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# TREND AND GROWTH PATTERN OF POPULATION IN MILLION PLUS CITIES OF INDIA-AN OVERVIEW

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- **Abstract**

Urbanization can also be defined as the rapid and massive growth of urban population and migration to towns/large cities. Urbanization is the process where an increasing percentage of a population lives in cities and suburbs. This process is often linked to industrialization and modernization, as large numbers of people leave agriculture work and live in cities. Urbanization is also facilitated by improvements in surplus agriculture, as cities are always dependent upon external farming for food. The larger cities have attracted a significant proportion of migrants in their population as respect their status. The present paper examines Trend and growth pattern of population in million plus cities of India based on census data during 1901-2011. The findings show that the urban population uneven and huge portion of population inhabited in major cities.

Keywords: Population; Urbanisation; Urban Agglomeration; Growth; Towns and Million pus cities

### Introduction

Urbanisation is an index of transformation from traditional rural economies to a modern industrial one. It is progressive concentration (Davis, 1965) of the population in urban unit. It is a long term process. Kingsley Davis has explained urbanization as a process (Davis, 1962) off switch from spreading out pattern of human settlements to one of concentration in urban centres. It is a finite process—a cycle through which a nation passes as they evolve from agrarian to industrial society (Davis and Golden, 1954). He has mentioned three stages in the process of urbanization. Stage one is the initial stage characterized by rural traditional society with predominance in the agriculture and dispersed pattern of settlements. Stage two refers to the acceleration stage where basic restructuring of the economy and investments in social overhead capitals including transportation, communication take place. The proportion of urban population gradually increases from 25% to 40%, 50%, 60% and so on. Dependence on primary sector gradually dwindles. A third stage is known as terminal stage where urban populations exceed 70% or more. At this stage level of urbanization (Davis, 1965) remains more or less same or constant. Rate of growth of urban and total population becomes same at this terminal stage.



Urbanisation is an increase in population and economic activities in the urban areas which leads to further development of towns and agglomerates to contain this rising population. It is a cause and effect of heightened economic progress in a region (Census of India, 2011). It plays an enormous role in social transformation and economic mobility all over the world. The process of urbanization is a universal phenomenon, which refers to the population of a nation living in urban areas. Urbanisation is the increased proportion of the population living in urban areas. It is an indicator of modernization, the growth and economic development. Urbanisation is involving a change from agricultural to non‑agricultural occupation and being associated with organizational and behavioural change (Patil, 1993). In the 21st century, the rate of urbanisation is much more in developing regions than developed regions. In recent decades, India is experiencing rapid growth of urban population and created an imbalance in total socio-economic and cultural development, which in-turn leads to several causes and consequences and it is discussed at length by many demographers (Ashish Bose, 1978; Ashok Mithra, et. al. 1980, and Kunda, 2006).

#### **Importance**

The population explosion is one of the most threatening issues facing contemporary India, particularly the Indian million plus cities. One of the most important reasons for population explosion in the cities of India is the largest scale rural to urban migration and rapid urbanization, resulted in many severe issues. Hence, the study of trends and the growth pattern of population in million plus cities of India are vital for planning and framing policy issue.

# **Objectives**

- To study the urban morphology in India
- To study the trend and growth pattern of population in million plus cities of India

#### Method and Material

The present paper is descriptive research based on secondary data collected from census of India during 1901-2011. Urbanisation is defined as a proportion urban population to total population and million plus cities that is cities having ten lakhs and above population.

# **Trends of Urbanization**

The study of urbanization in both quantitative and qualitative is of great importance and relevance to the population. Patterns of urbanization reveal the significant variable exists in the index of past and present levels as well as the concentration of population by size class towns and city level.

These phenomena generate a lot of interest among the urban planners, social scientists, policy makers and demographers. In this paper an attempt is made to here study the trends as well as patterns of urbanization in India by analyzing the percentage and growth of urban population, urbanisation by size class, percentage of population in million plus cities, and pattern of urban population concentrated in million plus cities. Table-1 gives data on trends of urbanisation in India during 1901-2011.

