<u>Urbanization in India: Dynamics & Consequences</u>

Urbanization is a form of social transformation from traditional rural societies to modern urban communities. It is long term continuous process. The objective of this paper is to understand the extent, trend and pattern of urbanization and the consequences in the socio-economic context in India by using data from Census of India from 1901 to 2001, NSSO. Both, natural increase and rural to urban migration have contributed towards the urban growth in India. The largest contributor is natural growth 41.7% during 1971-81 and 58.7% during 1981-91. Net migration and changes in boundaries contributed 39.4% during 1971-81 and it has reduced to 22 percent in 1981-91. Urbanization in India is not only migration lead but demographic factor has a strong say in deciding the urban population. The papers finding shows that in 1991 the value of Z was about 0.74 and it went down to 0.69 in the 2001, it is thus clear that with the passage of time the distribution of population in urban areas has become more even.

Introduction:

Urbanization is a form of social transformation from traditional rural societies to modern urban communities. It is long term continuous process. The objective of this paper is to understand the extent, trend and pattern of urbanization and also the consequences in the socio-economic context in India by using data from Census of India 1901-2001, NSSO etc. It is an attempt to outline urban growth process and its consequences which have severe implications on policy issues. Before attempting an analysis of pattern and trends in urbanization in India, it becomes imperative to trace the process of urbanization in India through history because what distinguished India most, from many other countries of the world is its long tradition of urbanization dating back as far back as about five thousand years, when Indus Valley Civilization saw the birth of the earliest urban settlement in human history. In India, the urban tradition continued throughout these centuries and during the ancient period of our history there were many well planned, big and beautiful cities in different parts of the country. In ancient and medieval times it was a cultural phenomena and many a times it happens due to political development because the rise and fall of new dynasties and kingdoms but in recent times, it is complementary of industrialization and socio-economic transformation ,hence it becomes a socio- economic phenomenon.

Urbanization can be defined as "as a process which reveals itself through temporal, spatial and sectoral changes in the demographic, social, economic, technological and environmental aspects of life in a given society. Urbanization is a Progressive concentration of population in urban unit (Kingsley Davis-1965). These changes manifest themselves in the increasing concentration of population in human settlements, larger than villages, in the increasing involvement of the people in the secondary and tertiary production functions, and in the progressive adoption of certain social traits which are typical of traditional rural societies". Urbanization is not only accompanies to industrialization but it is also interlinked with modernization and these three sometimes work in conjunction. The process of urbanization in developed countries has been very slow but steady and it has been accompanied by agricultural and industrial revolution, higher per capita income and high standard of living, whereas in developing countries the rate of urbanization is very fast and it is not accompanied by industrialization but rapid growth of service sector in the economies (Helen Macbeth & Paul Collinson-2002). In the counties of third world urbanization has not been accompanied by modernization as well as industrialization, i.e. a case of pseudo urbanization 'or over-urbanization'. In most of the developing countries the modern process of urbanization is a recent phenomenon and it is still unfolding. As this process is still unfolding in the developing countries it is revealing special features. The study of different aspects of urbanization is very important in order to have a proper understanding of the urbanization phenomena as well as policies to deal with it.

Importance of Study of Urbanization:

It is pertinent to identify the main issues which are concerned with the process of urbanization in India and other developing countries as well. These are

  ➢ Economic:
  ➢ Demographic:
  ➢ Political:
  ➢ Social and Cultural:

Urbanization is considered to be an inevitable part of economic development. Urbanization has been viewed as an important actor in the areas of economic transformation, orchestrating the breakdown of the feudal order and taking societies to higher levels of social formation. Urbanization is intrinsically connected and irrevocably enlaced with the development process, as an essential strand in the contemporary economic system. At the same time some scholars argue that "urbanization is not merely the concomitant of industrialization but a concomitant of whole gaumt of factors underlying the process of economic growth and social change.

