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## Mapping Metropolises in India

### ABSTRACT

This paper attempts to examine a specific parameter of Indian urbanisation with focus on metropolises across India. By adopting metropolises as per Census 2011 an attempt is made to trace their origin or roots in different periods in Indian history, examine their locational pattern vis-à-vis a number of features and highlight the trend in their growth pattern, in the post-liberal period. Secondary data obtained from Census of India has been processed, classified, analysed, tabulated and mapped. 21<sup>st</sup> century has ushered in a major phase of urbanisation in India, increasing faster than expected as increase in urban population has outpaced rural for the first time since independence. The urban areas in the country have added 91 million persons in the last decade in which 27.6 million persons that is 30.4 percent have been added by existing metropolitan cities. India at a comparatively low level of urbanisation contains a fairly large proportion of population in its metropolitan cities. These alone account for 42.3 percent of the urban population in 2011 in comparison to 18.8 percent in 1951. Ongoing increase in the number of metropolises, that is, cities whose population exceeds one million inhabitants is tremendous; increasing ten folds from 5 in 1951 to 52 in 2011. Metropolitanisation in the post-liberal period is both an economic and administrative process. The present growth pattern and spread of metropolitan cities is related to their administrative eminence, emergence as transport nodes and re-classification. The traditional colonial set up of Indian urbanisation is being reversed. However, the demographic decline of the mega cities or some metropolises does not mean their economic decline. The level of urbanisation shows a strong positive correlation ( $r=0.76$ ) with per capita income and population contained in metropolises ( $r=0.60$ ).

*Keywords: Metropolis, Statutory town, Census town, India*

### INTRODUCTION

Urbanisation 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. In fact, the process of urbanisation has been transforming the developing countries from 'countries of

villages' to 'countries of cities and towns'. The urban population today is growing large-city centric between two to three times faster than the rural population and the greater part of it happens to be in the developing world (United Nations 2012). Urban population of Africa and Asia is expected to double between 2000 and 2030. It will also continue to expand, but more slowly in Latin America and the Caribbean. Regarding India no matter which figures you select, the urban population growth projections are incredible. In a 2006 report, India's Registrar General expected the share of increase in urban population to be 249 million between 2001 and 2026 (Census of India 2006; viii). The 2010 McKinsey Global Institute Report on 'India's Urban Awakening' suggests a rise of 250 million citizens between 2008 and 2030.

Thus the first half of the 21st century is likely to be characterized by large scale urban development. The two most populated countries of Asia, China and India, are experiencing an urbanisation process of remarkable scale. As is evident from Table 1, India at a comparatively low level of urbanisation contains a fairly large proportion of urban population in its three megacities, each with a population of 10 million or more as compared to fast urbanising China and urbanised United States. Although the megacities attract considerable attention because of their population size and geographical complexity, they represent the extreme of the distribution of cities by population size.

In 2011, the world counted 23 megacities of at least 10 million inhabitants accounting for 9.9 percent of the world urban population. Asia has 13 megacities. In comparison 3 megacities in India contain nearly 13% of its urban population. The increase in the number of 10-million-plus cities from zero in 1950 to three by the turn of the century have been cited as evidence of unprecedented urban growth in India (Mohan and Dasgupta 2005). They are followed by large cities with populations ranging from 5 million to just under 10 million, which in 2011 numbered 40. Over three quarters of these "megacities in waiting" are located in developing countries (United Nations 2012), of which five are in India alone. These are Chennai, Bangalore, Hyderabad located in south India; Ahmadabad in west-central India and Pune in western India. Today, about 1 person out of 10 living in urban areas resides in a megacity of at least 10 million inhabitants. In relation to the overall population of the world, the share of megacities was 5.2 per cent in 2011, implying that just about one in every twenty people on Earth live in megacities. It is 4.03 per cent in India.

India's proportion of population in its metropolises is equivalent to that of China. The situation in United States is, however, different. In India, greater accretion of population in large cities leading to their higher increase in number is a post-liberal phenomenon not witnessed earlier. This vast urban expansion has regional, national and global implications. Cities are already the locus of nearly all major economic, social, demographic and environmental transformations (UNFPA 2007).

Table 1. Urbanisation Morphology of India, China and the United States: 2010

Pop. Size Category of towns	% in urban population in 2010		
	India	China	United States
10 million or more	15	8	13
5 to 10 million	8	10	10
1 to 5 million	17	23	34
500 000 to 1 million	9	15	10
Fewer than 500 000	52	44	33
Total urban population(in 000)	378775	660286	254959
% urban population	30.9	49.2	82.1
Urban annual growth rate (%) 2005-2010	2.56	3.44	1.24

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat,  
World Population Prospects: The 2010 Revision  
and World Urbanization Prospects: The 2011 Revision Sunday, January 05, 2014; 3:09:22 A.M.

Krishan and Singh (1993; 127) have visualised Indian urbanisation, with a history spanning over nearly five millennia, as having passed through four phases: pre-feudal (ancient) with primarily an administrative cultural base, feudal (medieval) with a political-military-economic base, colonial (modern) with an exploitative capitalist base, and post-colonial (contemporary) with a capitalist- welfare base. To this may be added the recent neo-liberal phase. The importance of cities and urban centres has been growing in India's economic development during the post-liberal phase, such as the contribution of urban areas in GDP has increased from 29 percent in 1951 to 63 percent in 2007 and is expected to increase to 75 percent by 2021. However, with increasing economic growth, prosperity is getting concentrated in cities and urban centres, and the rural-urban gaps in income levels and wages and employment opportunities are widening (Bhagat 2011a). It is linked with the globalisation, industrialisation and economic development.