Table 1 reveals that there is wide variation in levels and trends of urbanisation in India. It is evident that, in 1901, eleven percent of the population was living in the urban areas. In this context, Davis (1965) noticed that, this population resides in cities of smaller size with less than 20 thousand population. A steady increasing in trend of urban had noticed except, a decline in the decade 1901-1911, when plagues epidemic broke. Since 1901-1941, the growth rate of urban was slow to increase to 44.15 million (13.9 percent) because of freedom movement. While during 1941-51 decade, the proportion of urban population rose to 17.3 percent with the size of 62.2 million. This is largely due to the partition of the country in 1947, which leads to a large number of displaced persons from Pakistan had settled in large cities of India (Kunda, 2006). Apart from this, socio-economic development is another cause for an increase in urban population.

In the 1961 census, 78.94 million of Indian population was inhabited in urban areas; constituting 18.0 percent. This is mainly due to reorganization of states in 1956 and adoption of new distinctive classification rural-urban population (Ashish Bose, 1978). From 1961-81, the momentum of urban population growth had found an increasing trend. It can be attributed to planned development in several parts of India. In the decade 1981-91, the process of urbanisation was slow. Davis (1962) revealed that, slowness in economic development leads to slowness in an urbanisation. However, from 1961 to 201l, the trend of urbanisation increased 18.0 to 31.2 percent with the bulk size of the urban population, which is equal to the total population (283 millions) of the Western African Region (Population Reference Bureau, 2007). Another indicator of urbanisation is Rural-Urban ratio. It was 12.2 in 1901, increased to 20.9 in 1951 and it further rose to 45.3 by 2011.

#### Growth of urban population

The urban population in India in 1901 was only 25.9 million, constituting 10.9 per cent of the total population in 1901, which increased to 377.1 million accounts for 31.1 per cent of the total population in 2011 (Table-2). The urban population did not grow much until 1921 and the level of urbanization even showed a decline in 1911 owing to devastating plague epidemic of 1911, which spread mainly in the urban areas and brought exodus of urban population to rural areas. From the year 1921 onwards, the level of urbanisation grew steadily and



Table 1. Trends of Urbanisation in India 1901-2011

Census year	Population (in	millions)	Percent popula	U	Urban- Rural Ratio	
•	Total	Rural	Urban	Rural	Urban	•
1901	238,396,327	212,544,454	25,851,873	89.1	10.9	12.2
1911	252,093,390	226,151,757	25,941,633	89.7	10.3	11.5
1921	251,321,213	223,235,046	28,086,167	88.8	11.2	12.6
1931	278,977,238	245,521,249	33,455,989	88.0	12.0	13.6
1941	318,660,580	274,507,283	44,153,297	86.1	13.9	16.1
1951	361,088,090	298,644,156	62,443,934	82.7	17.3	20.9
1961	439,234,771	360,298,168	78,936,603	82.0	18.0	21.9
1971	548,159,652	439,045,675	109,113,977	80.1	19.9	24.8
1981	683,329,097	523,866,550	159,462,547	76.7	23.3	30.5
1991	846,387,888	628,836,076	217,551,812	74.3	25.7	34.6
2001	1,027,015,247	741,660,293	285,354,954	72.2	27.8	38.5
2011	1,210,193,422	833,087,662	377,105,760	68.83	31.2	45.26

Source: Registrar General and CensusCommissioner, Computed from Census of India, 1981, 1991, 2001and 2011, Paper-2, Rural-Urban Distribution

very fast during the decade 1941-51 when the decennial urban growth rate was recorded as high as 41.4 percent due to the partition of the country in 1947 (Census of India 1991). The decline in the growth rate during 1951-61 was an artifact of the change in definition of urban resorted in 1961 census. As a result, about 800 towns have been declassified in 1961 census (Mohan and Pant, 1982).

In 1951-61 decade, a slowing of growth rate was noticed with the exponential growth of 2.3 with absolute growth of 16.4 million. This is mainly due to reorganization of states in 1956 and adoption of new distinctive classification rural-urban population (Ashish Bose, 1978). However, it can be noticed from table-4.2 that the highest in urban growth was observed during 1971-81 when the decennial growth rate raised to 46.1 per cent- the highest ever during the last century. Thereafter, the urban growth rate has slowed down, which declined to 31.4 percent in 2011(Table 2). It can be attributed to the mainly low volume of migration of people to urban areas apart from a steep decline in natural growth rate. Table-4.2 holds data on the growth of urban population in India during 1901-2011.