Urbanization in India has been relatively slow during the last century the period as compared   with many other developing countries. In India the definition of "Urban" remained   more or less same for the period 1901-1951.However in the 1961 Census, several modifications were made and the definition of 'town' adopted for the 1961 Census was much more rigorous and further ,this new definition was followed all over the country uniformly. From 1981 onwards while calculating the proportion of workers in non-agricultural activities, the workers in occupation of fishing, livestock, hunting, planting and orchards have been included in agricultural workers whereas such workers were included in the category of non-agricultural worker at the time of 1961 and 1971 Censuses. The Census of India recognizes all those settlements as urban which

- ➢ Either   have   a   statutory   status   like   municipal committee/corporation/notified area committee/cantonment board, estate office, etc.
- ➢ or fulfill all the following three conditions simultaneously;

  (i)   A population of more than 5000;
  (ii) More than 75 percent of the male working population is engaged in non-agricultural activities; and
  (iii)   Density of population is more than 400 persons per square kilometer.

Besides, the Director of Census Operations/Union Territories are allowed to include ,in consultation with the concerned State Government/Union Territory Administrations and the Census Commissioner of India, some places having distinct urban characteristics as urban even if such places do not strictly satisfy all the criteria mentioned above. Such marginal cases include major project colonies, areas of intensive industrial development, railway colonies, important tourist centers, etc.

The four main component of urban growth are

- ➢ **Natural Increase**:

- ➢ **Migration**:

- ➢ **Boundary Change:**

- ➢ **Declassification**:

This analysis of urbanization leaves no doubt that Indian society is in a stage of massive urban transition. India's urban population is the second largest in the world, after China. Both, natural increase and rural to urban migration have contributed towards the urban growth in India. Component of urban growth (Bhagat, 1992) has attributed to mainly three components and the largest contributor is   natural growth 41.7 percent during 1971-81 and 58.7 percent during 1981-91.Almost the similar trend has been found by (Pathak & Mehta-1995).It reflects the role of demographic momentum.Net migration and changes in municipal boundaries contributed about 39.4 percent during 1971-81 and it has reduced to 22 percent in 1981-91.By this we can say that urbanization in India is not only a migration lead but demographic factor has a strong say in deciding the urban population.

Urbanization in India: Levels and Trends of Urbanization

India has been predominantly rural in character throughout the ages, though a few urban centers have flourished from time to time. It was only in the late nineteenth and the early twentieth centuries that industrial cities grew in India. Urban population of India has increased from 25.8 million in 1901 to 62.4 million in 1951 and to 285.4 million in 2001,thereby showing more than ten fold increase in total urban population. The total urban population of India, according to Census 2001 is more than 10 percent of total urban population of the world. Most of the urban growth has been caused by accretion to the existing towns particularly the already large cities, while the pace of growth of new cities

has been slow. However as compared to other developing countries, the urban spread in India is not that skewed and unbalanced, not it is characterized by any single city dominating the scene. Wide regional variation in urbanization is no less important a feature.

Table-1

Growth of Urban Population in India, Number of Towns & Percentage

Census Year	No. of Towns	% of Urban Pop	Decennial Growth Rate of Urban Population	Annual Expo. Growth Rate of Population	Tempo of Urbanization
1901	1827	10.84	0.00	0.00	0
1911	1815	10.29	0.35	0.03	-0.51
1921	1949	11.18	8.29	0.79	0.86
1931	2072	11.99	19.12	1.75	0.72
1941	2250	13.86	31.97	2.77	1.56
1951	2843	17.29	41.42	3.47	2.47
1961	2365	17.97	26.41	2.34	0.39
1971	2590	19.91	38.23	3.21	1.08
1981	3378	23.34	46.14	3.83	1.72
1991	3768	25.71	36.47	3.09	1.02
2001	4368	27.78	29.2	2.73	0.81

Source: Calculated from Census of India (1901-2001)

In the post independence period, the rate of growth of urban population in India has generally accelerated till 1981.It is only last two decades that it has shown a steady deceleration. The rates of urban population growth and urbanization have also shown a declining trend during 1981-91 and 1991-2001 period. This steady decline in the rate of urbanization at such a low level of urbanization is a matter of concern and needs attention from academicians, planners and policy makers.

