnating growth of smaller urban centers. Very often this argument is supported by calculating the growth rate of population in different population size categories between decades. However, this is a purely statistical artifact and is expected because being at the top of the urban size class hierarchy class I category adds a number of urban centers in every subsequent decade that graduate from lower categories. This can be elaborated by calculating the growth rates of urban

centers by size class (instantaneous approach) as well calculating the population growth rate for common urban centers (cohort approach) at two point of time (Table 6). It can be seen that the decadal growth rate of class 1 cities is much higher in each decade when calculated using instantaneous method, but when the growth rate in different size class of urban centers is calculated using cohort approach it does not differ much across different population size categories. In reality in each size class there can be some fast growing cities and towns and some slow growing cities and towns.

The emergence and dominance of metropolitan cities (as per Indian census a city having a population of 1 million or more is called a metropolitan city) is another challenging aspect of India's urbanization. In 1901 only 1 city i.e. Calcutta has more than a million population. By 1981 this number increased to 12 and further increased to 23 in 1991 and 35 in 2001. The metropolitan cities together possessed nearly 8 percent of country's total population and 33 percent of country's urban population in 1991 (Table 7). As per provisional figures of the 2001 census, metropolitan cities together possessed nearly 11 percent of country's total population and 38 percent of country's urban population. However, in a country with vast territorial expense, a billion people, and a long urban history, so many large cities are expected. One favourable aspect of this metropolitan growth is that now we have a very favourable spatial spread of these large cities that may help in achieving the goals of balanced urban development.

Since 1991 Mumbai has become the most populous city of the country followed by Kolkata, Chennai and Delhi. Since long these four cities have remained at the top of the urban hierarchy of the country. It will be interesting to look into the growth rate as well as the migration situation in these four leading cities of the country. By 2001 the population of Greater Mumbai U.A. has grown to about 16.4 million followed by 13.2 million in Kolkata, 13.0 million in Delhi and 6.4 million in Chennai (Table 8). Thus except Chennai, the other three metros have already crossed a 10 million mark. The rate of population growth in Calcutta and Chennai UAs during 1991-2001 is even lower than the national urban growth rate and the urban growth rate of their respective states. During the last two decades the population growth rates have declined for Greater Mumbai and Chennai urban agglomerations. It has remained almost stable for Kolkata UA. For Delhi U.A., however, the rate of population growth continues to be more than 5 percent per annum even during 1991-2001. The population growth in these cities is taking place mainly in

the nearby urban centers that have been included in the respective urban agglomeration rather than in the main city. However, what is important with respect to these cities is their inordinate size and the huge population that is added to them in every decade.

Migration to these cities has always remained a matter of serious concern and often it is held responsible for the rapid population growth in these cities. Many perceive migration as a main reason for deteriorating quality of life and increasing unemployment rates in urban areas. There is no denying of the fact that migration has played a very significant role in the growth of these cities. Over the decades, however, migration is losing its importance. Table 9 presents the proportion of migrants and in-migration rates by sex for these cities for 1971, 1981 and 1991. In 1991 the proportion of inmigrants ranged from 24 percent in Kolkata to 39 percent in Delhi. The proportion of migrant population as well as in-migration rates for both the sexes have declined very significantly in every metro during past two decades. In general the in migration rate has remained higher for females than for males.

As expected, employment continues to be the most important reason for male migration in all these cities. For females, marriage and `family moved' are the two most important reasons. The data on employment related migration is not directly comparable for 1981 and 1991 because business as a reason for migration was not included in 1981 and has been considered a separate reason in 1991. But even if we combined employment and business related migration there is slight decline in employment related male migration in Mumbai and Kolkata. The proportion of females moving to Mumbai and Kolkata due to employment has also remained almost constant. However, employment related migration of males has increased significantly in Delhi and Chennai. In Chennai employment related female migration has also increased during 1981 and 1991.

Discussion and Conclusions

The above analysis suggests that perhaps India has already passed the phase of rapid urban growth. Even by middle of 21 century, majority of India's population is expected to live in rural areas. Contrary to popular perception, rural to urban migration has not been a very important

factor in India's urban growth in the past three decades and its share in urban population growth has remained more or less constant. The process of reclassification of rural settlements in the category of urban has also slowed down. It seems that the level of urban population growth rate has remained very much tied up with the level of natural growth rate of urban population. The rate of natural increase of urban population has declined from 1.97 percent per annum during 1971-1981 to 1.44 during 1991-2001. It is expected that the overall urban growth rate may decline further in the coming decades unless there is an increase in net rural to urban migration or faster reclassification of rural settlements into urban category. This steady decline in urban population growth rate, therefore, should be considered a welcome sign. However, what remains a matter of concern is the decline in the rate of urbanization at such a low level and a decline in the rural urban growth differential. It is seen that compared to 1971-81 the rates of overall urban population growth and urban natural increase have declined by 30 percent and 27 percent respectively during 1991-2001 decade. During the same period the decline in rural population growth rate and rural natural increase rate is only 4 percent and 16 percent respectively. This implies that rural areas add a huge population due to natural increase which remains tied up there only and does not get transferred to urban areas. During 1981-2001, 234 million people were added in the rural areas of India. Thus we see that in just 20 years a country of Indonesia's size (232 million in mid 2002, U.N. estimates) is added in country's rural areas. The number of rural to urban migrants on the basis of place of last residence increased from around 23 million in 1971 to 33 million in 1981 and 40 million in 1991. But the growth of urban migrant population is 74 percent compared to 99 percent of overall growth of urban population during 1971-'91 period. The intra decadal (migrants with 0-9 years duration) rural to urban migrants constituted about 47 percent of the total rural to urban migrants both in 1971 and 1981 but their share has declined to 39 percent in 1991.The intra decadal rural to urban migrants constituted around 2.5 percent of the total rural population of India both in 1971 and 1991. The intra decadal rural urban migrants formed only 13 percent of the total rural population increase during 1981-91. Thus we see that rural to urban migration could transfer only 1 out of eight persons who were added due to population increase in rural areas during 1981-91.

This situation is in sharp contrast to what happened in developed countries during the course of their increasing urbanization. The increasing urbanization in developed countries was totally

migration-led, as the rate of out migration was so high that it not only compensated to negative rate of natural increase in cities but also kept the rate of urban population growth higher than rural population growth rate. As a result the countryside started de-populating along with increasing urbanization. This is not happening in India. Tamil Nadu is the first state to experience a negative rural growth rate during 1991-2001. In most of the other states, particularly in more populous states the rate of rural population growth still remains high and will continue to remain so for quite some time.

Several factors seem probable in holding back ever-increasing rural labour from migrating to cities. It is probable that rural development programmes such as Rural Labour Employment Guarantee Programme (RLEGP), Integrated Rural Development Programme (IRDP), and Jawahar Rojgar Yojana, (JRY)) etc. could generate more employment in rural areas, thus restricting rural out migration to cities. There is also evidence that significant increase in rural productivity in some of the states like Punjab, Haryana, and Gujarat have attracted large rural labour from poorer states like U.P., Bihar, and Orissa to their rural areas which otherwise would have migrated to cities.