2 reveals that during eleven decades (1901 to 2011), the urban population increased by 15 times. Compared to the change in urban population, the number of towns only got 6.2 times during the same period (1,827 in 1901 to 5,161 of 2011). The net addition in urban population was 5.4 million during 1921-1931, which rose to 18.3 million during 1941-51 and to a sharp increase of 54.4 million during 1971-1981. The census of 2001 showed that the net addition of population was 67.8 million during 1991-2001 and 91.8 million during 2001-2011. Further, in the decade 2001-2011, a decline annual exponential rate in 2.7 was noticed, which was affected by the consistent fall in fertility level (Census of India, 1991).

# Urbanization by Size Class of Cities/Towns

Urbanization may be linked with details related to topography, transportation, land use, social structure and economic type, but is generally related to demography and economy in a city (Li, et al., 2002). The most important index in the study of urbanisation is distribution of population by different size classes, overtime, which reveals the population concentration across the cities/ towns by size class. In table-3, urbanization is analyzed by spatial urban form and its changes over time a period of eleven decades (1901-2011). It gives information on the size classes which are losing as well as gaining over a period of time. Urban units in India are classified into six classes. They are as follows: Class-I with a population of 1,00,000 and above; Class-II consists 99,999- 50,000; Class-III has 49,999-20,000; Class-IV holds 10,000-19,999; Class-V with a population of 5,000-9,999 and Class-VI contains less than 5,000. Proportion of Indian urban population concentration by Size Class of Cities/Towns for eleven decades (1901-2011) is given in Table 3.

3 depicts that the number of cities-towns in class-I to class-IV has been increasing during 1901-2011, while the class class-V and class-VI towns where fluctuating during 1901-1951, thereafter rapidly declining. Thus, the Indian urbanization scenario shows a high concentration of population in large cities/towns signals the enormity of the urban problems such as socio-economic, environmental and administrative etc.

#### Urbanisation in million plus cities

The cities with a million and more population deserve a special category in India's urbanisation because of their large size and economic dominance in the countries. Such cities



Table 2. Growth of Urban population in India, 1901-2011

Cen- sus year	No. of Cities/ Towns	Urban population(in millions)	Percentage of urban population	Decennial Growth Rate of urban population	Annual Expo. Growth Rate of urban population	Tempo of Urbaniza- tion
1901	1,827	25.9	10.9	-	-	-
1911	1,815	25.9	10.3	0.4	0.03	-0.5
1921	1,949	28.1	11.2	8.3	0.8	0.9
1931	2,072	33.5	12.0	19.1	1.8	0.7
1941	2,250	44.2	13.9	32.0	2.8	1.6
1951	2,843	62.5	17.3	41.4	3.5	2.5
1961	2,365	78.9	18.0	26.4	2.3	0.4
1971	2,590	109.1	19.9	38.2	3.2	1.1
1981	3,378	159.5	23.3	46.1	3.8	1.7
1991	3,768	217.5	25.7	36.2	3.1	1.0
2001	4,368	285.3	27.8	31.4	2.7	0.8
2011	5,161	377.1	31.1	31.1	2.7	0.8

Source: Registrar General and Census Commissioner, Computed from Census of India, 1981, 1991, 2001 and 2011, Paper-2, Rural-Urban Distribution.

Table 3. Number of Cities/Towns and Percentage of Urban Population by Size Classes

Census		Number of Cities / Towns by size class						Percentage of urban population by size class				
year	Class-	Class-	Class-	Class-	Class-	Class-	Class-	Class-	Class-	Class-	Class-	Class-
	I	II	III	IV	$\mathbf{V}$	VI	I	II	III	IV	$\mathbf{V}$	VI
1901	24	43	130	391	744	479	26.0	11.3	15.6	20.8	20.2	6.1
1911	23	40	135	364	<b>707</b>	485	27.5	10.5	16.4	19.7	19.3	6.6
1921	29	45	145	370	734	571	29.7	10.4	15.9	18.3	18.7	7.0
1931	35	56	183	434	800	509	31.2	11.7	16.8	18.0	17.1	5.2
1941	49	<b>74</b>	242	498	920	<b>407</b>	38.2	11.4	16.5	15.8	15.1	3.1
1951	76	91	327	608	1124	569	44.6	10.0	15.7	13.6	13.0	3.1
1961	102	129	437	719	711	172	51.4	11.2	16.9	12.8	6.9	0.8
1971	148	173	558	827	623	147	57.2	10.9	16.0	10.9	4.5	0.5
1981	218	270	743	1059	758	253	60.4	11.6	14.3	9.6	3.6	0.5
1991	300	345	947	1167	<b>740</b>	197	65.2	11.0	13.1	7.8	2.6	0.3
2001	393	401	1151	1344	888	191	68.7	9.7	12.2	6.8	2.4	0.2
2011	468	605	1905	2233	2187	498	60.4	10.8	15.4	8.5	4.2	0.1