Table-2
Distribution of Urban Population by Size Classes

Census Years	Number of Towns by size class						Percentage of urban population by size class					
	I	II	III	IV	V	VI	I	II	III	IV	V	VI
1901	24	43	130	391	744	479	26.0	11.2	15.6	20.8	20.1	6.1
1911	23	40	135	364	707	485	27.4	10.5	16.4	19.7	19.3	6.5
1921	29	45	145	370	734	571	29.7	10.3	15.9	18.2	18.6	7.0
1931	35	56	183	434	800	509	31.2	11.6	16.8	18.0	17.1	5.2
1941	49	74	242	498	920	407	38.2	11.4	16.3	15.7	15.0	3.1
1951	76	91	327	608	1124	569	44.6	9.9	15.7	13.6	12.9	3.1
1961	102	129	437	719	711	172	51.4	11.2	16.9	12.7	6.8	0.7
1971	148	173	558	827	623	147	57.2	10.9	16.0	10.9	4.4	0.4
1981	218	270	743	1059	758	253	60.3	11.6	14.3	9.5	3.5	0.5
1991	300	345	947	1167	740	197	65.2	10.9	13.1	7.7	2.6	0.3
2001	393	401	1151	1344	888	191	68.6	9.67	12.2	6.8	2.3	0.2

Class I: Greater than 100,000 populations   Class II: 50,000-100,000 population
Class III: 20,000-50,000 population   Class IV: 10,000-20,000 population
Class V: 5000-10,000 population   Class VI: Less than 5000 population
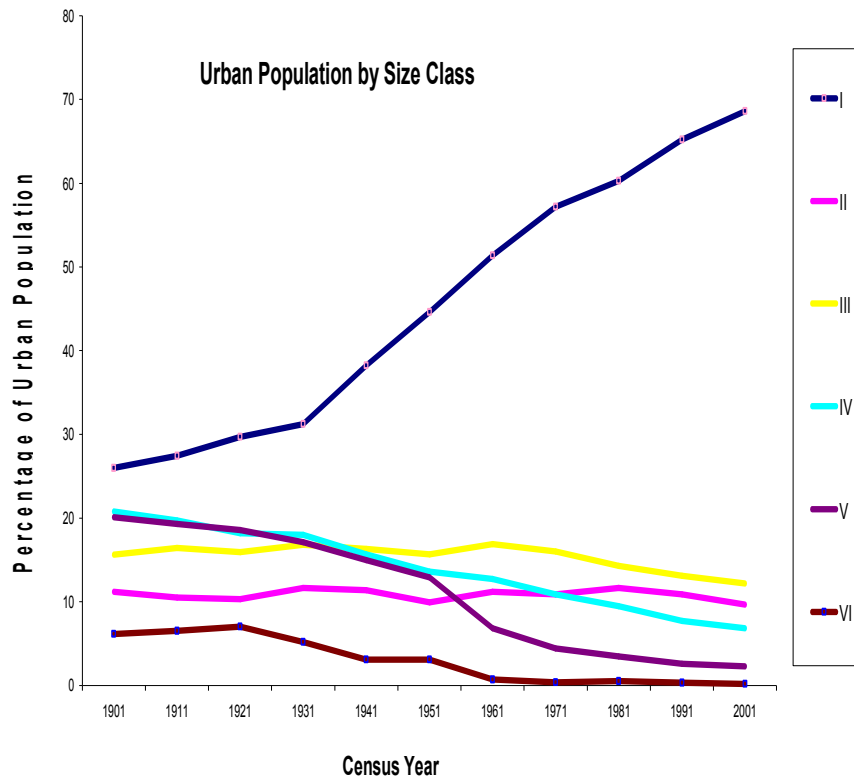
Urban Population by Size Class

