

A COMPARATIVE STUDY ON URBANISATION PROCESS IN INDIA AND CHINA

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ABSTRACT

India and China both are the largest developing countries in the World. The major factor of urbanisation is population growth in India and China. Many other factors such as economic, political and social also determine the rate of urbanisation. The objective of this study is to examine the pattern of urbanisation in India and China. The study is based on secondary data which is collected from Economic and Statistical organisation, China Statistical Year book, World Development Indicators, UN-Habitat, Asian Development Bank etc. Data covers the time period from 1980 to 2016. Average and Standard deviation techniques are used to study the pattern of urbanisation in India and China in different phases. Compound annual growth rate of total population, rural population and urban population were estimated in both countries. The study concludes that the percentage of urban population in India was higher than China till 1987. Subsequently, the urban population in China had increased very speedily. The position of China in annual growth rate of urban population was superior to India.

Keynotes: *India, China, Rural, urban, Urbanisation.*

INTRODUCTION

Urbanisation is an essential part of development in developed and developing countries. Since 1800, the process of urbanisation has moved rapidly in the entire world when only 2 per cent of human population lived in urban areas. In 1900, about 15 per cent of population were living in cities. During the century 1850-1950, majority of population for the first time in human history shifted from rural to urban areas. Urbanisation is a multi-dimensional concept which affects the economic, political, social and institutional factors of a country. A comparative study on urbanisation process in India and China represents the rapid growth of urbanisation.

URBANISATION

Urbanisation is a process that involves

1. Concentration of people in higher population densities,
2. Population shift (migration) from rural to urban areas
3. Occupational structure (shift from agricultural to non-agricultural, i.e. from primary sector to secondary or tertiary sector) and
4. Land use (shift from agriculture to non-agricultural operations).

Davis (1965) explained three stages in the process of urbanisation.

1. **Initial stage:** rural traditional society with predominance in agriculture and allied activities.
2. **Acceleration stage:** restructuring of the economy and investment through social overhead capitals (e.g. transportation, communication, safe drinking water, sanitation etc). The percentage of urban population increases from 25 per cent to 40 per cent, 50 per cent, 60 per cent and so on.
3. **Terminal stage:** 70 per cent or more than 70 per cent urban population indicated the terminal stage. The growth rate of urban population and total population becomes same.

OBJECTIVE:

The objective of this paper is to examine the pattern of Urbanisation in India and China.

URBANISATION IN INDIA AND CHINA

In 1950, India (17 per cent of population) was a more urbanised nation than China (13 per cent). India and China had the same rate of urbanisation i.e. 25 per cent in 1988. At the start of the reform period, the urban population of China was growing at a very high speed. India had also followed the same trend but at a slower rate. In 2000, China had achieved 35.8 per cent urbanisation whereas India reached only 29 per cent. In 2007, 42 per cent of urban population lived in China whereas 30 per cent in India. The rates of urban growth were 2.7 per cent per year in China and 2.4 per cent in India. The urban population was only 33 per cent in India whereas 51 per cent in China at the end of 2011.

China has announced its first 'Urbanisation policy' in March 2014, while India used the term as 'Smart cities'.

Total, rural and urban population

Urban population in India and china has grown very rapidly from 1950's.

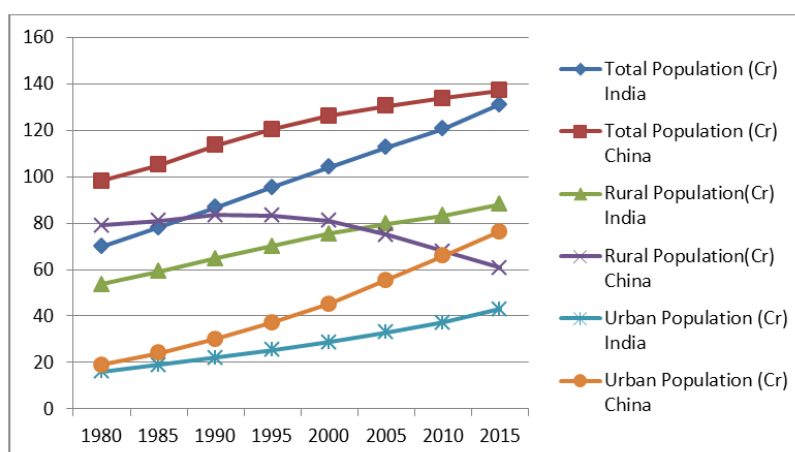
Table 1. Total, rural and urban population in India and China

