

Indian Cities in Transition Case of Indian State Capital Cities

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Abstract

India, as a developing country, has a lower output from resources than many other countries at the moment, but the emerging economic geography will determine whether this pattern can be sustained, maintained or re-aligned, as the consumption of resources increases. Similarly, social transformation and economy of a country also depend upon the urban growth. After independence, the shift from rural-agrarian to urban-industrial-service led economy changed the population distribution across the settlements. Many urban centers came up as a result. Thus, the country has faced an escalating rate of urbanization throughout the past six decades.

The rapid growth of the largest metropolitan cities in the twentieth century is now beginning to slow down whereas the smaller secondary cities are growing faster. It was observed that there is a growth of sub-centres between two cities due to the higher pressure on infrastructure, as well as high housing costs in the cities. This type of growth ultimately turns into an ancillary type settlement at a later stage and becomes a source of materials and services supplier to the adjacent cities and towns in consideration.

It is to be understood that the administrative and spatial control mechanisms were not available or were weak in preceding years which led to the uncontrollable growth. Though today apart from the Megacities, there are many cities which are almost about to become one. The state capital cities of India which are the focal points of their respective regions are now in their way to come up as future megacities and therefore it is the duty of planners to predict and mould their future by providing effective supporting machinery.

In this study, such metro cities are selected and compared with respect to the factors which are responsible for their growth. Followed by a look into the current economic geography and corridor formation between Indian cities.

Keywords: Urban Transition, Secondary Cities, Regional Planning, System of Cities, India

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1. Introduction

Over half of the world's population is now living in the cities and the transition of urban areas as been observed in the developed nations is making its presence in developing countries. The developing countries which are still in transition, are more populated than the developed. Today, two-thirds of the world's population is found in developing nations. While recently, rapid urbanization is not only creating huge pressures on the urban systems but also creating a dynamic change in the surrounding region. A few countries across the world are home to half of the world's population.

In 2014, China had the largest urban population, with 758 million urban dwellers, accounting for 20 percent of the global total. China was followed by India, with 410 million urban dwellers and the United States, with 263 million urban dwellers. (United Nations, 2014). A Large concentration of this population change is projected to be located in Asia, which will see a growth in urban population and a considerable decline in the rural population. Though looking at the future growth of global urban population, collectively China, India, and Nigeria are projected to account for 37 percent of the increase (~nearly 2.5 billion people) in the urban population, by 2050 (United Nations, 2014). It has been observed that India has the 2nd largest number of megacities and large cities are located in Asia which is second to China. China has six megacities which are populated over 10 million and ten large cities with a population between 5 to 10 million. While India has three mega cities and five large cities, out of these four cities are projected to become megacities by 2030.

Urban India today has many disjointed and diverse range of large and small cities spread widely around the nation. The largest urban agglomerations - Delhi, Mumbai, and Kolkata are geographically located in such a way that they negate the possibility of national primacy but specifically have become regional centers of primacy.

The study focuses on the understanding the process of urbanization in India and learns from the current classification of cities. The study is divided into six sections: the first section provides an introduction to the study, the second sections looks into the definition of 'Urban Area' in India, the third sections gives a brief overview of urban transition in India followed along with patterns of urbanization in the fourth section, section five provides a review on the emergence of the Metro cities of India, followed by the conclusion in section six.

2. Defining Urban in India

In Census of India, 2011 'urban area' was defined as follows:

- a) Statutory Towns: All places with a municipality, corporation, Cantonment board or notified town area committee, etc.
- b) Census towns: Places which have a minimum population of 5000 with at least 75% of the male main working population engaged in non-agricultural pursuits and a density of population for at least 400 persons per sq.km (1000 per SQ. Mile). Also, these towns are further classified into different classes based on the size of population:
 - a) Class I : 100,000 and above;
 - b) Class II : 50,000 to 99,999;

- c) Class III: 20,000 to 49,999;
- d) Class IV: 10,000 to 19,999;
- e) Class V : 5,000 to 9,999

The towns with population 100,000 and above are called Cities. The Reserve Bank of India uses the same population criteria to define the 'Tier centers' - a concept used in designing incentives for bank branch and ATM expansions (RBI, 2013). Towns with a population below 5000 are called Tier -6 centers. Tier 1 comprises metropolitan and urban centers, Tiers 2, 3, and 4 comprise semi-urban centers and Tiers 5 and 6 comprise rural centers.