Table-2 shows number of towns and percentage of urban population by size class of cities during 1901-2001. The pattern of urbanization in India is characterized by continuous concentration of population and activities in large cities (Kundu, 1983). Over the years it is found that there has been a continuous concentration of population in mega cities and decline in medium and small towns and cities. It is visible that number of cities by size class has increased in all categories except class VI. The share of all other cities except class I cities, has decreased especially class IV, V, and VI towns having less than 20,000 populations. The contribution of class I cities with population of 100,000 or more has gone up significantly and the share of class I cities has increased from 26 percent in 1901 to 68.6 percent in 2001, that is almost three times. This shows the increase urban imbalance and inequality in the distribution of population. Indian subcontinent has experienced very slow urban growth during the initial decades of twentieth century and only about ten percent of people were living in urban area in 1901 and it had increased to about twelve percent till 1931 which was almost marginal. But after 1931, urbanization got pace in the Indian subcontinent and during 1941-1951 the annual growth rate was about 3.47 percent which was very high. In 1951 about eighteen percent person of total population of India was living in urban areas. During (1931-1951) there was six

percentage point increase in total urban population and one of the most important reasons behind this high growth of urbanization was to large exodus of people because of partition of the Indian subcontinent. Some scholars attributed it to the vague definition of urban centers in the first Census conducted after independence. It was only after independence that urbanization started acquiring momentum. The growth rate of urban population was highest during the 1970s being 3.83 percent per year, which is highest during last century. The annual growth rate of urbanization has shown a declining trend during 1991-2001 it was only 2.73 percent which is lowest in the post independence era. In the first fifty years (1901-1951) of twentieth century total urban population increased about two and half times but in the second fifty years (1951-2001) total urban population has increased almost five times. Tempo of urbanization or the speed of urbanization refers to the change in the degree of urbanization during a period of time. The highest rate of change registered during 1941-1951.

Table-3
Total Population & Urban Population (Trend from 1901-2001)

Census year	Total Population (In million)	Urban Population (In million)	% of Urban Population to Total Population
1901	238.3	25.8	10.83
1911	252.1	25.9	10.27
1921	251.3	28.1	11.18
1931	278.9	33.5	12.01
1941	318.6	44.2	13.87
1951	361.0	62.4	17.29
1961	439.2	78.9	17.96
1971	548.1	109.1	19.91
1981	683.3	159.4	23.33
1991	846.3	217.6	25.71
2001	1027.1	285.4	27.78

Source: Calculated from Census of India (1901-2001)

Total Population & Urban Population (Trend 1901-2001)

Legend:
- Total Population (In million)
- Urban Population (In million)

Y-axis: Population in Million (0, 200, 400, 600, 800, 1000, 1200)