Year	Total Population (Cr)		Rural Population(Cr)		Urban Population (Cr)	
	India	China	India	China	India	China
1980	69.89	98.12	53.75	79.12	16.14	18.99
1985	78.17	105.1	59.13	81.06	19.03	24.04
1990	86.88	113.51	64.69	83.50	22.19	30.01
1995	95.58	120.48	70.14	83.18	25.43	37.30
2000	104.22	126.26	75.38	80.96	28.83	45.30
2005	112.71	130.37	79.76	74.93	32.95	55.43
2010	120.56	133.77	83.27	67.92	37.28	65.85
2015	131.15	137.12	88.17	60.86	42.98	76.26

Source: World Development Indicators 2016

The above table shows the total population, rural population and urban population in India and China from 1980 to 2015. Population (total population, rural population and urban population) have increased in both countries. Total population in India has increased from 69.89 cr. to 131.15 cr. whereas in China, total population has reached from 98.12 cr. to 137.12 cr. during the period of 1980 to 2015. Rural population was high 88.17 cr. in India as compared to China with 60.86. However, the share of rural population in China has declined from 1995 onwards. Urban population (42.98 cr.) constituted 32.7 per cent of the total population in India and 76.26 cr. of urban population represented 56 per cent of the total population in China in 2015. India and China both countries have largest urban population. From 2005 to 2010, the urban population in India has reached from 32.95 to 37.28, an increment of 4.33 which is higher than the increment of rural population i.e. 3.51 (from 79.76 to 83.27) for the first time in India.

Figure 1 Population (total rural and urban) in India and China



Source: table 1

Figure 1 indicates that there is a large gap in total population and rural population between India and China. However, urban population in both countries has almost similar position in 1980s. Gap between total populations in both countries has been falling from 1980 to 2015. Rural population in China has increased in 1990, after that it has declined. There is an upward slopping trend in India line of rural population in India. From 1980s, urban population has increased very rapidly in both countries. But the position of China is superior to India.

Table 2 Birth rate, death rate and natural growth rate in India and China

Year	India			China		
	Birth rate	Death rate	Natural growth rate	Birth rate	Death rate	Natural growth rate
1980	33.3	12.4	20.9	18.2	6.3	11.9
1985	32.9	11.8	21.1	21.0	6.8	14.3
1990	30.2	9.7	20.5	21.1	6.7	14.4
1995	28.3	9.0	19.3	17.1	6.6	10.5
2000	25.8	8.5	17.3	14.0	6.4	7.6
2005	23.8	7.6	16.3	12.4	6.5	5.9
2010	22.1	7.2	14.9	11.9	7.1	4.8
2012	21.6	7.0	14.5	12.1	7.2	5.0
2015	--	--	--	13.0	7.1	5.9

Source: SRS, Registrar General, Vol.48 No.2 Sept, 2013, India, Statistical yearbook China 2017.

Natural growth rate is calculated by difference between birth rate and death rate.

The above table represents birth rate, death rate and natural growth rate in India and China. Birth rate has declined from 33.3 per cent to 21.6 per cent in India and from 18.2 per cent to 12.1 per cent in China during 1980 to 2012. Death rate in India was 12.4 which have decreased to 7.0 per cent in 2012. Birth rate, death rate and natural growth rate in India was greater than China. Birth rate in was very low in China because it has adopted one child policy. Better health facilities, trained doctors and nurses, educated people reduce the birth rate, death rate and natural growth rate.