However, it is felt that instead of rural development, it is the deceleration in rural productivity in some of the states and increasing state-wise and regional disparities in rural productivity throughout the 1970s and 1980s (Mohan Rakesh, 1996) that have kept large rural labour stagnating. The share of agriculture in GDP has fallen from 55 percent in 1950-51 to 32 percent in 1990-91 whereas labour engaged in agriculture continues to account for almost two-thirds of the labour force. Though the unemployment rates in 1999-2000 are higher in urban areas (4.8 percent) than in rural areas (1.5 percent), it is well accepted that the incidence of underemployment and disguised employment remains much higher in rural areas compared to urban areas. The unemployment rates have remained almost unchanged during 1983-1999-2000 both in rural and urban areas (The National Human Development Report 2001). In 1999-2000 almost a quarter of population in rural areas (27.09 percent) and urban areas (23.62 percent) were below poverty line. Though there has been significant decline in the percentage of population below poverty line both in rural and urban areas during 1983-1999-2000 in all the states, but even now in some of the major states (Orissa, Bihar, Madhya-Pradesh), more than one-third (37-

48 percent) of the rural population lives below poverty line. The deceleration of urbanization could as well be contributing to further impoverishment of rural areas of many of the economically poorer states rather than holding back the rural labour due to greater rural prosperity.

The changing nature of urban economy might have also acted as a deterrent for migration of illiterate or semi literate, and unskilled rural migrants. A large rural labour force still continues to be illiterate or semi literate and unskilled or semiskilled. The shift of heavy industry dominated manufacturing sector to software and high tech Information Technology based industrial development in few metro cities would be a dissuading factor for this type of labour to migrate to cities. This is reflected in the fact that the proportion of labour force employed in manufacturing fell for the first time in the 1980s since 1931. The slow down of population growth in many leading cities of the country could have also restricted the employment opportunities in informal sector as quite a large number of informal activities in these cities developed due to their fast population growth.

The deteriorating situation of housing and other infrastructure and worsening of quality of urban life due to air, water and noise pollution in large cities might have also acted as a deterrent to rural people to migrate to cities. It is too evident, that Indian cities suffer from acute problems of deteriorating infrastructure in the form of poor housing, inadequate availability of drinking water, paucity of drainage and sewerage facilities, virtual breakdown of local public transport, and pollution. Most of the metro cities have large number of houseless population and crowding conditions continue to deteriorate. For more than one fourth households in Mumbai and Kolkata the number of persons per room was found 5 or more (NFHS-2, 1998-99). Squatter and slums have become an integral part of the urban India. There has been a steady increase in the proportion of population living in slums, particularly in the major metropolitan cities. Nearly half of Mumbai's population in 2001 (49 percent) was living in slums. A continuous increase has been registered in the percentage of slum population in other metropolitan cities also (Table 10). These slums present very dismal picture of urban living and lack most of the basic services, and are marked with gross environmental deficiencies. Basically, it is the squalor and stinking of these areas and the sub-human living conditions in the slums that have over scored the positive

role played by urbanization. It is, however realized that slum growth cannot be equated anymore with poverty as traditionally understood. While, affordability of housing is important, several policy and market distortions seriously limit the availability of land and virtually deny access to lower income groups(Sivaramkrishnan, 2002).

Most big cities have also experienced a steady decline in the quality of their physical environment. Air and water pollution are the serious problems encountered in most of the metro cities of India. The concentration of ambient air pollutants in many of the cities are high enough to cause increased mortality, disease prevalence, deficits in pulmonary function and cardiovascular and neurobehavioral effects. Air pollution is also a serious cause of damaging the material resources of cities, such as buildings and various works of art. According to a World Bank article, Delhi is one of the world's most polluted cities. In fact, in 1999, the average total suspended particulate (TSP) level in Delhi was 378 micrograms per cubic meter – approximately five times the World Health Organization's annual average standard. Furthermore, TSP levels in Delhi exceeded the WHO 24-hour standard on 97 percent of all days on which readings were taken (The Hindu, 2000). A recent survey found a significant concentration of lead in the children's blood in Mumbai and Delhi cities. Overall 45 percent of children in Delhi and 50 percent of children of age three years or less were found to have elevated levels of lead in their blood (10.0 µg/dl or higher). The situation in Delhi was particularly challenging as 10 percent of the children have a lead level of 20 µg/dl or higher and 0.2 percent have a lead level of 45 µg/dl or higher in their blood. Eight percent of children in Mumbai also have a lead level of 20 µg/dl or higher in their blood (NFHS-2, 1998-99).

The ever-increasing number of motor vehicles in the metro cities is the major cause of the air pollution in these cities. Air quality surveys shows that about 50-60 percent of air pollution in the cities is from automobile emissions. Among the four metro cities Delhi has the largest number of registered vehicles of all types. In 1996 Delhi has 2630 thousand motor vehicles. Each of our metro cities adds a few hundred vehicles daily mainly because of the lack of proper public transport facilities. Delhi tops the list with about 650 (The Hindu, 2002). Increasing number of two wheelers and trucks are mainly responsible for increasing number of road accidents. A large number of these road accidents turn out to be fatal.

Waste disposal also remains a serious problem in these cities (Table-12). A large amount of this waste remains uncollected in streets and roads exposing citizens to all kinds of harmful pathogens and bacteria. In 1996 Mumbai generated the largest amount of solid waste i.e. 5355 tonnes per day followed by Delhi (4000 tonnes/day), Kolkata (3692) tonnes /day) and Chennai (3124 tonnes /day). The problem of solid wastes remains challenging in all these cities because most of the items included in solid waste are non-degradable in nature, and cause serious environmental health hazards. The plastic waste has become a serious environmental and health problem (CPCB, 1998).

Water pollution is another important problem. In 1995 Mumbai generated approximately 2228 ml/d domestic wastewater followed by Kolkata (1383 ml/d) and Delhi (1270 ml/d). The generation of industrial wastewater is also highest in Mumbai. Nevertheless, compared to Delhi and Kolkata (75-80 percent) the collection of wastewater is better in Chennai and Mumbai (90-93). A large amount of this collected wastewater in Mumbai and Chennai is disposed in the sea while in Kolkata and Delhi it is disposed in the Hugli and Yamuna rivers respectively, thus making these water bodies highly polluted.

Noise pollution is another problem. In all the metro cities, noise pollution levels have been measured above than the prescribed standard. Kolkata experienced the highest noise pollution level in all the areas like residential, commercial, sensitive and industrial in both time, day and night (CES, 1995).

Deteriorating urban health has become a critical issue because of the emergence and spurt in some of the diseases related to poor environmental sanitation and poor living conditions such as malaria, tuberculosis, as well as HIV/AIDS and other sexually transmitted diseases. The relatively limited plague epidemic that began in Surat in1994 had created a serious scare in India about the consequences of the unregulated urban growth.

All these problems coupled with lack of productive jobs would have discouraged the potential rural migrants searching for better livelihoods in cities. This argument can be supported by the

fact that the growth of value-added in industry and in the tertiary sector was in the range of 6 to 8 percent per annum, whereas that of agriculture was in the range of 2.5 to 3 percent per year during the same period. Thus in spite of a much lower productivity of agricultural sector, a large rural labour remained tied up in rural areas (Mohan Rakesh,1996).This slow down of urbanization then becomes a matter of serious concern and requires attention from national policy makers and planners. This also provides city planners and administrators an opportunity to take corrective actions in order to make cities more conducive for economic and social development and improve upon the quality of urban life with respect to physical and social environment. Keeping the fact in mind that a large number of rural people migrate to cities seeking employment, the first and foremost task is to once again orient the industrial sector to generate more jobs that absorb large rural labour, without compromising productivity. For achieving this it is necessary to think some innovative and affordable solutions that may be implemented in the rural areas, particularly in the poorly developed states without incurring huge investments. Rural labour is also to be made more responsive to industry needs by providing necessary skills and technical competency by opening a variety of vocational centers in rural areas for illiterate and less educated labour. The case for improving urban infrastructure is strong and long overdue. However, programmes regarding the urban infrastructure can only be supportive of this larger endeavour of generating more employment opportunities and making cities as engines of growth. This should not be seen as a counter argument to the need and importance of developing the rural areas but it is an attempt to bring into focus the positive role to be played by urbanization in the overall national development. There is a need to change the academic antipathy of sixties and seventies that saw urbanization, particularly the growth of big cities as ‘cancerous’ rather than ‘catalysts’ of development and hence projecting urbanization as an undesirable phenomena in the process of overall national development. This has negatively affected the policies towards urbanization in developing countries as well as attitude of donor agencies towards supporting the development of cities. The happenings in past century show that urbanization is inevitable, and needs to be considered a positive force in the overall national development. The response to increasing urbanization and growth and development of cities at our stage of development needs to be viewed positively, though there is no denial of the fact that it should be more balanced and more responsive to national development goals. Our cities need to be better managed and to be made better habitable. Lot needs to be done in the field of the