Source: Registrar General and Census Commissioner, Computed from Census of India, 1981, 1991, 2001 and 2011, Paper-2, Rural-Urban Distribution.

are called as million plus or metropolitan cities. Million plus cities are a major source of economic activities, employment generation and prosperity in an economy. With rising income levels, people demand more goods and services, which become an important factor for them to live in cities. The cities attract more skilled labour, which, in turn, facilitates investments to open new firms and foster industrial development in the cities. Cities are the reflection of global integration of an economy as a majority of foreign firms operate their businesses in big cities and attract experts to live and work there. Over the last five decades, the world has faced dramatic growth of its urban population. The number of so-called mega cities increased in the period from 1975 until today from 4 to 22, mostly in less developed regions

(Munchner Ruck, 2005). Particularly, Indian mega cities are among the most dynamic regions on the earth. During the last five decades, the population of India (As per 2011 census, 1.2 billion) has grown two and a half times, but the urban population has grown nearly five times. Here, an attempt is made to trace the trend and pattern of urbanisation in million plus cities in India over period of eleven decades.

Table 4 depicts that the number of million plus cities in India doubles during 1901-1941, rose to 12 cities in 1981 and grew to 53 by 2011; thereby India has the largest concentration of mega cities in the world, while, the inhabitants of million plus cities had rapidly increased in recent decades than earlier periods. In 1901

census, only one city had recorded 1.5 million population,



Table 4. Growth of million cities: 1901-2011

Census year	Number of million plus cities (UA/M.Corp.)	Population in million plus cities (in millions)	Percent increase	Population per million plus city (in millions)	Population of Million Cities as % of India's population	Percentage to total urban popu- lation	CumulativeGrowth Indexof Popula- tion in million plus cities
1901	1	1.5	-	1.5	0.6	5.8	100
1911	2	2.8	82.8	1.4	1.1	10.7	187
1921	2	3.1	13.4	1.6	1.3	11.1	207
1931	2	3.4	8.9	1.7	1.2	10.2	227
1941	2	5.3	5.7	2.7	1.7	12.2	353
1951	5	11.8	21.3	2.4	3.3	18.8	787
1961	7	18.1	54.0	2.6	4.1	22.9	1,207
1971	9	27.8	53.8	3.1	5.1	25.5	1,853
1981	12	42.1	51.3	3.5	6.2	26.4	2,807
1991	23	70.7	67.8	3.1	8.4	32.5	4,713
2001	35	107.9	52.8	3.1	10.5	37.8	7,193
2011	53	160.7	48.9	3.0	13.3	42.6	10,713

Source: 1. Census of India, 1991. Part-II A (ii)-Towns and Urban Agglomerations classified by population in 1991 with variation since 1901. 2. Census of India, 2011: Population Totals, New Delhi.

increased to two cities constituting a population of 5.3 million in 1941, and further rose to five cities with population of 11.8 million in 1951, can be found from table-4. From, 1961 onwards, the million plus cities and concentration of population in these had been rapidly increased to seven cities holding population of 27.8 million, increased to twenty-three towns with inhabitants of 70.7 million in 1991 and rose to fifty-three cities comprising a population of 160.7 million by the year 2011. Thus, a huge share of urban population of India has been concentrating in million plus cities, which is clearly visible by noticing Population per million plus cities. It was 1.5 million in 1901, increased to 2.7 million in 1941 and grew to 3.1 million in 2001 census and recorded as 3.0 percent in 2011.