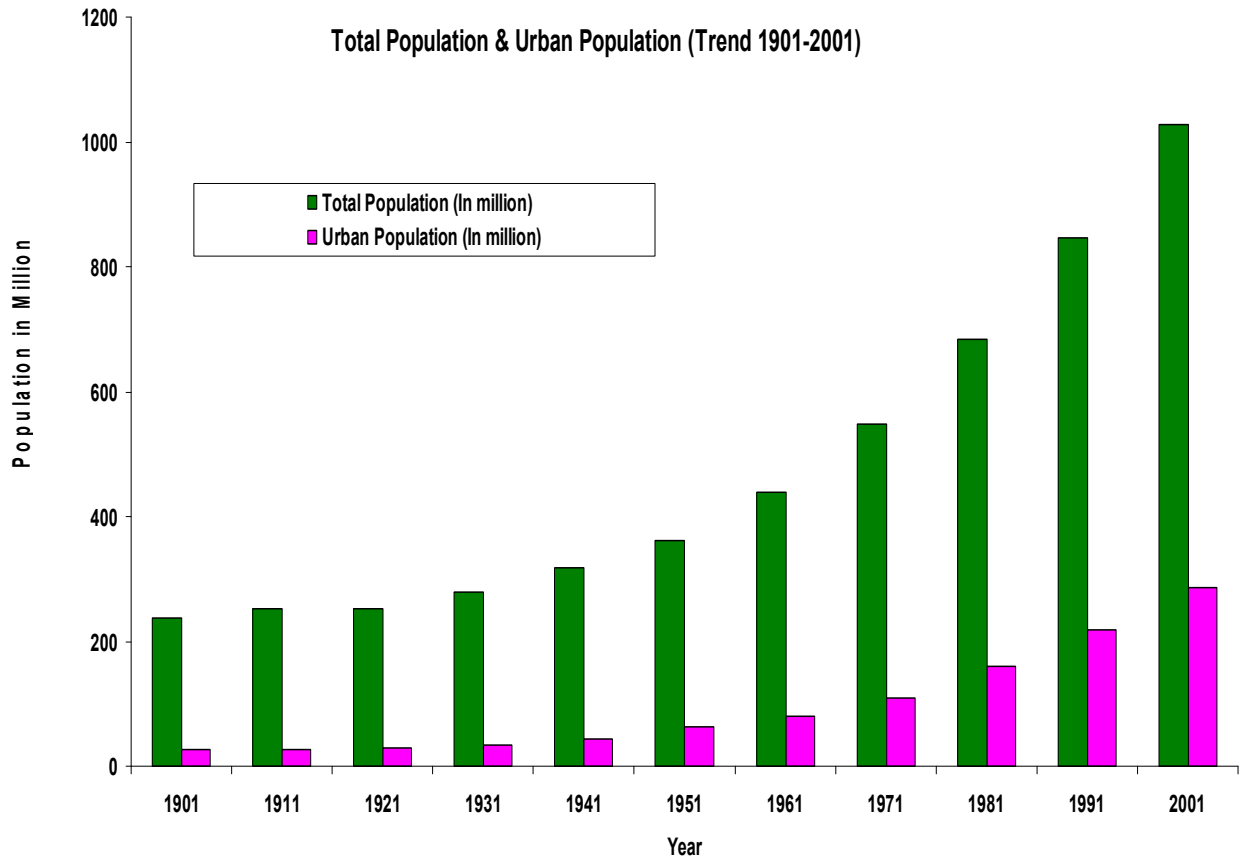X-axis: Year (1901, 1911, 1921, 1931, 1941, 1951, 1961, 1971, 1981, 1991, 2001)

Diagram-(i)

The size of country's urban population has increased from around 11 percent in 1901 to 28 percent in 2001.Thus we see that there is more than tenfold increase in the country's urban population ,the country's level of urbanization has increased by only about two and half times during past 100 years(Table-3). Diagram (i) gives an idea of the pace of urbanization in India during century and it can be seen that during first half century the growth rate of urbanization has been very slow but after 1951 it started to acquire momentum.

In India the urban growth is lopsided because the regional distribution of urban population is very uneven. Six large states contribute about half of the urban population of India namely, Maharashtra, Gujarat, Tamil-Nadu, Karnataka, Punjab, and West Bengal. The level and growth of urban population in the recent decades has been concentrated mainly near some big cities of India and the main reason

behind this is the concentration of most of economic activities near big metro cities. People come from rural to urban areas in search of job and better living condition.

Table-4

Level of Urbanization in Different State of India -1981,1991 & 2001			
	% Urban 1981	**% Urban 1991**	**% Urban 2001**
India	23.34	25.72	27.78
Andhra Pradesh	23.32	26.89	27.08
Arunchal Pradesh	6.56	12.8	..
Assam	9.88	11.1	12.72
Bihar	12.47	13.14	13.36
Goa	32.03	41.01	..
Gujarat	31.1	34.49	37.55
Haryana	21.88	24.63	29
Himachal Pradesh	7.61	8.69	9.79
Jammu & Kashmir	21.05	23.83	24.88
Karnataka	28.89	30.92	33.98
Kerala	18.74	26.39	25.97
Madhya Pradesh	20.29	23.18	24.92
Maharashtra	35.03	38.69	42.4
Manipur	26.42	27.52	..
Meghalaya	18.07	18.6	..
Mizoram	24.67	46.1	..
Nagland	15.52	17.21	..
Orissa	11.79	13.38	14.97
Punjab	27.68	29.55	33.95
Rajasthan	21.05	22.88	23.38
Sikkim	16.15	9.1	..
Tamil Nadu	32.95	34.15	43.86
Tripura	10.99	15.3	..
Uttar Pradesh	17.95	19.84	21.02
West Bengal	26.47	27.48	28.03