Table 3 Percentage of rural population, urban population and degree of urbanisation in India and China

Year	Rural population as a % of total population		Urban population as a % of total population		Urban population as a % of rural population (U/R)	
	India	China	India	China	India	China
1980	77	81	23	19	29.87	23.46
1985	76	77	24	23	31.58	29.87
1990	74	74	26	26	35.14	35.14
1995	73	69	27	31	36.99	44.93
2000	72	64	28	36	38.89	56.25
2005	71	57	29	43	40.84	75.44
2010	69	51	31	49	44.93	92.3
2015	67	44	33	56	49.25	127.27

Source: World Development Indicators 2016

The above table 3 shows that rural population as a percentage of total population has been decreasing in both countries. However, the percentage share of rural population in China is greater than India. On the other hand, urban population as a percentage of total population in both countries has been growing but the percentage share of urban population is higher in China as compared to India. Degree of urbanisation has continued to grow in both countries India and China. The percentage of rural population, percentage of urban population and degree of urbanisation were same in both countries in the period of 1990. After that the share of urban population and degree of urbanisation are continued to rise in China more than in India. Degree of urbanisation in India grew at 29.87 per cent in 1980, 35.14 per cent in 1990 and 49.25 per cent in 2015 whereas in China 23.46 per cent in 1980, 35.14 per cent in 1990 and 127.27 per cent in 2015. About 33 percent of Indian population and 56 per cent in Chinese population live in urban areas.

Pattern of Urbanisation in India and China

India and China (as the fastest growing of the 'BRICS' economies) occupy a special place in the World. The pattern of urbanisation in India and China is divided in three phases.

- (A) Urbanisation pattern from 1980-90
- (B) Urbanisation pattern from 1991-2000
- (C) Urbanisation pattern from 2001-2016

(A) Urbanisation pattern from 1980 to 1990

Since 1980's, the urban population has been growing very rapidly. The rate of urbanisation in India was more than China. The rate of urbanisation in India was 23 per cent in 1980 and 25 per cent in 1989. On the other hand, the rate of urbanisation was 19 per cent in 1980 and 26 per cent in 1989 of China. The rate of urbanisation was same in both countries i.e. India and China in 1988. China adopted economic reforms in 1978. One of the main pillars of China's economy was Township and Village Enterprises (TVE) which started in rural areas. Alleviation of poverty, to improve the living standard of peasants, to modernized agriculture, to absorb surplus labour etc were the main driving forces of the growth of TVE. The growth of rural industries stimulates the development of small towns and cities. So the urbanisation process from 1980 to 1990 in India and China was an endogenous growth of rural industries in small towns which was leading to the urbanisation level.

Table 4 Pattern of urbanisation in India and China from 1980 to 1990

Year	India			China		
	Urban Population (million)	Growth Rate of Urban Population (%)	Urban Population as % of Total Population	Urban Population (million)	Growth Rate of Urban Population (%)	Urban Population as % of Total Population
1980	161.44	3.96	23.0	189.94	2.68	19.0
1981	167.45	3.72	23.0	199.94	5.26	20.0
1982	172.96	3.88	24.0	210.82	5.44	21.0
1983	178.61	3.27	24.0	220.47	4.58	22.0
1984	184.40	3.26	24.0	230.20	4.41	22.0

1985	190.33	3.21	24.0	240.41	4.43	23.0
1986	196.41	3.19	25.0	251.32	4.54	24.0
1987	202.63	3.17	25.0	262.97	4.64	24.0
1988	208.98	3.13	25.0	275.12	4.62	25.0
1989	215.44	3.09	25.0	287.50	4.50	26.0
1990	221.95	3.02	26.0	300.16	4.40	26.0
Mean	185.02	3.41	24.1	232.79	5.16	22.08
SD	22.34	0.35	1.07	40.94	1.03	2.95

Source: World development Indicators 2014

The above table highlights the urban population, growth rate of urban population and percentage of urban population in both countries. Urban population in India and China was 161.44 and 189.94 in 1980 which had increased to 221.95 in India and 300.16 in China respectively in 1990. The average growth rate of urban population of India was 3.41 with standard deviation of 0.35 whereas in China, the average value of urban population was 5.16 per cent with Standard Deviation of 1.03. The highest growth rate of urban population was recorded 3.96 per cent in 1980 of India. The maximum value of urban population in china was 5.44 per cent in 1982. However, the urban population growth rate was lowest in India 3.02 per cent in 1990 whereas in China, 2.68 per cent in 1980. Urban population as a percentage of total population in both countries has increased with SD of 1.07 in India and 2.95 in China respectively. During this period, China was transferred from small villages into towns and cities developed with industrialisation. From 1980 to 1990, urban population in India has increased from 23 per cent to 26 per cent whereas in China from 19 per cent to 26 per cent. The main reason of this rapid growth rate of urban population in India and China was rural urban migration, birth rate and natural growth rate, etc.