Also, the volume of urbanisation in million plus cities can be noticed through their share in a Population of Million Cities as percent of India's population, percentage of total urban population and Cumulative Growth Index of Population in million plus cities. Of the 53 cities that have upgraded to million plus status, 48 cities were in existence in 1901 also. These cities contained 12 percent of the total urban population of the country. This period contains frequent epidemic diseases that not only took a toll of millions of human lives, but also disrupted the economic life of urban and rural areas alike. Moreover, the decline of India's exports of cotton, leather, sugar and coffee in the face of growing international competition was also responsible for arresting the growth of many markets, manufacturing and port towns.

Table 5 shows that in Kerala, three million plus cities like Kannur, Kollam, Malapuram and Thrissur have shown an abnormal increase in the population recording growth rate

more than 100 percent during 2001-2011. This may not be due to natural increase, but due to the three type process of change in the territorial boundaries of these urban agglomerations through incorporation of the surrounding rural areas and merging of the towns into them apart from inflow of people. Growth of population during 1991-2011 in million plus cities at the time of the census 1991 and have attained the status in 2011 indicate the different growth rate. The fastest growth documented on those urban centres which are become million plus cities in 2001-2011 census in comparison to the existed million plus cities. The natural growth of urban population, in-migration from rural area as well as smaller urban places and expansion of urban boundaries which include adjacent towns and villages contributed the rapid growth. Evidence indicates that, about two-thirds of an increase in the urban population of the large cities as a result of natural increase (Singh, 1992) and remaining as the consequences of in-migration (Oberai, 1993). Reasonably, Southern India is more urbanized than its northern counterpart. The coastal areas are characterised by development of port areas, industrialisation and commercialization resulted in a higher degree of urbanisation.

#### Conclusion

Although the present share of the urban population in India is relatively small, namely about 31.2 percent, but it is quite large in absolute number, namely, about 377 million. Moreover, the large mega-cities in the country are showing an imbalance fast growth pace over the past decades.



Table 5. Population size and annual exponential growth rate at different time periods (1901-2011)

U.As /	State / U.T		Census Yea	rs/ Populatio		Annua	l Exponential Gi	rowth Rate
Municipal	State / U.1	1901	1951	1991	2011	1901-51	1951-91	1991-
Corporation								2011
VasaiVirar City	Maharashtra	10702	19640	83734	1221233	1.2	3.6	13.4
(M.Corp.)								
Malappuram UA	Kerala	NA	10357	142204	1698645	NA	6.5	12.4
Thrissur UA	Kerala	15585	75342	275053	1854783	3.2	3.2	9.5
Ghaziabad UA	Uttar	11275	43745	511759	2358525	2.7	6.1	7.6
	Pradesh							
Kannur UA	Kerala	55694	82471	463962	1642892	0.8	4.3	6.3
Kollam UA	Kerala	15691	66126	362572	1110005	2.9	4.3	5.6
Surat UA	Gujarat	129500	237394	1518950	4585367	1.2	4.6	5.5
Kozhikode UA	Kerala	76981	178187	801190	2030519	1.7	3.8	4.6
Raipur UA	Chhattisgarh	32114	89804	462694	1122555	2.1	4.1	4.4
Faridabad (M	Haryana	9816	37393	617717	1404653	2.7	7.0	4.1
Corp.)	·							
Chennai UA	TamilNadu	541167	1427420	3841396	8696010	1.9	2.5	4.1
Rajkot UA	Gujarat	36151	132069	654490	1390933	2.6	4.0	3.8
Nashik UA	Maharashtra	24384	156888	725341	1562769	3.7	3.8	3.8
Bangalore UA	Karnataka	163091	786343	4130288	8499399	3.1	4.1	3.6
Thiruvananth	Kerala	57882	191343	826225	1687406	2.4	3.7	3.6
apuram UA								
Aurangabad UA	Maharashtra	36837	66636	592709	1189376	1.2	5.5	3.5
(aipur (M Corp.)	Rajasthan	160167	304380	1518235	3073350	1.3	4.0	3.5
Pune UA	Maharashtra	164117	608634	2493987	5049968	2.6	3.5	3.5
Coimbatore UA	TamilNadu	53080	287334	1100746	2151466	3.4	3.4	3.4
Indore UA	Madhya	97804	310859	1109056	2167447	2.3	3.2	3.4
	Pradesh							
Delhi UA	Delhi	214115	1437134	8419084	16314838	3.8	4.4	3.3
Ahmadabad UA	Gujarat	185889	877329	3312216	6352254	3.1	3.3	3.3
Kota (M Corp.)	Rajasthan	33657	65107	537371	1001365	1.3	5.3	3.1
Kochi UA	Kerala	74198	211729	1140605	2117990	2.1	4.2	3.1
Patna UA	Bihar	171899	326163	1099647	2046652	1.3	3.0	3.1
Agra UA	Uttar	188022	375665	948063	1746467	1.4	2.3	3.1
8	Pradesh							
Ranchi UA	Jharkhand	25970	106849	614795	1126741	2.8	4.4	3.0
Chandigarh UA	Chandigarh	N.A	NA	575829	1025682	NA	NA	2.9
Bhopal UA	Madhya	77023	102333	1062771	1883381	0.6	5.9	2.9
·L	Pradesh							2.,
Hyderabad UA	Telangana	448466	1135758	4344437	7749334	1.9	3.4	2.9
Vijayawada UA	Andhra	31926	186394	845756	1491202	3.5	3.8	2.8
,,	Pradesh	01,20	100071	0.20,00	11,1202	2.2		2.0
Lucknow UA	Uttar	256239	496861	1669204	2901474	1.3	3.0	2.8
	Pradesh		1,0001	100,201	_, , , , ,			2.0
odhpur UA	Rajasthan	79109	180717	666279	1137815	1.7	3.3	2.7
Meerut UA	Uttar	125999	245179	849799	1424908	1.3	3.1	2.6
	Pradesh	12000	2101/7	01/1//	1121700	1.0	J.1	2.0
Amritsar UA	Punjab	162429	336114	708835	1183705	1.5	1.9	2.6
Visakhapatnam	Andhra	40892	108042	1057118	1730320	1.9	5.7	2.5
Visaknapatham UA	Pradesh	10072	100042	103/110	1/30320	1.9	5.7	4.3
Vadodara UA	Gujarat	103790	211407	1126824	1817191	1.4	4.2	2.4
Asansol UA	West Bengal	14906	156165	763939	1243008	1.4 4.7	4.2	2.4
Asalisul UA	west beligat	14700	130103	829171	1337131	NA	4.0	2.4