urban governance. The 74th Amendment in the constitution marks a significant set of initiatives in India to make urban local bodies as institutions of self-governance. Urban local bodies have to be made accountable for efficiently managing the cities. Much more can be learn from the experience of the tremendous rapid improvement in infrastructure in some of the large cities in East Asia and Latin America in spite of a much rapid urbanization in their respective countries.

The latest data on world urbanization shows that at the beginning of the twenty-first century a number of developing countries including India do not have even one third of their population in urban areas. The latest census results show that in India there is a noticeable slowing down of the rate of urbanization as well as rate of urban population growth in the past two decades. The rate of rural-urban migration as well as contribution of rural-urban migration in country's urban population growth has remained almost stagnant over the past three decades. There is a significant shift in the country's urban hierarchy. Many of the larger cities of the country like Mumbai, Kolkata, Chennai etc. that remained at the center stage of the country's urbanization process and earlier attracted lot of attention from the scholars and policy makers due to their rapid population growth and heavy in migration have recorded only modest rates of population growth. However, there is noticeable sub-urbanization process around all these cities. In contrast some of the inland cities like Delhi, Bangalore, Hyderadabad etc have become the new happening centers, bursting with activities and people. All these changes in India's urbanization process not only need to be studied in detail but have significant implications for the overall socio-economic development for country and states, particularly for the states which continue to experience high natural increase both in rural and urban areas and leg behind in socio-economic development. Currently Indian states are passing through different phases of demographic and socio-economic transition In this paper we discuss the changes in different aspects of urbanization process and the changing industrial scenario of India using data from secondary sources such as different censuses, NSSO surveys and other sources.

Table 1 shows that there has been a steady increase in the size of country's urban population in the past 100 years. The urban population of the country has increased by more than 10 times from 26 million in 1901 to 285 million in 2001. India now not only has the second largest urban population of the world; the size of its urban population exceeds even the total population of each country of the world except China and India. In 1901 nearly 11 percent of the country's

population lived in urban areas. This proportion increased to 17 percent in 1951 and about 28 percent in 2001, thus registering about two and a half times increase in the proportion urban in 100 years. According to Planning Commission India was expected to have nearly 30.5 percent of her population in urban centers by 2001(India, Planning Commission, 1992). But the level of urbanization as per 2001 census is nearly 2.5 percentage points below than what was projected by Planning commission for 2001. Thus India now holds a very unique urban scenario, a country with swelling urban population but without much urbanization.

During 1961-71 and 1971-81 there was a steady acceleration in the growth rate of urban population. After peaking up at 3.9 percent per annum during 1971-81, the rate of urban population growth has decelerated to 3.9 percent per annum during 1981-91 and 2.7 percent per annum during 1991-2001. Similarly there is a steady decline during 1981-2001 period in the rate of urbanization (change in percent urban) and urban rural growth differential. For example for country as a whole there is a steady decline in the rural urban growth differentials from 2 percentage points during 1971-81 to one percentage point between 1991-2001. This slow down of urban population growth rate at national level has also been supported by the fact that a large number of states as well as urban centers at all levels have experienced this slow down. In general, trends in the state wise rate of urbanization as well as urban rural growth differentials have remained fluctuating (Tables 2&3). Interestingly, in all the less developed states there has been a continuous decline in the difference between rural and urban population growth rates. In the economically advanced states, either there has been a decrease during 1981-91 and then increase in the gap between rural urban growth rates or other way round. Assam is the only state that has experienced a steady increase in the gap between rural and urban population growth rates. It is interesting to see that the rate of rural population growth for the country as a whole during all three decades since 1971 has remained more or less stable and there is a steady decline in the urban rural growth differentials over the past three decades. The economically backward states that have experienced relatively higher growth rate of urban population experienced higher growth rate of rural population too. One very important reason for their higher growth rates of population in rural and urban areas is their continuing higher natural increase rates both in rural and urban areas.

Components of Urban Population Growth:

Urban population growth results from 1) natural increase, 2) rural to urban migration, 3) reclassification, and 4) boundary changes of the existing urban centres. However, it is difficult to calculate the precise contribution of the different components of urban population growth due to problems inherent in the data available. For example, the data on the population added in the urban areas due to boundary changes is often not available. Data are available only on one or two components and share of other components is often estimated as residual.

Historically, rural to urban migration has remained the most important component of the urban population growth both in developed and developing countries. The studies on Indian urbanization during fifties and sixties have also highlighted the importance of rural to urban migration in India's urban growth, particularly in the growth of the metropolitan cities of the country (Davis, 1951; Bogue and Zacharia, 1962; and Bose, 1980). Over the decades, however, the contribution of rural to urban migration in urban population growth is found to be on decline. It is estimated that during 1951-61 nearly 41 percent of the urban growth was due to rural to urban migration (Office of the Registrar General of India, 1986). The estimates of the different components of urban population growth during 1961-71, '71-81 and '81-91 are provided in table 4. The share of rural to urban migration in urban population growth declined sharply during 1961-71 and remained more or less constant during subsequent two decades (18-28 percent). The contribution of the net reclassification of the settlements has declined continuously in urban growth from 15 percent during 1961-71 to 13 percent in 1971-81 and 9 percent during 1981-91. For 1991-2001 we have the SRS data about the birth, death and natural increase of the rural and urban population. The natural increase of urban population is 1.44 percent during 1991-2000, which means that almost 55 percent of the urban growth during the latest decade is caused by natural increase and the remaining urban growth is due to rural to urban migration, reclassification and boundary changes.

Distribution and Growth of Urban Population by Size Class:

As seen earlier the number of urban centers in India has increased by more than two and half fold in India in the past hundred years from 1916 in 1901 to 5133 in 2001. Indian census classifies urban centers into six population size categories i.e. class I cities (population 100,000 or more), class II towns (population 50,000-99,999), class III towns (population 20,000-49,999), class IV towns (population 10,000-19,999) class V towns (population 5,000-9,999) and class VI towns (population < 5,000). Since distribution of urban centers by population is not yet available for all the states for the 2001 census, in **Table 5** we present the distribution of urban centers and urban population by size class for 1961, 1971, 1981, and 1991. In this table all the constituent units of an urban agglomeration are considered as one urban center. Of the 3690 urban centers in 1991, 296 were class I cities. There is a steady increase in the number of class I cities as well in the share of their population to country's total urban population. These cities together possessed nearly half of the country's urban population (51 percent) in 1961. In 1991 they possessed around two third (65 percent) of country's total urban population. In contrast the proportion of urban population in most other size class categories has remained fluctuating or declining. This changing pattern of urban concentration is often seen as an outcome of the excessive growth of larger cities and declining or stagnating growth of smaller urban centers. Very often this argument is supported by calculating the growth rate of population in different population size categories between decades. However, this is a purely statistical artifact and is expected because being at the top of the urban size class hierarchy class I category adds a number of urban centers in every subsequent decade that graduate from lower categories. This can be elaborated by calculating the growth rates of urban centers by size class (instantaneous approach) as well calculating the population growth rate for common urban centers (cohort approach) at two point of time **(Table-6)**. It can be seen that the decadal growth rate of class 1 cities is much higher in each decade when calculated using instantaneous method, but when the growth rate in different size of urban centers is calculated using cohort approach it does not differ much across different population size categories. In reality in each size class there are some fast growing cities that may be graduating to higher category very fast.