### URBAN DEFINITION

The Census of India recognizes three categories of urban places: metropolitan areas, cities and towns. The Census typology of urban places is entirely based on the population criterion. Thus, the term 'metropolitan area' is applied to places with a population of one million and above whereas city population designated with one hundred thousand and above persons in India. Lower down the population size urban places are designated as towns (Ramachandran 2007; 108). In the present article 'metropolitan area', 'metropolitan city' or 'metropolis' is referred to for a city with a population of at least one million. Mega city refers to a city with minimum 10 million people. Barring Jaipur, Greater Visakhapatnam, Ludhiana, Faridabad, Vasai Virar City and Kota that are municipal corporations, all other metropolises are urban agglomerations.

An area is classified as rural or urban depending upon various criteria such as civic status, population size, density, occupational composition. In India whereas state governments decide on the civic status of a settlement, the Census of India applies demographic and economic criteria in identifying towns at every census. The first criterion of statutory administration includes civic status of towns and the towns identified on this basis are known as statutory or municipal towns. These include all

places with a municipality, corporation, cantonment board or notified town area committee. Towns identified on the basis of the second criteria involving economic and demographic indicators that entail characteristics like population size, density of population, and percentage of the workforce in the non-agricultural sector are termed census or non-municipal towns. Specifically, it includes fulfilling the conditions of (a) minimum population of 5000; (b) at least 75 per cent of the male main working population engaged in non-agricultural pursuits; (c) a population density of at least 400 persons per square kilometre. In the government perspective these are villages. This definition was carried through the 1961 Census.

In every census, several new towns are added to or removed from the roster of towns if they do not satisfy the earlier-mentioned criteria. As many urban residents also live outside the municipal boundary, the Indian Census uses the concept of an 'urban agglomeration' (UA) to measure urban population at the town and city level. An UA consists of the population of a core urban centre living within its municipal boundary, as well as the population of contiguous towns and adjoining urban outgrowths (OGs). An 'out growth' (OG) is a viable unit such as a village or a hamlet or an enumeration block made up of such village or hamlet and clearly identifiable in terms of its boundaries and location. These are areas around a core city or a statutory town that are fairly large such as a railway colony, university campus, port area, military camp, among other examples, but are not included within the municipal boundary of the core city or town. These have come up near a statutory town outside its statutory limits but within the revenue limits of a village or villages contiguous to the town. While determining the outgrowth of a town, it has to be ensured that it possesses the urban features in terms of infrastructure and amenities such as pucca roads, electricity, taps, drainage system for disposal of waste water, educational institutions, post offices, medical facilities, banks etc. and physically contiguous with the core town of the UA ([http://www.censusindia.gov.in/2011-prov-results/paper2-vol2/data\\_files/India2/1.%20Data%20Highlight.pdf](http://www.censusindia.gov.in/2011-prov-results/paper2-vol2/data_files/India2/1.%20Data%20Highlight.pdf)).

The municipal boundaries are also changed from time to time as decided by the state government, but it is a time-consuming process as notification has to go through the offices of Deputy Commissioners and District Magistrates for due processing. However, in the absence of changes in the municipal boundaries, the application of the concepts of UA and OG by the Census takes into account any spill over of urban population outside the municipal boundary.

### **URBAN SITUATION IN INDIA**

The population of India has increased from 238 million in 1901 to 1210 million in 2011. Of this, the rural population stands at 833.1 million and the urban population 377.1 million. The urban population growth of nearly 91 million between 2001 and 2011 is for the first time higher than the absolute rural growth, albeit slightly. The urban growth rate, which fell in the last two decades, also rose in this census. This has reversed the slowdown in Indian urbanisation observed during the 1980s and 1990s. The average annual growth rate of population in the last decade was 1.2% and 3.2% in rural and urban areas respectively with the average at 1.8 percent ([http://www.censusindia.gov.in/2011census/PCA/PCA\\_Highlights/pca\\_highlights\\_file/India/Chapter-1.pdf](http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/Chapter-1.pdf)). The level of urbanisation in India is 31.2 percent in 2011, has increased from 10.8 percent in 1901; only a three-fold increase in more

than a century (Table 2). Much of it can be attributed to high rate of rural population growth. The total number of urban agglomerations/towns that constitutes the urban frame in the country in 2011 is 7935, which has grown from 1827 in 1901.

The current census has enumerated 264.7 million people, constituting 70% of the total urban population living in 468 Class I UAs/Towns (Table 3) having at least 1,00,000 persons. Their number has increased from 23 in 1901 and 76 in 1951 to 468 in 2011. The graduation of number of urban centres from lower population size categories to class I cities has resulted in top-heavy structure of urban population in India oriented towards large cities (Kundu 2011, 2009).

Table 2. Urban situation in India: 1901-2011

Census Years	Number of Towns/UAs	Cities with 100,000 + Persons (No.)	Metropolitan city	Urban Population (in millions)	% urban Population	Compound annual growth rate of urban population
1901	1827	23	1	26	10.8	—
1911	1815	21	2	26	10.3	0.04
1921	1949	27	2	28	11.2	0.8
1931	2072	33	2	34	12.0	1.8
1941	2250	47	2	44	13.9	2.8
1951	2843	71	5	62	17.3	3.5
1961	2365	95	7	79	18.0	2.4
1971	2590	139	9	109	19.9	3.3
1981	4029	204	12	159	23.3	3.9
1991	4689	273	23	217	25.7	3.2
2001	5161	394	35	286	27.8	2.7
2011	7935	468	52	377	31.2	2.8

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, PCA UA/Towns, Office of the Registrar General & Census Commissioner, India, New Delhi (compact disk form).