Urban Agglomeration: Urban agglomeration is a continuous urban spread constituting a town and its adjoining Urban Outgrowths (OGs) or two or more physically contiguous towns together and any adjoining urban outgrowths of such towns. Examples of outgrowths are railway colonies, University campus, port area, military campus that may come up near a statutory town or city (Census Report, 2001).

In the census of India, 2001 it was decided that the core town or at least one of the constituent towns of an urban agglomeration should necessarily be a statutory town and the total population of all the constituents should not be less than 20,000.

The Urban agglomerations are grouped into the following categories on the basis their population in Census:

- a) Class I Urban agglomerations/Towns: The Urban agglomerations/Towns which have at least 1,00,000 persons as a population are categorized as Class I UA/Town.
- b) Million Plus Urban agglomerations /Towns: Urban agglomerations/Towns which have a population of one million or above each are known as Million Plus UA/Cities.
- c) Metro Cities: Urban agglomerations /Towns which have a population of four million or above each are known as Metro Cities.
- d) Megacities: Urban agglomerations with more than 10 million persons are known as Mega Cities.

Among the Million Plus UAs/Cities, there are three very large urban agglomerations with more than 10 million persons in the country, known as Mega Cities. These are Greater Mumbai UA (18.4 million), Delhi UA (16.3 million) and Kolkata UA (14.1 million).

3. Urban Transition

The process of urbanization or urban transition is described as a shift in a population from the one that is dispersed along small rural settlements in which agriculture is the dominant activity towards one where the population is concentrated in large, dense urban settlements characterized by industrial and service activities (Montgomery, 2004).

The Urban transition of India has the potential to shift the country's social, environmental, political & economic scenario. Indian cities are no exception to the rapid urbanization evident in all cities across the world (McKinsey, 2014). With being home to around 1.21 billion people and

over one-third of them living in cities, the population of the country is experiencing peculiar and observable pull towards growth center located in cities.

Table 1: Population of India as per decadal Census starting from 1901

Census Years	Number of UAs/Towns	Total Population	Total Urban Population	Total Rural Population	Percentage of Urban Population	Percentage of Rural Population
1901	1827	238396327	25851873	212544454	10.84	89.16
1911	1825	252093390	25941633	226151757	10.29	89.71
1921	1949	251321213	28086167	223235046	11.18	88.82
1931	2072	278977238	33455989	245521249	11.99	88.01
1941	2250	318660580	44153297	274507283	13.86	86.14
1951	2843	361088090	62443709	298644381	17.29	82.71
1961	2363	439234771	78936603	360298168	17.97	82.03
1971	2590	598159652	109113977	489045675	18.24	81.76
1981	3378	683329097	159462547	523866550	23.34	76.66
1991	3768	844324222	217177625	627146597	25.72	74.28
2001	5161	1028737436	286119689	742617747	27.81	72.19
2011	7935	1210193422	377105760	833087662	31.16	68.84

Source: Census of India Reports, Government of India

Out of the top three most populous countries in the world, India's population constitutes to 17.5% of world's population, second to the 19.4% of China and is followed by the USA at 4.5%. In 2011, a little more than one out of every six persons in the world is from India (Census Report, 2011). It can be observed that total population has increased from 238.4 million in 1901 to 1210.2 million in 2011 whereas the number of the population residing in urban areas has increased from 25.8 million in 1901 to 377.1 million in 2011. It can also be observed in Table 1, that the total number of Urban agglomerations/towns falls to 2363 in 1961 from 2843 in 1951, this is because of the introduction of a new census definition term of 'town groups' for the year 1961 census.