The emergence and dominance of metropolitan cities (as per Indian census a city having a population of 1 million or more is called a metropolitan city) is another challenging aspect of India's urbanization. In 1901 only 1 city i.e. Calcutta has more than a million population. By 1981 this number increased to 12 and further increased to 23 in 1991 and 35 in 2001. The metropolitan cities together possessed nearly 8 percent of country's total population and 33 percent of country's urban population in 1991 **(Table 7)**. As per provisional figures of the 2001 census, metropolitan cities together possessed nearly 11 percent of country's total population and 38 percent of country's urban population. However, for a country with a billion people so many large cities are expected. Mumbai continues to be the most populous city of the country followed by Kolkata, Chennai and Delhi **(table 8)**. There is a significant shift in the country's urban hierarchy. Though the four metros continue to be at the helm of affair a number of secondary metros are growing very fast and experiencing a significant face lift.

It will be interesting to look into the growth rate as well as the migration situation in the four leading cities of the country. By 2001 the population of Greater Mumbai U.A. has grown to about 16.4 million followed by 13.2 million in Kolkata, 13.0 million in Delhi and 6.4 million in Chennai **(table 9)**. There has been a steady decline in the growth rate of all the four metropolitan cities since 1981. During the last two decades the rate of population growth in Mumbai declined from 4.9 percent per annum in 1971-81 to 3 percent per annum in 1991-2001. Only for Delhi U.A. the rate of population growth continues to be more than 3 percent per annum during 1991-2001. The rate of population growth in Calcutta and Chennai U.As is lower than the national urban growth rate as well as the urban growth rate of their respective states. It is, however, important to note that most of these cities form big urban agglomerations and include different constituent units at different point of time. This very much affects their inter decadal growth rates. Very often neighbouring constituent units, many of which are large cities in their own right having independent statutory status, grow very rapidly due to spill over of the population growth from the main city. These nearby cities maintain close socio-economic and functional interactions with the main metro through daily or weekly commuting and virtually serve as residential suburbs to the main metro.

Migration to Mumbai, Kolkata, Delhi and Chennai has always remained a matter of serious concern and often it is held responsible for the rapid population growth in these cities. Many perceive migration as a main reason for deteriorating quality of life and increasing unemployment rates in urban areas. **Table 10** presents the proportion of immigrants and in-migration rates by sex for the four leading cities of the country in 1981 and 1991. In 1991 the proportion of in migrants ranged from 24 percent in Kolkata to 39 percent in Delhi. The proportion of migrant population as well as in migration rates for both the sexes have declined very significantly in every metro during past two decades. The information on the reasons of migration by sex for these four cities is presented in table 11. Employment remains the most significant reason for male migration in all the cities. For females, marriage and `family moved' are the two most important reasons. The data on employment related migration is not directly comparable for 1981 and 1991 because business as a reason for migration was not included in 1981 and has been considered a separate reason in 1991. But even if we combined employment and business related migration, there is slight decline in employment related male migration in Mumbai and Kolkata. The proportion of females moving to Mumbai and Kolkata due to employment has also remained almost constant. However, employment related migration of males has increased significantly in Delhi and Chennai. In Chennai employment related female migration has also registered an increase during 1981 and 1991.

Discussion and Conclusions:

The above analysis suggests that perhaps India has already passed the phase of rapid urbanization. Even by middle of 21 century majority of India's population is expected to live in rural areas. In contrast to popular thinking rural to urban migration has not been a very important factor in India's urban growth during the past three decades. The process of reclassification of rural settlements in the category of urban has also slowed down. It seems that the rate of urban population growth has remained very much tied up with rate of natural increase of urban population. The rate of natural increase of urban population has declined from 1.97 percent per annum during 1971-81 to 1.44 during 1991-2001. It is expected that the rate of natural increase in urban areas may decline further in near future resulting into decline in the overall urban growth rate unless there is an increase in net rural to urban migration or faster reclassification of

rural settlements into urban category. Therefore this steady decline in urban population growth rate should be considered a welcome sign. However, what should worry planners and policy makers is the decline in the rate of urbanization at such a low level of urbanization as well as decline in the rural urban growth differential.

It is seen that during 1971-2001 the decline in overall urban population growth rate and urban natural increase rate is nearly 30 percent and 27 percent respectively whereas during the same period the decline in overall rural population growth rate and rural natural increase rate is only 4 percent and 16 percent respectively. This implies that rural areas add a huge population due to natural increase which remains tied up there only and does not get transferred to urban areas. During 1981-2001 234 million people were added in the rural areas of India. Thus we see that in just 20 years a country of Indonesia's size (232 million in mid 2002, U.N. estimates) is added in country's rural areas. Though there is a steady increase in the number of rural to urban migrants (migrants defined on the basis of place of last residence) from around 23 million in 1971 to 33 million in 1981 and 40 million in 1991 as well as in the share of rural to urban migrants in the country's total migrant population from around 14 percent in 1971 to 18 percent in 1991, it is interesting to note that intra decadal (migrants with 0-9 years duration at the place of enumeration) rural to urban migrants constituted about 47 percent of the total rural to urban migrants both in 1971 and 1981 but their share has declined to 39 percent in 1991. Again these intra decadal rural to urban migrants form only a negligible proportion of the total rural population of the country. For example their proportion in country's rural population was 2.5 percent in 1971, increased slightly to 3 percent in 1981 but again declined to 2.5 percent in 1991. Similarly intra decadal rural urban migrants accounted only 14 percent of the total increase in rural areas during 1961-71 which increased to 23 percent in 1971-81 but declined to only 13 percent during 1981-91. Thus we see that rural to urban migration could transfer only 1 out of seven persons who were added due to population increase in rural areas during 1961-71 or 1981-91.

The history of urbanization process in developed countries show that their increasing urbanization was totally migration led as rural to urban migration not only contributed to higher urban growth but it also compensated for negative natural increase in urban areas. As a result the

countryside started depopulating along with increasing urbanization. This does not seem to be happening in India. Tamil Nadu is the first state to experience a negative rural growth rate during 1991-2001 and that too because of the fact that more than 300 rural settlements of the state were declared urban in 2001statutarily, indicating a prominent role of administrative reason rather than economic or social transformation of these settlements.

It will be worthwhile to explore the reasons that might be holding back the ever-increasing rural labour from migrating to cities. There is a possibility that many rural development programmes (Rural Labour Employment Guranttee Programme (RLEGP), Integrated Rural Development Programme (IRDP), and Jawahar Rojgar Yojana, (JRY)) instituted by government during seventies and eighties for generating more employment in rural areas might have resulted into some improvement in rural economic development. There is also evidence that significant increase in rural productivity in some of the states like Punjab, Haryana, and Gujarat has attracted rural labour from poorer states like U.P., Bihar, and Orissa to their rural areas. So a part of labour that would otherwise migrate to cities now migrates to the rural areas of agriculturally prosperous states. In contrast to these agriculturally prosperous states in some poorer states rural productivity has decelerated continuously throughout the 1970s and 1980s. This has resulted into increasing state-wise and regional disparities in rural productivity in contrast to reduction in the state wise industrial productivity. This deceleration in rural productivity is also considered a reason for not releasing enough rural labour (Mohan Rakesh, 1996). This is supported by the fact that though the share of agriculture in GDP has fallen from 55 percent in 1950-51 to 32 percent in 1990-91, labour engaged in agriculture continues to account for almost two-thirds of the labour force. In the economically backward states the share of rural labour engaged in agricultural activities is even higher.