3. <http://censusmp.nic.in/censusmp/All-PDF/3TrendsInurbanization21.12.2011.pdf>

Another important feature of the 2011 Census is a phenomenal increase of 2,774 new towns. Only 242 statutory towns are added in the last decade in comparison to 2532 Census towns. Whereas the number of statutory towns (STs) have increased marginally from 3,799 to 4,041 there is unexpected jump in the number of “census towns” from 1362 to 3894 (Table 4), which is unprecedented in the history of the Indian census since 1901. Many of these towns are part of UAs and the rest are independent towns. A phenomenon of dispersed pattern of ‘in situ’ urbanisation is observed with the reluctance of state policy to recognise new statutory towns partly responsible for the growth of new CTs.

Table 3. The break-up of class-I cities: 2011

Cities population	No. of Cities	Cities	Total population	Percent Population
More than 10 million	3	Greater Mumbai, Delhi, Kolkata	48802734	18.4 (12.9)
5-10 million	5	Chennai, Bangalore, Hyderabad, Ahmadabad, Pune	36266376	13.7 (9.6)
2-5 million	11	Surat, Jaipur, Kanpur, Lucknow, Nagpur, Ghaziabad, Indore, Coimbatore, Kochi, Patna, Kozhikode	28839005	10.9 (7.7)
1-2 million	33	Bhopal, Thrissur, Vadodara, Agra, Visakhapatnam, Malappuram, Thiruvananthapuram, Kannur, Ludhiana, Nashik, Vijayawada, Madurai, Varanasi, Meerut, Faridabad, Rajkot, Jamshedpur, Jabalpur, Srinagar, Asansol, Vasai Virar City, Allahabad, Dhanbad, Aurangabad, Amritsar, Jodhpur, Ranchi, Raipur, Kollam, Gwalior, Durg-Bhilainagar, Tiruchirappalli, Kota	45665729	17.3 (12.1)
Total (Cities with Million plus population)	52		159573844	60.3 (42.3)
0.5 million to 1 million	44		31207407	11.8 (8.3)
1 hundred thousand to 5 hundred thousand	372		73919974	27.9 (19.6)
Total (Class-I Cities)	468		264701225	100 (70.2)

Source: Computed from Census of India, 2011, PCA UA/Towns, Office of the Registrar General & Census Commissioner, India, New Delhi (compact disk form).

Note: Figs. in parentheses indicate % to total urban population. The names of the metropolitan cities are listed in the descending order of population.

Table 4. Number of UAs/Towns and Out Growths (OGs), 2001-2011

Type of Towns/UAs/OGs	Number of towns	
	2001	2011
Statutory Towns	3,799	4,041
Census Towns	1,362	3,894

Source: Same as in Table 2

Pradhan (2012) finds that 26% to 29.5% of the urban growth from 2001 to 2011 can be attributed to the recognition of new census towns, varying from a high of nearly 90% in Kerala and 60% in West Bengal to less than 10% in states like Karnataka and Gujarat. By contrast, only 8.4% of the growth in urban population over 1991 to 2001 was due to new census towns. Thus a substantial urbanisation has taken place outside recognised urban local bodies. Not all of this growth of census towns is occurring around existing large towns. Using a differentiated spatial buffer around towns above 1,00,000, he finds that only 37.2%, or 926 (of 2,489) settlements and 33.6% of the population fall within these buffers, indicating that much of this growth is outside the peripheries of existing large towns.

The spatial distribution of new census towns shows that while there is a high concentration in certain districts close to metropolitan cities, the formation of census towns is also widely spread across the country. This indicates that the process of spontaneous transformation of settlements, reflected in the growth of census towns beyond metros, is a relatively widespread geographical phenomenon. Krishan (2012; 74) has attributed a large part of the increase in census towns to a definitional change under which the growers of five plantation crops, namely coconut, tea, coffee, rubber and betelnut, were recorded as non-agricultural workers at the 2011 census.

Bhagat (2011) estimates that 44% of the urban growth between 2001 and 2011 is due to natural growth and the remaining 56% is due to net reclassification, expansion of boundaries and migration. As shown earlier, 29.5% of the growth is because of reclassification of rural settlements into CTs, implying the remaining 26.5% is attributable to net reclassification of rural settlements into STs, the incorporation of such settlements into existing STs by expansion of their boundaries and migration.

The pattern of urbanisation and growth of urban population reveals a strong positive correlation ( $r=0.76$ ) with per capita income of the states and the flow of foreign direct investment. Also the correlation between per capita flow of foreign direct investment (FDI) and infrastructure indicators like road, railway and telecom is positive and very strong. These investments directly or indirectly have been instrumental in infrastructure development (Sivaramakrishnan et al. 2005).

Sixteen states and one union territory contain at least one metropolis (Table 5). There is no metropolitan city in any of the states in the northeast namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Nagaland, Tripura, Sikkim and Mizoram; the hilly states of Uttarakhand and Himachal Pradesh; low income and less urbanised state of Odisha; the small highly urbanized state of Goa. Except the NCT of Delhi, none of the union territories, namely Andaman and Nicobar, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep, Puducherry, are a metropolis. Many states and union territories do not have threshold population to support a metropolitan city.

### **METROPOLISES IN THE INDIAN URBAN SYSTEM**

The Indian Census 2011 appears to indicate that two major urbanisation trends are at work. Kundu (2011; 24) feels that “urbanisation process has....become concentrated in developed regions and larger cities in recent years, with backward areas and smaller towns tending to stagnate”. Denis, Mukhopadhyay and Zérah (2012) seem to suggest that multiple urbanisation processes may be at work in India, such as metropolitan agglomeration and what they term subaltern urbanisation. India seems intent, as Nijman (2012; 18) puts it, on “writing its own script”. It is an urbanisation with a distinct story, a “contribution made by the people *on their own*” (Guha 1982; 39), countering the claim of hegemonic narratives of space and identity. These cities have a resilient and robust economic base, which may be connected globally, sometimes bypassing the intermediation of the metropolis.