Source: Census of India ,1991,series-1,India general population tables, part-II-A(i) Census of India,Provisional Population Totals,Paper-2 of 2001 of States, Rural-urban Distribution

India is a large country and hence regional differences in the urbanization are worth mentioning. According to Table-4 Maharastra is the most urbanized state of country in 1991 but in 2001, Tamil Nadu has become the most urbanized state of the country. There is no very consisting pattern in the sate wise differentials in percent urban during past two decades.

Table-4
Z-Value or the Degree of Concentration of Population in India for Ten Most Populated Cities.

Z-Value for 1991

City	Population	Rank	C_1/C_k	$\ln C_1/C_k$	$\ln k$	$\ln k * \ln C_1/C_k$	$(\ln k)^2$
Greater Mumbai	12596243	1	1	0	0	0	0
Kolkata	11021918	2	1.14	0.13	0.69	0.09	0.48
Delhi	8419084	3	1.50	0.40	1.09	0.44	1.19
Chennai	5421985	4	2.32	0.84	1.38	1.16	1.90
Hyderabad	4344437	5	2.90	1.06	1.60	1.70	2.56
Bangalore	4130288	6	3.05	1.12	1.79	2.00	3.20
Ahmadabad	3312216	7	3.80	1.34	1.94	2.59	3.76
Pune	2493987	8	5.05	1.62	2.07	3.35	4.28
Kanpur	2029889	9	6.21	1.83	2.19	4.00	4.80
Surat	1518950	10	8.29	2.12	2.30	4.87	5.29
						20.20	27.47
						Z Value =	0.74

Source: Calculated from Census of India 1991

Table-5

Z-Value for 2001

City	Population	Rank(k)	C_1/C_k	$\ln C_1/C_k$	$\ln k$	$\ln k * \ln C_1/C_k$	$(\ln k)^2$
Greater Mumbai	16368084	1	1	0	0	0	0
Kolkata	13216546	2	1.24	0.21	0.69	0.15	0.48
Delhi	12791458	3	1.28	0.25	1.09	0.27	1.19
Chennai	6424624	4	2.55	0.94	1.38	1.29	1.90
Hyderabad	5686844	5	2.88	1.06	1.60	1.69	2.56
Bangalore	5533640	6	2.96	1.08	1.79	1.94	3.20
Ahmadabad	4519278	7	3.62	1.29	1.94	2.50	3.76
Pune	3755525	8	4.36	1.47	2.07	3.05	4.28
Kanpur	2811466	9	5.82	1.76	2.19	3.86	4.80
Surat	2690486	10	6.08	1.81	2.30	4.15	5.29
						18.89	27.47
						Z Value =	0.69

Here: k = the rank order
Z = a derived value
C_1= Population of the first ranked city
C_k= Population of the kth rank city

In = Natural Logarithm of a real number

$$Z = \text{In } k * \text{In } C_1/C_k \,/\, (\text{In } k)^2$$

I have calculated the Z-value for ten most populated cities of India at two point of time 1991 and 2001 respectively. These are given in Tables 4 and 5. Z value measures the degree of concentration of population at different point of time. The higher the value of Z, the greater the concentration of population in the largest city relative to smaller cities. Accordingly if the value of Z is less, it means the distribution is more even. In 1991 the value of Z was about 0.74 and it went down to 0.69 in the 2001, it is thus clear that with the passage of time the distribution of population in urban areas has become more even. It shows that now urbanization is taking place also in relatively smaller cities.