Perhaps it is also a signal of the inability of changing urban economy to absorb the semi literate, unskilled rural migrants. A large rural labour force continues to be illiterate or semi literate and unskilled or semiskilled. The changing nature of labour intensive manufacturing sector to capital-intensive high tech software and electronic industrial development in few metro cities could also lead to lower absorption of labour in urban areas. This can be supported by the fact that the proportion of male workers employed in secondary sector has remained stagnant in

urban areas since 1961 onwards (34 percent). This indicates that not enough jobs are generated in the productive non-agricultural sectors to absorb unskilled or semiskilled rural labour force. The slow down of population growth in many leading cities of the country could have also restricted the employment opportunities in informal sector as quite a large number of informal activities in thesecities developed due to their fast population growth in earlier decades.

All these structural factors coupled with deteriorating situation of housing and other infrastructure and quality of life in cities would have kept away potential rural migrants to cities. It is too evident that Indian cities suffer from acute problems of deteriorating infrastructure such as non - availability of affordable housing, inadequate availability of drinking water, paucity of drainage and sewerage facilities, virtual breakdown of local public transport, and pollution. The housing shortage and poor quality housing is perhaps the most apparent and most discussed problem in the metro cities. Most of the metro cities have large number of houseless population and crowding conditions continue to deteriorate. For more than one fourth households in Mumbai and Kolkata the number of persons per room is 5 or more. A large number of people in these cities do not have any toilet facility within the house and defecate in the open or use public toilets. Squatter and slums have become an integral part of the urban India. There has been a steady increase in the proportion of population living in slums, particularly in the major metropolitan cities. The highest proportion of the population living in slums is found in Mumbai where nearly half of the population in 2001 was residing in slums.

Most big cities have also experienced a steady decline in the quality of their physical environment. Air and water pollution are the serious problems encountered in most of the metro cities of India. The concentration of ambient air pollutants in many of the cities are high enough to cause increased mortality, disease prevalence, deficits in pulmonary function and cardiovascular and neurobehavioral effects. Air pollution is also a serious cause of damaging the material resources of cities, such as buildings and various works of art. According to a World Bank article, Delhi is one of the world's most polluted cities. In fact, in 1999, the average total suspended particulate (TSP) level in Delhi was 378 micrograms per cubic meter – approximately five times the World Health Organization's (WHO) annual average standard. Furthermore, TSP levels in Delhi exceeded the WHO 24-hour standard on 97 percent of all days on which readings

were taken. A recent survey found a significant concentration of lead in the children's blood in Mumbai and Delhi cities. Overall 45 percent of children in Delhi and 50 percent of children of age three years or less were found to have elevated levels of lead in their blood (10.0 µg/dl or higher). The situation in Delhi was particularly challenging as 10 percent of the children have a lead level of 20 µg/dl or higher and 0.2 percent have a lead level of 45 µg/dl or higher in their blood. Eight percent of children in Mumbai also have a lead level of 20 µg/dl or higher in their blood (NFHS-2, 1998-99). Waste disposal also remains a serious problem in the metro cities in India. A large amount of this waste remains uncollected in streets and roads exposing citizens to all kinds of harmful pathogens and bacterias. In 1996 Mumbai generated the largest amount of Municipal solid waste (5355 tonnes per day) followed by Delhi (4000 tonnes/day), Kolkata (3692) tonnes /day) and Chennai (3124 tonnes /day). Deteriorating urban health has become a critical issue because of the emergence and spurt in some of the diseases related to poor environmental sanitation and poor living conditions such as malaria, tuberculosis, as well as HIV/AIDS and other sexually transmitted diseases. The relatively limited plague epidemic that began in Surat in1994 had created a serious scare in India about the consequences of the unregulated urban growth.

No doubt many of the metro cities have experienced very rapid population growth in earlier decades and have already possess an inordinately large population. Even with modest growth rates during the past two decades a large population has been added in cities like Mumbai, Kolkata, and Delhi. It is worth mentioning that in spite of a slow down in the urban population growth rates over past two decades the quality of living in these cities continues to deteriorate. This brings into focus the issue of urban management. Several scholars have advocated the need to strengthen local bodies and issues related to efficient urban management. We feel that this slow down of population growth could be converted into a timely opportunity to invest, manage and plan the urban infrastructure both in existing as well as in would be metros through holistic planning and efficient management (for a detailed discussion of this issue please see Mohan Rakesh, 1996).

The National Human Development Report 2001 shows that unemployment rates in 1999-2000 are higher in urban areas (4.8 percent) than in rural areas (1.5 percent). However, it is well

known that the incidence of underemployment and disguised employment remains much higher in rural areas compared to urban areas. The unemployment rates have remained almost unchanged during 1983-1999-2000 both in rural and urban areas. The report also shows that in 1999-2000 almost a quarter of population in rural areas (27.09 percent) and urban areas (23. 62 percent) were below poverty line. Though there has been significant decline in the percentage of population below poverty line both in rural and urban areas during 1983-1999-2000 in all the states, but even now in some of the major states (Orissa, Bihar, Madhya-Pradesh) more than one-third (37- 48 percent) of the rural population lives below poverty line. The deceleration of urbanization could as well be contributing to further impoverishment of rural areas of many of the economically poorer states. We do not have evidences to show that there has been large-scale rural industrialization, particularly in large north Indian states. It seems that the benefits of higher industrial and overall economic growth have not been as widespread as they should have been and are not being shared with would be urban immigrants (Mohan Rakesh). All these problems coupled with lack of productive jobs would have discouraged the potential rural migrants searching for better livelihoods in cities. This argument can be supported by the fact that the growth of value-added in industry and in the tertiary sector was in the range of 6 to 8 percent per annum, whereas that of agriculture was in the range of 2.5 to 3 percent per year during the same period. Thus in spite of a much lower productivity of agricultural sector, a large rural labour remained tied up in rural areas (Mohan Rakesh,1996).This slow down of urbanization then becomes a matter of serious concern and requires attention from national policy makers and planners. This also provides city planners and administrators an opportunity to take corrective actions in order to make cities more conducive for economic and social development and improve upon the quality of urban life with respect to physical and social environment. Keeping the fact in mind that a large number of rural people migrate to cities seeking employment, the first and foremost task is to once again orient the industrial sector to generate more jobs that absorb large rural labour, without compromising productivity.