Notwithstanding these opinions, metropolitan urbanisation is a distinct feature on the Indian landscape. Metropolises wield considerable influence by their sheer size and economic agglomeration as they alone account for more than 2/5<sup>th</sup> of the total urban population of the country. Translated into numbers it is nearly 160 million peoples contained in 52 metropolises. Ongoing increase in the number of metropolises, that is, cities whose population exceeds one million inhabitants is tremendous. The

number since 1951 has increased ten folds from 5 in 1951 to 52 in 2011. With a large number of cities acquiring the status of metropolises, the hegemony of port cities and the contours of colonial set up of Indian urbanisation is being gradually weakened and regional centres of great potential are emerging inland.

A special case of metropolitan urbanisation is capital urbanisation, where the city is also the state capital. Administratively created towns are also growing rapidly. However, the Census of 2011 also indicates that large metropolises are slowing down, but growth is occurring around them. All this is indicative of the changing nature of geography of areas, which is rapidly undergoing change in the neo-liberal period. Metropolises beyond doubt have a sustained relevance. These are reflective of the regional configuration of political power, trade and commerce and reflect the nature of Indian urbanisation. By adopting metropolises in India as in 2011 an attempt is made to trace their origin or roots in different periods in Indian history, examine their locational pattern vis-à-vis a number of features and highlight the trend in their growth pattern.

### **METROPOLITAN URBANIZATION: SPATIAL SPREAD, ORIGIN, PATTERN OF GROWTH TRENDS**

The fifty two million cities in the country are located in 16 states and one union territory. The largest metropolitan city Greater Mumbai is 18 times the size of the smallest Kota in the hierarchy. 9 metropolises are spread over more than one district but within the same state. These are 1) Kolkata spread over the districts of Kolkata, South Twenty Four Parganas, North Twenty Four Parganas, Nadia, Haora and Hughly in West Bengal, 2) Delhi covering the districts of Central Delhi, East Delhi, New Delhi, North Delhi, North-East Delhi, North-West Delhi, South Delhi, South-West Delhi, West Delhi, 3) Greater Mumbai constituting the districts of Mumbai, Mumbai Suburban and Thane in Maharashtra, 4) Hyderabad including the districts of Hyderabad, Rangareddi and Medak in Andhra Pradesh, 5) Ahmadabad covering the districts of Ahmadabad and Gandhinagar in Gujarat, 6) Chennai incorporating the districts of Chennai, Thiruvallur and Kancheepuram in Tamilnadu, 7) Vijayawada spread over the districts of Krishna and Guntur in Andhra Pradesh and 8) Jamshedpur including the districts of Purbi Singhbhum and Seraikela-Kharsawan in Jharkhand and 9) Srinagar stretched over Badgam and Srinagar ([http://www.censusindia.gov.in/2011-prov-results/paper2-vol2/data\\_files/India2/UAs\\_spreading\\_over\\_more\\_than\\_one\\_districts.pdf](http://www.censusindia.gov.in/2011-prov-results/paper2-vol2/data_files/India2/UAs_spreading_over_more_than_one_districts.pdf)).

At the state level, greater concentration of metropolitan cities is found in Uttar Pradesh and Kerala (seven each) followed by Maharashtra (six), Tamil Nadu, Gujarat and Madhya Pradesh containing four each. Andhra Pradesh, Jharkhand and Rajasthan have three each cities with million plus inhabitants. The corresponding number is two in Chhattisgarh, Punjab and West Bengal. The states of Bihar, Haryana, Karnataka, Jammu & Kashmir contain one metropolitan city each. The National Capital Territory of Delhi as a union territory has a negligible rural population. The rest of the states/union territories are without any metropolitan city.

In some states like Kerala, Maharashtra, Gujarat and West Bengal, majority of urban population is concentrated in metropolises. The range is from highest of 76.2% in Kerala to 16.0 % in Haryana. The degree of urbanisation in a state is positively correlated ( $r = + 0.60$ ) with proportionate share of

million cities in its urban population. Kerala and Uttar Pradesh have seven metropolises each. The comparison ends there. Large number in Kerala is because of its peculiar land configuration, where a very large number of settlements have been constituted into urban agglomerations along the coast. Uttar Pradesh is a heavily populated state in the Ganga plain. The rate of urban population living in metropolises is comparatively high regarding the low level of urbanisation in the states of Uttar Pradesh, Jharkhand, and Chhattisgarh. Haryana and Punjab display a more dispersed urbanisation pattern. Both are small states where agriculture and industry are equally developed. Haryana borders the national capital on three sides with several towns growing simultaneously.