Consequences of Unbalanced Urbanization

The consequeuences are more severe and it lead to The process of urbanization is preceding a pace without commensurate growth in industrialization and the rise in the level of overall economic development. Unplanned urban growth, for instance causes growth of slums and squatter settlements, varying affects on environmental degradation and increased burden on existing infrastructure. The general problems which are the by product of certain kind of urbanization characteristic of low income countries are:

1. Shortage of houses
2. Critical inadequacies in public utilities viz, power, water, health facilities, sanitation etc
3. Deteriorating urban environment, urban unemployment, congestion etc
4. Acute poverty
5. Slums proliferation.

Shortage of Houses: The problem that perhaps causes the most concern to a majority of urban dwellers is that of finding an appropriate place to live in. According to Tenth Five Year Plan the nation needed twenty two million additional houses. Inadequate housing that forces more than fifty percent of our population in some metropolis to live in slums, all these severely decrease the quality of life and lower the well being of urban population(Approach Paper for 11th Plan- Govt. of India).

Critical Inadequacies in Public Utilities
Massive problem   have emerged due to rapid growth of urban population without a corresponding increase in urban infrastructure like safe drinking water, preventive health services, sanitation facility, adequate power supply and provisioning of basic amenities. Minimum basic facility is also not available for many cities. The existing urban health services are under tremendous pressure to meet the demands of all needy people. The quality of life for the bulk of urban population involves many avoidable hardships. Poor urban infrastructure, congested roads, poor public transport, improper treatment of sewage, uncollected solid waste are the general feature of urban settlements. According to Urbanization report of World Bank only fifty eight percent of urban population of India has access to improved sanitation facilities.

Deteriorating Urban Environment: India is the world's fifth-largest producer of global warming gas and emissions (USA leads the race). The problem of pollution is more severe in big cities like Mumbai, Delhi, Kolkata and Chennai. In India, urban areas are more developed and industrialized than the rural areas, and this attracts still more people to the urban areas. Thus there is more pressure on facilities like transport services, housing and drainage facilities, as well as more production of other goods required by the urban population, which in turn results in the release of large amounts of wastes and pollutants. The rapid growth in urban population, which affects patterns of production and consumption, is a principal source of pressure on the environment. The environment has to sustain the basic human needs for survival and also the conversion of raw materials into products and services. Urban centers and mega-cities in particular cause many environmental problems like the declining and contaminated water supplies, accelerating atmospheric pollution, severely inadequate sanitation facilities and enormous quantities of solid and liquid waste for disposal. A common and general instance that can be cited here is the contamination of water and rising level of toxins in almost all major rivers of India due to heavy disposal of sewage wastes, excreta and chemical wastes. Due to large migration of population to urban areas the threat to the environment   becomes inevitable and it not only leads to environmental degradation but also the increasing vulnerability to infectious disease and congestion.

Poverty: Poverty in India can be defined as a situation only when a section of peoples are unable to satisfy the basic needs of life. According to an expert group of Planning Commission, poverty lines in rural areas are drawn with an intake of 2400

calories in rural areas and 2100 calories in urban areas. If the person is unable to get that minimum level of calories is considered as being below poverty line. In the cities people are suffering from acute poverty and the living conditions is so poor that in one small room all family members are staying and this is common feature of people who are living below poverty line. The speed of population growth and levels of poverty in mega cities such as Mumbai, Kolkata, Delhi and Hyderabad pose immense infrastructural problems.

Percentage of Population below Poverty line-India

Table-6

Comparison of Poverty Estimates Based on Mixed Recall Period		
	1993-94	**2004-05**
Rural	27.1	21.8
Urban	23.6	21.7
Total	26.1	21.8

Source: 60th Round of NSSO Survey (CSO-Govt. of India)

Table-7

Comparison of Poverty Estimates Based on Uniform Recall Period		
	1999-2000	**2004-05**
Rural	37.3	28.3
Urban	32.4	25.7
Total	36.0	27.05

Source: 60th Round of NSSO Survey (CSO-Govt. of India)

Though the percentage of population below poverty line declined during subsequent period but still large number of population are below poverty line. Chronic poverty is the general phenomenon of people in urban slums. Existence of mass poverty is a reality in India and it is included in thirty poorest nations of the world. Poverty is more visible in mega cities as compared to intermediate cities. The divide with in the urban area is growing rapidly and inequality is more common in urban places.