For achieving this it is necessary to think some innovative and affordable solutions that may be implemented in the rural areas, particularly in the poorly developed states without incurring huge investments. Rural labour is also to be made more responsive to industry needs by providing necessary skills and technical competency by opening a variety of vocational centers

in rural areas for illiterate and less educated labour. The case for improving urban infrastructure is strong and long overdue. However, programmes regarding the urban infrastructure can only be supportive of this larger endeavour of generating more employment opportunities and making cities as engines of growth. This should not be seen as a counter argument to the need and importance of developing the rural areas but it is an attempt to bring into focus the positive role to be played by urbanization in the overall national development. There is a need to change the academic antipathy of sixties and seventies that saw urbanization, particularly the growth of big cities as 'cancerous' rather than 'catalysts' of development and hence projecting urbanization as an undesirable phenomena in the process of overall national development. This has negatively affected the policies towards urbanization in developing countries as well as attitude of donor agencies towards supporting the development of cities. The happenings in past century show that urbanization is inevitable, and needs to be considered a positive force in the overall national development. The response to increasing urbanization and growth and development of cities at our stage of development needs to be viewed positively, though there is no denial of the fact that it should be more balanced and more responsive to national development goals. Our cities need to be better managed and to be made better habitable. Lot needs to be done in the field of the urban governance. The 74th Amendment in the constitution marks a significant set of initiatives in India to make urban local bodies as institutions of self-governance. Urban local bodies have to be made accountable for efficiently managing the cities. Much more can be learn from the experience of the tremendous rapid improvement in infrastructure in some of the large cities in East Asia and Latin America in spite of a much rapid urbanization in their respective countries.

A further rational to have higher level of urbanization also emerges from the fact that the disparities in several indicators of socio-economic development between rural and urban areas are smaller in those states of India that have relatively higher level of urbanization than vice versa. The correlation coefficients between level of urbanization and ratio of urban to rural ratio of several indicators of socio-economic and demographic indicators show that there is a negative relationship between level of urbanization and urban rural ratio of Human development Index, urban rural female literacy ratio, urban rural ratio of mass media exposure and standard of living index meaning thereby that those states that have relatively higher level of urbanization have relatively lower disparities in these indicators of development between urban and rural areas than

vice versa. It is expected that slowing down of urbanization may not only increased pressure on the already crowded agricultural resources of the poorer and economically less developed states but may further widen disparities in rural development across Indian states as well as rural urban disparities with in the less urbanized states.

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Tables

Table 1: Trend of Urbanisation in India, 1901-2001[1]

Census Years	Number of Towns[2]	Urban Population (in millions)	Percent Urban	Annual Exponential Growth Rate	Rate of Urbanization
1901	1916	25.9	10.8	-	-
1911	1908	25.9	10.3	0.0	-0.46
1921	2048	28.1	11.2	0.8	0.87
1931	2220	33.5	12.0	1.7	0.71
1941	2422	44.2	13.8	2.8	1.50
1951	3060	62.4	17.3	3.5	2.54
1961	2700	78.9	18.0	2.3	0.40
1971	3126	109.1	19.9	3.2	1.06
1981	4029	159.5	23.3	3.8	1.72
1991	4689	217.6	25.7	3.1	1.02
2001	5161	284.5[3]	27.8	2.7	0.82

[1] *Including interpolated population of Jammu and Kashmir and Assam in 1991 and 1981 respectively where census could not be taken in respective years*

[2] *Cities and Towns included in Urban Agglomerations are treated separate units*

[3] *total population and urban population of India for the year 2001 are provisional and include estimated population of those areas of Gujarat and Himachal Pradesh where census could not be conducted due to natural calamities during the appointed period.*

Source: http://www.censusindia.net

Table 2A: Trend of Urbanisation in the States of India, 1971-2001[1]

India/States	Percent Urban				Rate of urbanization		
	1971	1981	1991	2001[2]	1971-81	1981-91	1991-2001
Andhra Pradesh	19.31	23.32	26.89	27.08	2.08	1.53	0.07
Assam	8.82	9.88	11.1	12.72	1.20	1.23	1.46
Bihar[2]	10.00	12.47	13.14	13.36	2.47	0.54	0.17
Gujarat	28.08	31.10	34.49	37.35	1.08	1.09	0.83
Haryana	17.66	21.88	24.63	29.00	2.39	1.26	1.77
Himachal Pradesh	6.99	7.61	8.69	9.79	0.89	1.42	1.27
Jammu & Kashmir	18.59	21.05	23.83	24.88	1.32	1.32	0.44
Karnataka	24.31	28.89	30.92	33.98	1.88	0.70	0.99
Kerala	16.24	18.74	26.39	25.97	1.54	4.08	-0.16
Madhya Pradesh[3]	16.30	20.30	23.21	24.92	2.45	1.43	0.74
Maharashtra	31.17	35.03	38.69	42.40	1.24	1.04	0.96
Orissa	8.41	11.79	13.38	14.97	4.02	1.35	1.19
Punjab	23.73	27.68	29.55	33.95	1.66	0.68	1.49
Rajasthan	17.63	21.05	22.88	23.38	1.94	0.87	0.22
Tamil Nadu	30.26	32.95	34.15	43.86	0.89	0.36	2.84
Uttar Pradesh[4]	14.02	17.95	19.84	21.02	2.80	1.05	1.98
West Bengal	24.75	26.47	27.48	28.03	0.69	0.38	0.20
INDIA	**19.91**	**23.34**	**25.71**	**27.78**	**1.72**	**1.02**	**0.81**

1Provisional results of Census 2001

2Including Jharkhand,3Including Chattisgarh,4Including Uttaranchal,

Source: Census of India, 1991, Series – 1, India, General population Tables, Part-II – A (i)

Census of India, Provisional Population Totals, Paper – 2 of 2001of states, Rural-urban Distribution

Table 2B: Distribution of Districts and Their Urban Population by Range of Percentage of Urban Population in India: 1991 and 2001

Level of urbanisation category (in percent)	1991				2001			
	Absolute		Percentage		Absolute		Percentage	
	Number of districts	Population In thousand	Number of districts	Population In thousand	Number of districts	Population In thousand	Number of districts	Population In thousand
<20.0	349	15164	58.8	69.7	331	19416	55.9	68.0
20.0-50.0	199	5710	33.6	26.2	205	7687	34.6	26.9
> 50.0	45	882	7.6	4.1	57	1432	9.5	5.1
Total	593	21755	100.0	100.0	593	28535	100.0	100.0

Source : As table1

Table 3: Average Annual Growth Rate of Urban and Rural Population and Urban Rural Growth Differentials (URGD) in the Major States of India, 1971-2001[1]

Country/ States	Rural			Urban			URGD		
	1971-81	1981-91	1991-2001[2]	1971-81	1981-91	1991-2001[2]	1971-81	1981-91	1991-2001[2]
Andhra Pradesh	1.57	1.84	1.36	3.96	4.32	1.46	2.39	2.48	0.10
Assam	2.00	2.26	1.67	3.27	3.96	3.62	1.27	1.70	1.95
Bihar[2]	1.88	2.26	2.13	4.37	3.02	2.55	2.49	0.76	0.42
Gujarat	2.01	1.52	1.71	3.47	3.44	3.27	1.46	1.92	1.56
Haryana	2.00	2.29	2.06	4.67	4.34	5.08	2.67	2.05	3.02
Himachal Pradesh	2.06	1.94	1.61	2.98	3.78	3.24	0.92	1.84	1.63
Jammu & Kashmir	-	2.44	2.87	-	4.59	3.62	-	2.15	0.75
Karnataka	1.75	1.77	1.21	4.10	2.96	2.89	2.35	1.19	1.68
Kerala	1.46	0.36	1.01	3.19	6.10	0.76	1.73	5.74	-0.25
Madhya Pradesh[3]	1.76	2.24	1.82	4.45	4.39	2.79	2.69	2.15	0.97
Maharashtra	1.62	1.87	1.52	3.36	3.89	3.13	1.74	2.02	1.61
Orissa	1.46	1.79	1.38	5.22	3.62	2.98	3.76	1.83	1.60
Punjab	1.61	1.77	1.23	3.68	2.90	3.76	2.07	1.13	2.53
Rajasthan	2.43	2.55	2.75	4.62	3.96	3.12	2.19	1.41	0.37
Tamil Nadu	1.22	1.33	-0.52	2.47	1.96	4.28	1.25	0.63	4.80
Uttar Pradesh[4]	1.80	2.26	2.13	4.74	3.87	2.82	2.94	1.61	0.69
West Bengal	1.85	2.30	1.69	2.76	2.95	2.02	0.91	0.65	0.33
INDIA	**1.78**	**1.80**	**1.70**	**3.83**	**3.09**	**2.70**	**2.05**	**1.29**	**1.00**