Table 5. Configuration of million cities, 2011

State/Union territory	City with Million plus Population	No. of million cities	Million cities' population	State urban population	States % urban population	% share of metropolis
Kerala	Kochi UA, Kozhikode UA, Thrissur UA, Malappuram UA, Thiruvananthapuram UA, Kannur UA, Kollam UA	7	12139860	15934926	47.7	76.2
Uttar Pradesh	Kanpur UA, Lucknow UA, Ghaziabad UA, Agra UA, Varanasi UA, Meerut UA, Allahabad UA,	7	14025098	44495063	22.3	31.5
Maharashtra	Greater Mumbai UA, Pune UA, Nagpur UA, Nashik UA, Vasai Virar City (M Corp.), Aurangabad UA	6	29927857	50818259	45.2	58.9
Gujarat	Ahmadabad UA, Surat UA, Vadodara UA, Rajkot UA	4	14161800	25745083	42.6	55.0
Madhya Pradesh	Indore UA, Bhopal UA, Jabalpur UA, Gwalior UA	4	6428127	20069405	27.6	32.0
Tamil Nadu	Chennai UA, Coimbatore UA, Madurai UA, Tiruchirappalli UA	4	13278580	34917440	48.4	38.0
Andhra Pradesh	Hyderabad UA, Visakhapatnam (M Corp.) Vijayawada UA	3	10882077	28219075	33.4	38.6
Jharkhand	Jamshedpur UA, Dhanbad UA, Ranchi UA	3	3662372	7933061	24.0	46.2
Rajasthan	Jaipur (M Corp.), Jodhpur UA, Kota (M Corp.)	3	5186157	17048085	24.9	30.4
Chhattisgarh	Raipur UA, Durg-Bhilainagar UA	2	2187780	5937237	23.2	36.8
Punjab	Ludhiana (M Corp.), Amritsar UA	2	2802428	10399146	37.5	26.9
West Bengal	Kolkata UA, Asansol UA	2	15301405	29093002	31.9	52.6
Bihar	Patna UA	1	2049156	11758016	11.3	17.4
Haryana	Faridabad (M Corp.)	1	1414050	8842103	34.9	16.0
Jammu & Kashmir	Srinagar UA	1	1256831	3433242	27.4	36.6
Karnataka	Bangalore UA	1	8520435	23625962	38.7	36.1
Delhi	Delhi UA	1	16349831	16368899	97.5	99.9
India		52	159573844	354638004	31.2	45.0

Source: Same as in Table 2

With the origin of towns that are presently metropolises dating back to phase of urbanization in India that took place in the Ganges Plain beginning c. 600 BC, their contribution to the evolved cultural landscape has been substantial. The oldest (Varanasi) to the recent (Durg-Bhilainagar) span a period from c. 600 BC to 1960. The oldest existing cities in India – Varanasi and Patna in the north and Madurai and Kochi in the south, which originated around 500 BC are symbolic of India's long urban heritage (Fig.1).

Different kinds of towns grew out of earlier settlements; as capitals of Kingdoms, as defence sites or grew out of markets, or from being sacred centres where people gathered. Evidence of towns comes

from the grammar of Panini generally dated to 5<sup>th</sup> century BC and contemporary with urban centres (Thapar 2003; 139-40). 34 cities had origin in the medieval period. From the seventh through 16<sup>th</sup> centuries Muslim peoples successively entered India. The choice of Delhi as the capital of India for these invaders was very much a function of geography. As Fairgrieve (quoted in Kaplan 2012; 237) writes, “Sind and the Indus valley, including the Punjab.....form but the antechamber to India, to which there is a comparatively narrow passage, 150 miles wide, between the Indian desert and the Himalayas. At the exit from this passage stands Delhi.” The medieval period in Indian history was significant from the viewpoint of urban development. Many new towns appeared as administrative, defence and trade points.

In the early modern India (1761 A.D. to the close of the 19<sup>th</sup> century) the new economic activity showed a tendency of concentration in the three port cities of Bombay, Madras, Calcutta (presently Mumbai, Chennai and Kolkata respectively) in conformity with the colonial nature of urbanisation (Raj Bala 1986; 11). Bombay, Madras, Calcutta presidencies became focal points of the British rule. In the British period, introduction of the railways and modern industry led to the creation of new industrial townships such as Kanpur, Dhanbad, Asansol and Jamshedpur.