Table 2: Number of towns in different size classes

Census Year	Class I	Class II	Class III	Class IV	Class V	Class VI
1901	24	43	130	391	744	479
1911	23	40	135	364	707	485
1921	29	45	145	370	734	571
1931	35	56	183	434	800	509
1941	49	74	242	498	920	407
1951	76	91	327	608	1124	569
1961	102	129	437	719	711	172
1971	148	173	558	827	623	147
1981	218	270	743	1059	758	253
1991	300	345	947	1167	740	197
2001	393	401	1151	1344	888	191
2011	468	474	1373	1683	1749	424

Source: Census of India Reports, Government of India

The town group, according to the census was 'a group of towns which adjoined one another so closely as to form a single inhibited urban locality'. The definition was further classified into sub-criteria based on clustering of other municipalities and their distance from the most populous city. The adopted definition was severely criticized and as result, the concept of Urban agglomeration was adopted by the Census in 1971. The definition of urban agglomeration as mentioned in the earlier section has been continued further in 1981 Census and since. (Ramachandran, 1989).

Table 3: Percentage of urban population in states of India

Region	States	1971	1981	1991	2001	2011
Northern	Jammu & Kashmir	18.6	21.1	22.80	22.24	24.05
	Himachal Pradesh	7.0	7.7	8.70	9.79	10.04
	Punjab	23.7	27.7	29.72	33.95	37.49
	Chandigarh (U.T)	90.6	93.6	89.69	89.78	97.25
	Haryana	17.7	22.0	24.79	29.00	34.79
	Delhi (U.T)	89.7	92.8	89.93	93.01	97.50
	Rajasthan	17.6	20.9	22.88	23.38	24.89
Central	Uttarakhand	-	-	19.89	20.78	22.28
	Uttar Pradesh	14.0	18.0	-	-	30.55
	Chhattisgarh	-	-	-	20.09	23.24
	Madhya Pradesh	16.3	20.3	26.44	37.35	27.63
Eastern	Bihar	10.0	12.5	13.17	10.47	11.3
	Orissa	8.4	11.8	13.43	14.97	16.68
	Sikkim	9.4	16.2	9.12	11.10	24.97
	Jharkhand	-	-	-	-	27.21
	West Bengal	24.8	26.5	27.39	28.03	31.89
	Andaman & Nicobar Islands (U.T)	22.8	26.4	26.80	32.67	35.67
North-Eastern	Arunachal Pradesh	3.7	6.3	12.21	20.41	22.67
	Assam	8.8	9.9	11.08	12.72	14.08
	Meghalaya	14.6	18.0	18.69	12.72	20.08
	Tripura	10.4	11.0	15.26	17.02	26.18
	Nagaland	10.0	15.5	17.28	17.74	28.97
	Manipur	13.2	26.4	27.69	23.88	30.21
	Mizoram	11.4	25.2	46.20	49.50	51.51
Western	Gujarat	28.1	31.1	34.40	37.35	42.58
	Dadra & Nagar Haveli (U.T)	0.0	6.7	8.47	22.89	46.62
	Daman & Diu (U.T)	-	-	46.86	36.26	75.16
	Maharashtra	31.2	35.0	38.73	42.40	45.23
Southern	Andhra Pradesh	19.3	23.3	26.84	27.08	33.49
	Karnataka	24.3	28.9	23.83	33.98	38.57
	Kerala	16.2	18.8	30.91	25.97	47.72
	Tamil Nadu	30.3	33.0	34.2	43.86	48.45
	Goa	26.4	32.5	41.02	49.47	62.17
	Pondicherry (U.T)	42.0	52.3	64.04	66.57	68.31
	Lakshadweep (U.T)	0.0	46.3	56.29	44.47	78.08
All India	20.2	23.7	25.72	27.78	31.16	