1Provisional results,2Including Jharkhand,,3 Including Chattisgarh, 4Including Uttaranchal,

Source : calculated from Census of India, 1991, Series– 1, India, General population Tables, Part-II – A(i) and Census of India, Provisional Population Totals, Paper–2of 2001of states , Rural-urban Distribution

Table 4: Components of Urban Population Growth in India, 1961-2001

Components	1961-71		1971-81[1]		1981-91[2]	
	Number	Percent	Number	Percent	Number	Percent
1. Absolute increase	30.2	100.0	49.9	100.0	57.7	100.0
2. Net reclassification of localities from rural to urban	4.5	14.9	6.7	13.4	5.3	9.2
3. Net rural-urban migration	6.3	20.9	9.8	19.6	16.6	28.8
4. Natural increase						
I. of initial urban population	18.8	62.3	24.5	46.1	34.0	58.9
II. of inter-censal migrants (net figure)	0.7	2.3	1.1	2.2	1.8	3.1
Residual (incl. Errors and changes in boundaries)	-0.1	-0.3	7.8	15.6	-	-

1 *Excluding Assam*

2 Including Assam as well as Jammu and Kashmir

Source: Visaria, P. (1997): Urbanization in India: An Overview, Published in Urbanisation in Large Developing Countries: China, Indonesia, Brazil, and India, Edited by Gavin Jones and Pravin Visaria pp. 273

Table 5: Percentage of Urban Population in India by Size-class of Urban Centers, 1961-2001[1]

Size Class	1961	1971	1981	1991	2001*
Class I (100 000+)	51.4	57.2	60.4	65.2	68.48
Class II (50 000-100 000)	11.2	10.9	11.6	11.0	9.57
Class III (20 000-50 000)	16.9	18.0	14.4	13.2	12.41
Class IV (10 000-20 000)	12.8	10.9	9.5	7.8	6.95
Class V (5000-10 000)	6.9	4.5	3.6	2.6	2.36
Class VI (< 5000)	0.8	0.4	0.5	0.3	0.24
Total	**100**	**100**	**100**	**100**	**100**

1 *Excludes Assam in 1981 and Jammu and Kashmir in 1991*

Source: Census of India, Provisional Population Total, Paper – 2 of 2001, India

** The figure for Uttar Pradesh, Uttranchal and Chattisgarh were taken from www.censusindia.net*

Table 6: Average Annual Growth Rate of Urban Population (in percent) in India by Size-class of Urban Centers, 1961-1991[1]

Size Class	Instantaneous Method[2]			Cohort Method[3]	
	1961-71	1971-81	1981-91	1971-81	1981-91
Class I (100 000+)	4.32	4.60	3.92	3.62	3.01
Class II (50 000-100 000)	3.49	4.22	2.51	3.44	2.78
Class III (20 000-50 000)	2.60	2.53	2.28	3.28	2.62
Class IV (10 000-20 000)	1.74	2.10	1.02	3.29	2.53
Class V (5000-10 000)	-1.09	1.45	-0.13	3.83	2.66
Class VI (< 5000)	-2.18	4.86	-2.42	3.52	2.88
Total	**3.27**	**3.86**	**3.13**	**-**	**-**

1 *Excludes Assam in 1981 and Jammu and Kashmir in 1991*

2The growth rate is calculated by considering the total population of towns in each size class as per census classification.

3The growth rate is calculated by considering the total population of towns in each size class according to their classification in base year and the total population of the same towns in the next census, e.g. the growth rate of 3.62 percent per year for class I cities during 1971-1981 refers to the growth rate of population of the same number of towns during 1971 and 1981 classified as class I cities in 1971.

Table 7: Growth in the Number of Million Plus (1,000,000 Population or more) Cities in India 1901-2001[1]

Census Years	Number of Cities with population more than one Million	Population in million	Percent increase	Population of million cities as percent of India's	
				Total Population	Urban Population
1901	1	1.51	-	0.6	5.8
1911	2	2.76	08.3	1.1	10.7
1921	2	3.13	13.2	1.3	11.1
1931	2	3.41	08.8	1.2	10.2
1941	2	5.31	55.8	1.7	12.0
1951	5	11.75	121.3	3.3	18.8
1961	7	18.10	54.1	4.1	22.9
1971	9	27.83	53.7	5.1	25.5
1981	12	42.12	51.3	6.2	26.4
1991	23	70.67	67.8	8.4	32.5
2001	27	73.02	52.6	10.50	37.8

Source: Calculated from Censuses of different years

Table 8: Trend in the Population Size and Decadal Growth Rate of the Four Metropolitan Cities of India 1981-2001

Metropolitan City	Population (In Million)			Growth Rate	
	1981	1991	2001	1981-1991	1991-2001
Greater Mumbai Urban Agglomeration	**9.42**	**12.60**	**1.64**	**33.69**	**29.94**
(i) Greater Mumbai Municipal Corporation	8.24	9.93	1.19	20.41	20.03
(ii) Other constituent units	1.18	2.68	4.45	126.46	66.82
Kolkata Urban Agglomeration	**9.19**	**11.02**	**13.21**	**19.88**	**19.91**
(i) Kolkata Municipal Corporation	4.12	4.39	4.58	6.61	4.11
(ii) Other constituent units	5.06	6.62	8.63	30.69	30.41
Delhi Urban Agglomeration	**5.72**	**8.37**	**12.79**	**46.18**	**51.93**
(i) Delhi Municipal Corporation	4.88	7.17	9.81	46.89	36.83
(ii) Other constituent units	8.45	1.20	2.97	42.05	147.74
Chennai Urban Agglomeration	**4.28**	**5.42**	**6.42**	**26.41**	**20.28**
(i) Chennai Municipal Corporation	3.27	3.84	4.21	17.24	9.76
(ii) Other constituent units	1.01	1.58	2.20	56.07	39.71

Source: Census of India, Provisional Population Total, Paper – 2 of 2001,Rural-urban classification, Maharastra, Delhi, West Bengal and Tamil Nadu.

Table 9: Percentage of Migrants to Total Population and In-migration Rate in the four metro cities of India by sex, 1971-1991

Metropolitan Cities	Percentage of All Duration Migrants to Total Population			In-migration Rate*		
	1971	1981	1991	1971	1981	1991
G. Mumbai						
Total	56.9	51.5	37.5	1.87	1.53	0.87
Male	61.1	54.6	38.8	1.86	1.44	0.82
Female	50.9	47.4	35.9	1.87	1.58	0.93
Calcutta UA						
Total	37.3	31.3	23.7	0.85	0.60	0.31
Male	39.9	32.3	22.9	0.91	0.59	0.28
Female	33.4	29.4	24.7	0.54	0.60	0.34
Delhi UA						
Total	51.7	44.6	39.1	3.38	2.66	1.18
Male	52.9	45.1	39.2	3.64	2.82	1.24
Female	50.2	43.9	39.0	3.06	2.47	1.11
Chennai UA						
Total	36.7	34.5	27.6	1.96	1.53	0.36
Male	37.4	34.1	27.4	2.08	1.47	0.34
Female	36.0	34.9	27.8	1.82	1.58	0.39