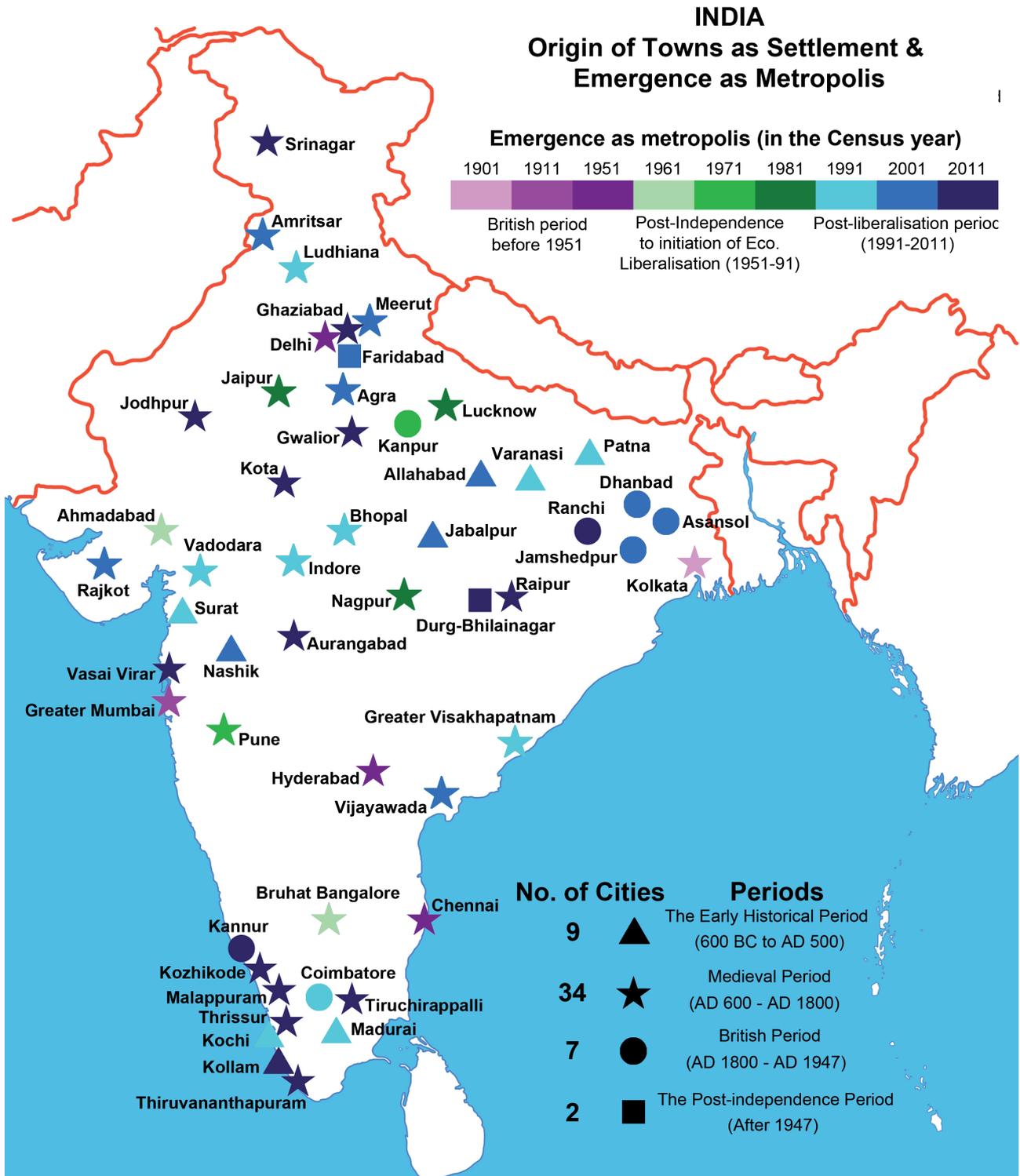
Majority of the towns that are metropolises today had some administrative status in 1901, such as that of presidency capital, imperial capital, division headquarter, native state capital, and district headquarter. Naturally these towns had an edge over other towns in their respective regions being centres of political power, administration, economy, trade and commerce. The post-Independence period witnessed administrative urbanisation with creation of cities by the state, like Chandigarh, Durg-Bhilainagar Bhubaneswar, Faridabad, Gandhinagar, etc. some of which became cities with million plus-inhabitants. Presently, 14 metropolises are state/ union territory capitals and remaining are district headquarters except Vasai-Virar. Delhi is the capital of India. Chandigarh is close to become a million city. It was listed as a metropolis in the census provisional totals but could not make it in the final list (Census of India 2011).

Historically, 32 of these cities had initially emerged as settlements along the banks of rivers. Several of these places were located on historical trade routes. However, regional setting alone does not determine which cities will grow or thrive. National policies, corporate strategies, political significance and the comparative advantages that cities offer in global, regional and local markets determine the growth of cities. Connected through railway network, presently all these towns are located on recently emerged premier transport routes: golden quadrilateral, north-south corridor and east-west corridor. Golden Quadrilateral connects Delhi, Mumbai, Chennai and Kolkata. The North-South–East-West corridor connecting Srinagar, Kanyakumari, Porbandar and Silchar with some stretches common with Golden Quadrilateral is the largest ongoing highway project in India. Only National Highways have been used in the projects.

Fundamentally, geographers have approached the study of city on locational and regional bases. There is only one metropolis, Srinagar, located in the Himalayas. Situated in the valley, it had emerged as a settlement before AD 700. It was a native state capital at the time when British ruled India. 14 metropolitan cities are distributed in The Great Plains of North India, 16 are located on the Eastern and Western coasts of the country and 21 dot the peninsular plateau.

It is evident that towns have structured the Indian spatial landscape since historic times. However, the growth of metropolises can easily be configured into distinct phases during the 20<sup>th</sup> century and oughties: the period before 1951, post-Independence to initiation of economic liberalisation (1951-1991) and post-liberalisation (1991-2011) period.

Figure 1. Location of Metropolises in India (Based on 2011 Census year)



Kolkata was the only metropolitan city at the beginning of twentieth century. Mumbai was added to this category in 1911. The number of such cities remained constant at two till 1941. Delhi, Chennai

and Hyderabad joined the rank of million cities increasing the tally to five in 1951. From 18.8% of urban population living in metropolitan cities in 1951 the percentage has grown to 42.3 in 2011. Thus, there has been significant increase in the concentration of urban population in metropolitan cities in the last decades from a little more than one-fourth in 1970s and 1980s to nearly one-third in 1990s and approaching two-fifth in oughties. Greater Mumbai UA (18.4 million), Delhi UA (16.3 million) and Kolkata UA (14.1 million) are the largest urban agglomerations in the country. Within the metropolitan cities, eight cities having population more than 5 million namely Greater Mumbai, Delhi, Kolkata, Chennai, Bangalore, Hyderabad, Ahmadabad and Pune contain 22.6% of the country's total urban population. Concentration of urban population in metropolitan (or metro) cities – cities having population of a million or more – is even greater. There was only one city with over a million people in 1901, claiming just 6 per cent of the urban population. The number rose to 2 in 1911 and remained so until 1941, although their percentage share in urban population went up from 10.7 to 12.0. In 1981, the share became 26.4 which increased further to 32.5 in 1991 and 42.3 in 2011 (Table 6). This further corroborates the thesis of top-heavy urban development. The average population per million city has, however stabilized since 1980s after reaching a maximum population of 3.5 million per metropolis in 1981 as several new metropolises have entered the million league after 1981 compared to earlier decades.