Source: Census of India Reports, Government of India

4. Patterns of Urbanization

Observing the levels of urbanization for each state and union territory, the level of urbanization varies widely among the States of the country. As per Census of 2011, Goa is the most urbanized State in India with 62.17 % urban population followed by Mizoram, Tamil Nadu, and Maharashtra. While the national capital, Delhi is the most urbanized Union Territory with 97.5% urban population (Neelmai Jayaswal, 2014). As can be seen in Table 3, Except Andaman and Nicobar Islands and Dadra & Nagar Haveli all other Union Territories are highly urbanized but all are well above the national average of 31.16%. It is observed that 12 of the 29 states have a higher percentage of the urban population than the national average and most of it is concentrated in southern, western and north-eastern states whereas low urbanization level is found in northern and central states (Kundu, 2011).

The maximum concentration of the country's urban population is found in Maharashtra, Uttar Pradesh, Tamil Nadu, Kerala, West Bengal and Andhra Pradesh. It is important to note that states

of Maharashtra and Uttar Pradesh together contribute 95.2 million in the national urban population which amounts to 13.5% and 11.8% from each state respectively.

5. Emergence of metro cities in India

During post-independence, most of the development has taken place in India for strengthening the urban economy especially the cities of larger size. As discussed in the earlier section the observed spatial patterns of urbanization are creating a permanent impact on the country's overall growth and that has been happening since colonization. The major four metropolitan cities of India, Delhi, Kolkata, Mumbai, and Chennai have remained the dominant cities in Indian urban system; they remained the top metropolitan cities even after independence. These large urban agglomerations have acted as the major magnets for the migrants from other parts of the country.

Kolkata (then Calcutta) was the capital of India since 1772, it was the location for administrative, military and trade activities. The city kept attracting population from other parts of the country for many years even after Delhi was made capital in 1911. Calcutta remained the most industrialized metropolis which created an agglomeration effect providing opportunities in terms of employment, education, trade etc. for the migrants. Historically, Calcutta got almost no competition from other cities in the eastern region in terms administrative, economic importance and opportunity provision. This also explains the lower level of urbanization in the eastern part of the country as shown in Table 3. This effect lasted for so long that Calcutta was the largest metropolis till 1981 census.

In 1981, Delhi was third largest metropolis after Mumbai and Kolkata. Though now, after the formation of the National Capital Region Planning Board in 1985, NCR Delhi has been recorded as the largest urban agglomeration in the country and second largest in the world in the year 2011. Delhi has a hierarchical historical importance. It has been the capital for many Mughal rulers and was called the Delhi sultanate. The city of New Delhi was built by 1935, being the National Capital, an administrative centre in the pre-independence period, in the period immediately after independence and partition of the British India into West Pakistan (Pakistan), India and East Pakistan (Bangladesh), the refugees from West Pakistan settled around New Delhi and surrounding states of Punjab and Haryana (Ramachandran, 1989).

Mumbai, the financial capital of India was known as Bombay till 1995. Bombay, the word literally meaning 'Good port' was one of the important port during British empire in the western part of India and has been the commercial center for a long time. Mills for textile exports and other heavy industrial areas set up in Bombay attracted migrants for better opportunities, incidentally, Bombay was the first city to have railways in India, developed by the British in 1853. Later development of the railways was one of the prime reasons for an urban form of Bombay till the formation of New Bombay (Now known as Navi Mumbai), a CBD-growth center based city, in 1971. The city attracted a lot of population from Bombay as the basic concept of Navi Mumbai was decentralizing and relocating the CBD based in Navi Mumbai. Collectively Mumbai Urban agglomeration as formed in 1974 with the enactment of Mumbai Metropolitan Region Development Authority Act. The Mumbai Metropolitan Region encompasses Mumbai, Navi Mumbai along with nine other Municipal corporations.