Source: Computed from Migration Tables of different Census years
Inmigration rate refers as follows:
*MR = (MI/PI)*K*
Where,
MR = Immigration Rate
MI = Total number of in-migrants to the city within one year prior to the census enumeration.
PI = Population of the city as of census date
K = Constant (100)

Table 10: Reasons for Migration by Sex to Four Metropolitan Cities of India – 1981 and 1991

Reason for Migration	G. Mumbai		Kolkata UA		Delhi UA		Chennai UA	
	M	F	M	F	M	F	M	F
Employment								
1981	50.4	6.8	44.3	11.7	52.1	10.5	37.7	7.4
1991	46.5	3.5	36.0	3.7	52.4	2.9	47.2	7.1
Business								
1981	-	-	-	-	-	-	-	-
1991	12.9	1.2	5.2	0.5	7.7	0.6	5.6	1.0
Education								
1981	5.3	2.1	2.1	1.9	2.5	1.6	3.0	1.3
1991	4.8	2.2	2.9	0.9	1.9	0.8	4.1	2.0
Family Moved								
1981	19.1	36.4	21.9	38.4	29.4	55.3	36.8	47.6
1991	17.1	28.3	25.4	26.6	28.4	49.2	26.8	34.1
Marriage								
1981	0.3	16.9	0.2	16.8	0.2	14.5	0.5	20.5
1991	0.9	45.4	1.6	47.2	0.5	39.4	1.2	41.6
Natural Calamities								
1981	-	-	-	-	-	-	-	-
1991	0.3	0.3	0.2	0.1	0.1	0.1	0.5	0.4
Others								
1981	24.9	37.8	31.5	31.2	15.8	18.1	21.9	23.2
1991	17.6	19.2	28.7	20.9	8.9	6.9	14.7	13.9

Source: Migration Tables, Census of India, 1981 and 1991
- Not indicated separately in 1981.

Table 11: Percentage of Slum Population in the four Metropolitan Cities of India, 1981-2001

Metropolitan Cities	1981	1991	2001
Greater Mumbai (UA)	30.8	43.2	48.9
Kolkata (UA)	30.3	36.3	32.6
Delhi Municipal Corp. (UA)	18.0	22.5	18.9
Chennai (UA)	13.8	15.3	17.7

Sources: Census of India 1981, 1991 and 2001

Table 12: Status of Municipal Solid Waste Generation and Collection in Metro Cities of India, 1996

Metropolitan cities	Municipal Solid Waste[1] (tones/day)	Per capita Generation[1] (Kg/day)	Collection in percent[2]
Mumbai	5355	0.436	90
Kolkata	3692	0.347	-
Delhi	4000	0.475	77
Chennai	3124	0.657	90

Source: [1]Central Pollution Control Board, Status of Solid Waste Management in Metro Cities India, 1998
[2] World Resources, 1996-97

Figure 1

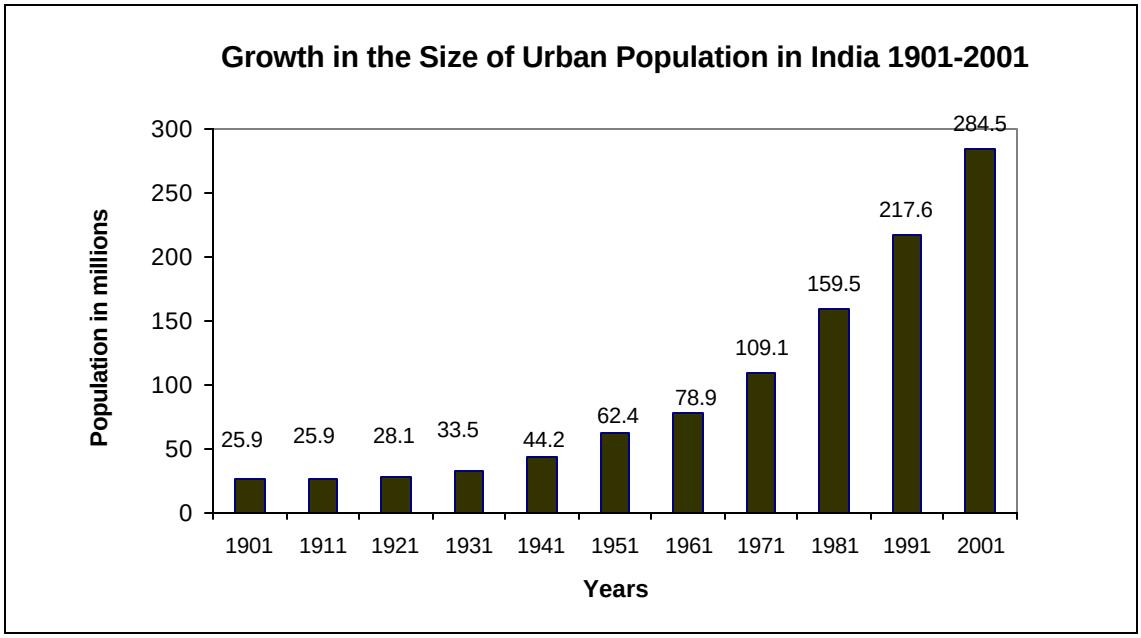
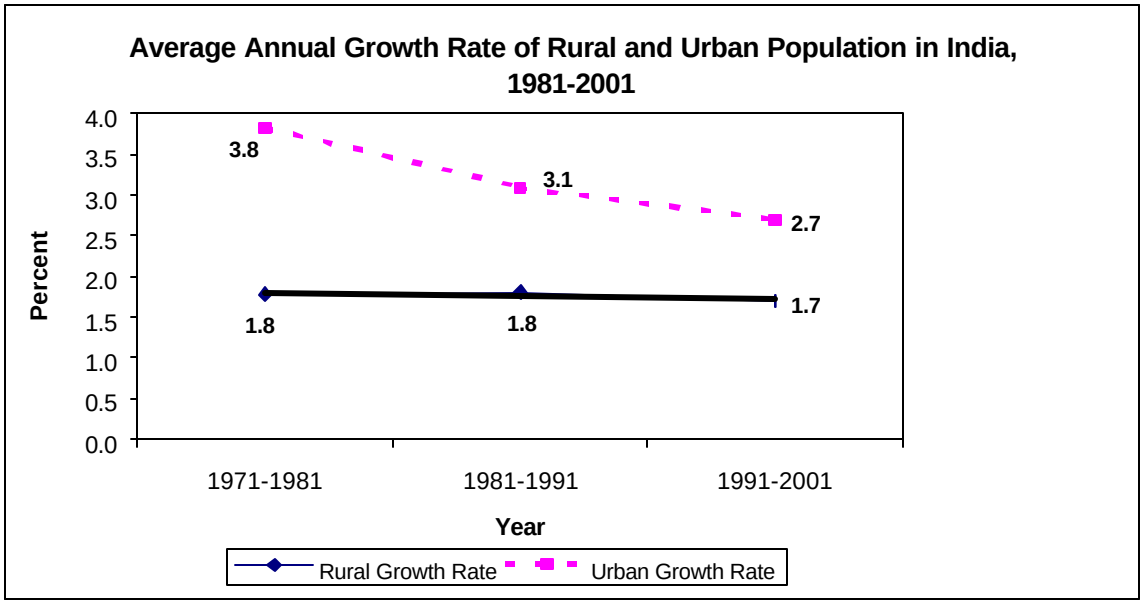


Figure 2


Average Annual Growth Rate of Rural and Urban Population in India, 1981-2001
Percent
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
3.8
3.1
2.7
1.8
1.8
1.7
1971-1981
1981-1991
1991-2001
Year
Rural Growth Rate
Urban Growth Rate