In India the eighties experienced substantive liberalization of domestic economic policy and partial globalization while the nineties witnessed complete liberalization domestically and gradual integration of the national economy with the global economy. Hence the pattern of growth trends of metropolitan cities is examined for 1981-2011. Overall, there is decline in growth rate of metropolitan cities particularly in the post-liberal period. 19 cities, however, have shown an increased growth rate during this period, primarily due to reclassification of their jurisdictional boundaries or addition of new towns or outgrowths (Table 6). These include cities in Kerala (Kannur, Kollam, Kozhikode, Malappuram, Thrissur, Thiruvananthapuram), Andhra Pradesh (Hyderabad, Vijayawada, Visakhapatnam), Madhya Pradesh (Indore, Gwalior), Tamil Nadu (Coimbatore, Madurai), Uttar Pradesh (Ghaziabad, Varanasi), Chhattisgarh (Raipur), Gujarat (Ahmadabad), Maharashtra (Vasai Virar) and Karnataka (Bangalore). Majority of these cities are located in South India.

At the time of Independence Indian urban landscape was characterised by selective development of a few port cities and their hinterlands. After Independence, urbanisation had entered a new and important phase in India. In contrast with the British Period that witnessed a period of urban stagnation, the post-Independence period is notable for rapid urbanisation, characterised by uneven distribution with few larger metropolitan and mega cities growing at a faster rate and containing disproportionate large share of urban population (Ramachandran 2007).

Table 6. Growth of Cities with Million plus Population: 1901-2011

Census Years	Number	Population (in millions)	Decadal increase (percent)	Population of Million+ UAs/Cities as % of India's total Population	Population of Million+ UAs/Cities as % of India's Urban Population
1901	1	1.5		0.6 (1.5)	5.8
1911	2	2.8	82.8	1.1 (1.4)	10.7
1921	2	3.1	13.4	1.3 (1.6)	11.1
1931	2	3.4	8.9	1.2 (1.7)	10.2
1941	2	5.3	5.7	1.7 (2.7)	12.0
1951	5	11.8	21.3	3.3 (2.4)	18.8
1961	7	18.1	54.0	4.1 (2.6)	22.9
1971	9	27.8	53.8	5.1 (3.1)	25.5
1981	12	42.1	51.3	6.2 (3.5)	26.4
1991	23	70.7	67.8	8.4 (3.1)	32.5
2001	35	107.8	52.8	10.5 (3.1)	37.9
2011	52	159.6	48.9	13.2 (3.1)	42.3

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: Provisional Population Totals, New Delhi.

3. Figs. in parentheses indicate Population per Metropolitan city (in millions).

As already mentioned, cities with million plus population are distributed in 16 states and one union territory in India. In states, all the capitals have attained the status of metropolitan cities excluding Gandhinagar which is the capital of Gujarat. These continue to grow fast in comparison to other cities, because these are the hub of administrative and economic activities and have attracted investment in social and welfare activities. In addition, these are the sphere of governmental activities. Other metropolitan cities are the commercial centres of the regions in which they are located and growing fast from their hinterland. Large cities like Mumbai, Kolkata and Delhi, are extremely congested especially in their central place. They are not likely to maintain the phenomenal growth rate experienced earlier. Their growth rate is slow and these are expanding in the peripheral zone. Kolkata UA which held the second rank in population size in Census 2001 has been replaced by Delhi UA. The growth in population in these mega cities has slowed down considerably during the last decade. The compound annual growth rate in Greater Mumbai UA has declined from 2.7% during 1991-2001 to 1.1% during 2001-2011. Likewise the decline in Delhi UA is from 4.3% to 2.4% and Kolkata UA from 1.8% to 0.6% during the corresponding period (Table 7). The process of growth in suburbs or satellite towns for example Ghaziabad (9.4%), Faridabad (3.0%), Noida and Gurgaon is much faster than Delhi. Importantly, the demographic decline in these does not reflect economic decline. These are economically the flagship cities where cost of living is very high and hence in that sense elitist in nature. 2.80 million is the critical size beyond which the growth rate of metropolitan cities seems to decline. Metropolitan cities in Kerala, like Malapuram, Thrissur, Kannur, and Kollam, have shown abnormal increase in the population registering compound annual growth rate more than 10 percent during 2001-2011. Vasai-Virar city near Mumbai in Maharashtra also falls in this line. This is more due to the twin process of change in the territorial boundaries of these urban agglomerations through incorporation of the surrounding rural settlements and merging of the towns into them. Similarly, other cities that have recently acquired the status of million cities have registered a higher growth rate due to merging of outgrowths into these towns.