Chennai is an industrial and commercial hub in the southern part of India. The foundation for the development of the Chennai was laid in 1639 as a British settlement and later expanded as a new town around Fort St. George. The population expanded to 40,000 in 1669 and the surroundings of the Fort area covering 16 hamlets were constituted as the City of Madras in 1798. The introduction of railways gave the port city and its surroundings the required potential ultimately making Madras the administrative center of Madras Presidency. Today Chennai is the manufacturing hub for automobiles and electrical and related ancillary industries. The first Master Plan for Chennai Metropolitan Area was approved in 1976, it proposed the structure of the Metropolis taking into account various factors. The structure proposed was a radial pattern with the City as the hub. The main elements of the strategy were the encouragement of growth along the major transport corridors and development of urban nodes. This proposal also included the development of satellite towns outside the metropolitan boundary envisioning a spatial structure of the region.

By 2030 India will include four more urban cities, particularly, Ahmedabad, Bangalore, Chennai and Hyderabad other than the three existing megacities of Delhi, Mumbai, and Kolkata making the figure seven in the list (Bholey, 2016). The development of Indian urban communities has been natural. On the financial and social setting, they offer a wide variety as far as range and kind. The heterogeneous nature creates difficulties due to the multifaceted nature of urban planning too. The lack of planning in the Indian cities is the consequence of spatial arranging rather than the socio-economic arrangement (Bholey, 2016). The major difficulties lied in waste management, inadequate resources, air pollution, human health problems and deteriorating infrastructure which are actually among the technical, physical and material problems. Apart from these problems, there are also social and organizational flaws which are related to different stakeholders, high levels of interdependence, competing objectives and values, and social and political complexity. In this respect, city problems become wicked and intertwined.

As mentioned, the top four metropolises have been administrative, manufacturing, defense and business centers at different points of time in the pre-independence period and such historical frameworks thus laid in the past still exist in the functioning of these megacities. The emergence of urban corridors, particularly originating from Mumbai, Ahmedabad, Chennai, Bangalore, and Hyderabad, linking several important urban centers and absorbing new investments is an extremely important feature of urban growth. Most of these urban centers are linked with expressways, rail connections and have observed an increase in the frequency of the trains as well as airlines. For instance, few of the noteworthy express corridors are Ahmedabad–Vadodara in Gujarat, Pune–Mumbai in Maharashtra, New Delhi–Gurgaon in National Capital Region (NCR), Bangalore–Mysore in Karnataka.

Most of these corridors connect to the secondary cities (Tier II) which started increasing in size as the transport infrastructure supported the industrial investments are done in cities like Pune, Bangalore, Hyderabad, Ahmedabad started growing at a rapid rate (EY, 2016) (McKinsey, 2014). The increasing number of ICT companies and software parks in the cities like Bangalore, Hyderabad, Pune, and others have resulted in taking these cities in top 10 most populated cities in India. These Tier II cities are becoming a more popular hub for opportunities in the recent era than the pre-independence phase.

6. Conclusions

Globalization, industries and the growing flow of international capital are changing the economic geography of cities, regions, and countries. Megacities are transforming rapidly to maintain their competitiveness and trade advantage position. But while the megacities have reached saturation level for employment generation and housing affordability which has led to overcrowding into the over-congested slums. To avoid this, it is important to build a strong economic sector in the urban economy. It is in the secondary cities that the new transformation of industries is developing rapidly (Roberts, 2014). The growth in the number class II cities has been higher around the top four metro cities. The mega cities have reached saturation level for employment generation and to avoid over-crowding into the over-congested slums of it is required to build strong economic sector in the urban economy. Investments should be directed towards secondary cities which have been neglected so far so that functional base of the urban economy is strengthened.

The growth of a city leads to consumption of resources and energy. Since it is difficult to decide on the quantum and area for distribution of such resources and energy in an equitable manner, performance assessment and indicators of the cities might drive us towards solutions and help us in making judgments. The policy should also be developed to look at the cluster of cities (combination of class I and II) as a system of cities in a region and should consist of infrastructural, developmental and conservative planning. Infrastructural planning should take care of improvement of urban infrastructure. Developmental planning should emphasize on the development of urban areas as well as areas affected by proposed urban infrastructure. Conservative planning should aim to maintain and adding to the current urban form of the region in a positive way keeping in mind the future planning.

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