Slums Proliferation: Rapid urbanizations with lack of adequate housing led to proliferation of slums across cities. The pace of urbanization is not matched by adequate housing and other basic facilities and this resulted in rapid proliferation of slums and slum population. Resulting emergence of uncountable slums and slum dwellers across the mega cities need utmost attention from the government and policy making bodies. In 1981 about thirty million people were living in slums

which increased to fifty-five million in 1991 and in 2001 the total number of people living in slum reached to about seventy five million and it is about twenty six percent of total urban population in 2001. In terms of slum population as a percentage of urban population Haryana, Andhra Pradesh and Maharastra occupied the top three places. If we consider a specific case of the glittering metropolis of Mumbai it appears that 55% of the total population of 11 million is slum dwellers occupying about 12-85% of the city's total land area (Asha et.al).Data from a study by National Institute of Urban affairs (NIUA) reported that among the poorest cities were Kolkatta, Bangalore and Indore. More disturbingly, there was a gender divide in the distribution of urban poor in the slums: NIUA reported that 68% of this group consisted of women. Also notable is the fact that 6 million of this population is in the age group 0-6.It also reveals that the urbanization of the country has created the most brutal and inhuman living conditions of the people, with vast sections of the population living in squatter settlements(Krishna Veni et.al). People who are living in slums are under conditions of multiple deprivations. They tend to experience the highest rates of unemployment, under-employment, malnutrition, morbidity and mortality. Some other facts are that the crime and social unrest is high in the slum areas. In consequence, the long standing presumption that living conditions are better in larger cities than in the countryside is only true where efficient city management   and   governance   occur   (Brockerhoff   and   Brennan 1998) .Unfortunately ,they are lacking in many countries included India.

Conclusion & Policy Implication

According to the UN-HABITAT 2006 Annual Report, in regard to future trends, it is estimated 93% of urban growth will occur in Asia and Africa and mainly in two Asian   countries,India and China.By 2050 over 6 billion people, two thirds of humanity, will be living in towns and cities.
With the country's growing population concentrating on less and less land and linking together more and more tightly in an expanding network of large cities, the well established geographical concepts of inhibited area, state population and population density are gradually becoming less meaningful and pertinent. The blind forces of urbanization, flowing along the lines of least resistance, show no aptitude for creating an urban and industrial pattern that will be stable, self-sustaining, and self-renewing. Neither the blotting-out of the landscape nor the disappearance of the city is the climax stage of urbanization. Rather, it is the farsighted and provident balancing of city populations and regional resources so as to maintain in a state of high development all the elements (social, economic, and agricultural) necessary for their common life. In India policies towards urbanization have traditionally been negative and since independence no government has ever made any sincere effort to

implement a uniform and coherent urban reform policy for better management of this concurrent issue. This must be changed so that the process of urbanization is regarded as a positive force in the development of the country. Policies concerned with urbanization and urban development must pay special attention to increase the access of the poor to urban incomes and amenities so that they also take advantages of urbanization. There should be a mechanism for **sustainable urban environmental management** so that the urban environment will be supportive to the needs of a rapidly increasing urban population. The urbanization is always a supportive force for economic and social development and it should be welcomed, indeed we must seek out creative and sustainable ways to accelerate it in the interest of both common masses and our environment.

Notes:
1. Tempo of Urbanization has been calculated by linear model. Tempo of Urbanization $TRa=1/n$ (PU^{t+n}/PU^{t} -1)*100. Where TRa =Tempo of Urbanization=Number of Years, PU= Present urban at the year t and t+n.
2. MRP consumption = Mixed Recall Period consumption in which the consumption expenditure data for five non food items ,namely clothing, footwear, durable goods, education and institutional medical expenses are collected from 365-day recall period and the consumption data for the remaining items are collected from 30-days recall period.
3. URP consumption= Uniform Recall Period consumption in which the consumer expenditure data for all the items are collected from 30-day recall period.

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