Table 7. Compound Annual Growth Rate of Metropolitan Cities\* in India

UAs/M.Corp.	State/Union Territories	1981-91	1991-2001	2001-11
Greater Mumbai UA	Maharashtra	2.9	2.7	1.1
Kolkata UA	West Bengal	1.8	1.8	0.6
Delhi UA	NCT of Delhi	3.9	4.3	2.4
Hyderabad UA	Andhra Pradesh	5.2	2.8	2.9
Bangalore UA	Karnataka	3.5	3.3	4.1
Chennai UA	Tamil Nadu	1.6	5.5	2.8
Ahmadabad UA	Gujarat	2.6	3.2	3.5
Pune UA	Maharashtra	3.8	4.2	3.0
Kanpur UA	Uttar Pradesh	2.2	3.0	0.7
Lucknow UA	Uttar Pradesh	5.2	3.0	2.6
Nagpur UA	Maharashtra	3.2	2.5	1.6
Jaipur (M Corp.)	Rajasthan	4.1	4.3	2.7
Surat UA	Gujarat		6.4	5.0
Kochi UA	Kerala		1.7	4.6
Vadodara UA	Gujarat		2.8	2.0
Indore UA	Madhya Pradesh		3.2	3.6
Coimbatore UA	Tamil Nadu		2.9	3.9
Patna UA	Bihar		4.4	1.9
Madurai UA	Tamil Nadu		1.0	2.0
Bhopal UA	Madhya Pradesh		3.2	2.6
Visakhapatnam UA	Andhra Pradesh		2.4	2.5
Ludhiana (M Corp.)	Punjab		3.0	1.5
Varanasi UA	Uttar Pradesh		1.6	1.8
Agra UA	Uttar Pradesh			2.8
Meerut UA	Uttar Pradesh			2.0
Nashik UA	Maharashtra			3.1
Jamshedpur UA	Jharkhand			1.9
Jabalpur UA	Madhya Pradesh			1.5
Asansol UA	West Bengal			1.5
Dhanbad UA	Jharkhand			1.2
Faridabad (M Corp.)	Haryana			3.0
Allahabad UA	Uttar Pradesh			1.5
Vijayawada UA	Andhra Pradesh			3.6
Amritsar UA	Punjab			1.7
Rajkot UA	Gujarat			3.3
Ghaziabad UA	Uttar Pradesh			
Kozhikode UA	Kerala			
Thrissur UA	Kerala			
Malappuram UA	Kerala			
Thiruvananthapuram UA	Kerala			
Kannur UA	Kerala			
Srinagar UA	Jammu & Kashmir			
Vasai Virar City (M Corp.)	Maharashtra			
Aurangabad UA	Maharashtra			
Jodhpur UA	Rajasthan			
Ranchi UA	Jharkhand			
Raipur UA	Chhattisgarh			
Kollam UA	Kerala			
Gwalior UA	Madhya Pradesh			
Durg-Bhilainagar UA	Chhattisgarh			
Tiruchirappalli UA	Tamil Nadu			
Kota (M Corp.)	Rajasthan			
<b>All Metropolises</b>		<b>3.0</b>	<b>3.2</b>	<b>2.3</b>

\*The number of metropolises is as per Census of India, 2011.

\*\*UAs and M. Corp. refers to Urban Agglomerations and Municipal Corporation, respectively.

Source: Same as in Table 2 and Paper-2, Rural-Urban Distribution, 1981, 1991, and Census 2001

## CONCLUSIONS

Indian urbanisation, with a history spanning over nearly five millennia has entered the neo-liberal phase with the immediate background of exploitative colonial background. At a comparatively low level of urbanisation (31.2 percent), its metropolises contain more than 2/5<sup>th</sup> of the urban population. The increase in the number of mega cities, each with a population of 10 million or more from zero in 1950 to three by the turn of the century have been cited as evidence of unprecedented urban growth in the country. Greater accretion of population in large cities leading to their higher increase in number is a post-liberal phenomenon not witnessed earlier. In comparison to fast urbanising China, urbanised United States and the world average, the share of mega cities in the total urban population in India is fairly high. Although in relation to the overall population, the share of megacities is less in comparison to the world. This vast urban expansion has regional, national and global implications.

India is in a major phase of urbanisation, increasing faster than expected. Census 2011 has reported higher urban growth rate than rural. For the first time since independence, the absolute increase in the urban population is also slightly higher than the rural population. The number of million cities in the country since 1951 has increased ten folds from 5 in 1951 to 52 in 2011. The 'inner cities' have developed very fast along with the port cities. With a large number of cities acquiring the status of metropolises, the hegemony of port cities is being gradually weakened and regional centres of great potential are emerging inland. The traditional colonial set up of Indian urbanisation is being lessened.

The metropolises are no longer confined to the coastal areas. They have fast developed in interior land. Ranging in population size ratio of 1:18 Kota and Greater Mumbai respectively, metropolitan cities are found dotting the country's landscape except the north-east, which is conspicuous by their absence. Largely the towns that have enjoyed some initial advantage since historic times have grown into metropolitan cities.

The vast region of metropolitan cities is seen around Delhi (Ghaziabad, Faridabad, Meerut and Agra.), Greater Mumbai (Vasai-Vivar, Nashik and Pune) and in coastal Kerala (Kochi, Thiruvananthapuram, Malapuram, Thrissur, Kannur, Kollam, and Kozhikode). Larger cities particularly within developed states are generally more efficient in generating growth and attracting investments, thus attracting more population. Coastal areas accommodate 16 metropolitan cities, 21 cities are situated in the peninsular plateau and 14 million cities are positioned in the Great Indian Plains. North Himalayas have only Srinagar as metropolis. An individual metropolitan city's strong linkage with the regional and global economy seems to be the determining factor of its growth/ spurt in their population.

The fastest growth rate is recorded in that have recently joined the million cities club in 2011 census. Metropolitanisation is both an economic and administrative process. The growth and spread of metropolitan cities is administrative eminence, construction of efficient transport routes and re-classification. 13 of the 28 states have metropolitan cities as their capital in addition to the NCT of Delhi. Many states and union territories do not have the threshold population for a metropolis. However, the demographic decline of the mega cities or some metropolises does not mean their economic decline.

Managing millions of new people a year moving to India's cities requires major planning and intense government focus at national, state and city level. Clearly, there is no simple solution. Because

India is a diverse and varied country with a rich and diverse culture, the approach to managing city growth must also be diverse. The cases may range from new satellite cities, to new urban hubs in existing cities, to renewing slum areas, to environmental and transport solutions for cities etc.

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