Continued on next page



Table 5 continued										
Durg- Bhilainagar	Chhattisgarh	NA	20249	685474	1064077	NA	8.8	2.2		
UA Ludhiana (M Corp.)	Punjab	48649	153795	1042740	1613878	2.3	4.8	2.2		
Gwalior UA	Madhya Pradesh	138612	241577	717780	1101981	1.1	2.7	2.1		
Nagpur UA	Maharashtra	127734	449099	1664006	2497777	2.5	3.3	2.0		
Dhanbad UA	Jharkhand	NA	73602	815005	1195298	NA	6.0	1.9		
Greater Mumbai UA	Maharashtra	839672	3216904	12596243	18414288	2.7	3.4	1.9		
Jabalpur UA	Madhya Pradesh	90316	256998	888916	1267564	2.1	3.1	1.8		
Kanpur UA	Uttar Pradesh	202797	705383	2029889	2920067	2.5	2.6	1.8		
Allahabad UA	Uttar Pradesh	172032	332295	844546	1216719	1.3	2.3	1.8		
Tiruchirappalli UA	TamilNadu	127760	294233	711862	1021717	1.7	2.2	1.8		
Varanasi UA	Uttar Pradesh	226105	369799	1030863	1435113	0.9	2.6	1.7		
Madurai UA	TamilNadu	105984	370791	1085914	1462420	2.5	2.7	1.5		
Kolkata UA	West Bengal	1510008	4669559	11021918	14112536	2.3	2.1	1.2		
Srinagar UA	Jammu & Kashmir	122618	507224	NA	1273312	1.4	N.A	N.A		
Total	India	7638854	23294481	87939207	160725506	2.2	3.3	2.9		

Source: 1.Census of India, 1991. Part-II A (ii) – Towns and Urban Agglomerations classified by population in 1991 with variation since 1901. 2. Census of India, 2011: Population Totals, New Delhi. N.A- Not Applicable.



Million plus cities has become congested, clogged, polluted, and also show significant social polarization. Thus, the top-heavy character of India's urban system also adversely impacts the balanced regional development of the country. The government policies aimed at tackling the urban challenges by developing small as well as medium towns to divert migration to larger cities and develop rural areas to curtail out-migration.

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