(B) Urbanisation pattern from 1991 to 2000

In 1991, new economic reforms were introduced in India i.e. Liberalisation, Privatisation and Globalisation. In this time period, the Chinese planned economy was transformed towards Market economy. In some industries, favourable policies were facilitated to increase the foreign direct investment. The main objective of these reforms was to develop the economy, to increase labour productivity, foreign investment and to expand the revenue in both countries.

Table 5 Pattern of urbanisation in India and China from 1990 to 2000

Year	India			China		
	Urban Population (million)	Growth Rate of Urban Population (%)	Urban Population as % of Total Population	Urban Population (million)	Growth Rate of Urban Population (%)	Urban Population as % of Total Population
1991	228.48	2.94	26.0	314.30	4.71	27.0
1992	234.83	2.77	26.0	328.52	4.52	28.0
1993	241.24	2.73	26.0	342.96	4.39	29.0
1994	247.74	2.69	26.0	357.83	4.34	30.0
1995	254.31	2.65	27.0	373.03	4.25	31.0
1996	260.96	2.68	27.0	388.59	4.17	32.0
1997	267.70	2.58	27.0	404.48	4.09	33.0
1998	274.51	2.54	27.0	420.60	3.99	34.0
1999	281.39	2.55	27.0	436.76	3.84	35.0
2000	288.36	2.42	28.0	452.99	3.72	36.0
Mean	257.95	2.66	26.7	382.0	4.20	31.5
SD	20.14	0.14	0.67	46.79	0.30	3.03

Source: World development Indicators 2014

The above table shows that during the period of 1991 to 2000, the average urban growth rate of population was 2.66 per cent in India and 4.20 per cent in China which was less than the period of 1980 to 1990 in both countries. It highlights that the process of urbanisation increased very rapidly during 1980 to 1990 as compared to 1991 to 2000 in both countries. The highest growth rate of urban population was recorded 2.94 per cent of India and 4.71 per cent of China in 1991. The urban population has increased from 26 per cent to 28 per cent in India with standard deviation of 0.67 whereas in China, the urban population has amplified from 27 per cent to 36 per cent with standard deviation of 3.03 respectively. There is a continuous rising trend of urban population in China. The average value and standard deviation of urban population as a percentage of urban population was high in China to the period of 1980 to 1990 as compared to 1991-2000.

(C) Urbanisation pattern from 2001 to 2016

The urbanisation process in India and China was developed by the growth of service sector. Since 2000, service sector has expanded with industry, FDI, employment, transport and communication and growth of new cities.

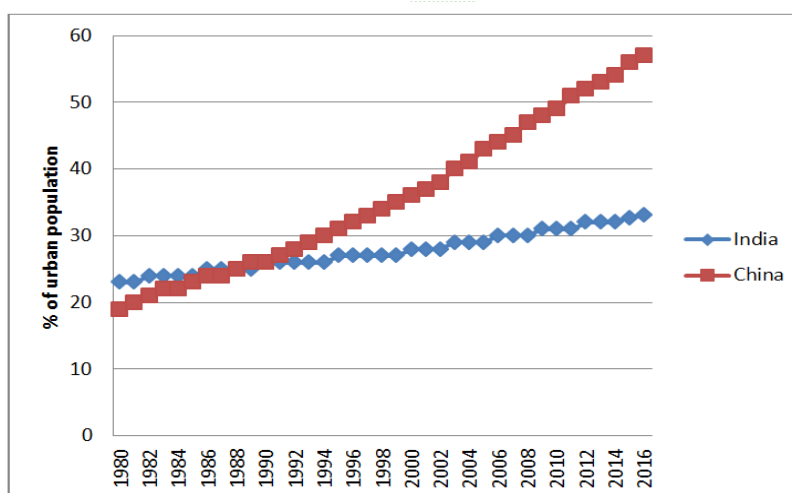
Table 6 Pattern of urbanisation in India and China from 2001 to 2016

Year	India			China		
	Urban Population (million)	Growth Rate of Urban Population (%)	Urban Population as % of Total Population	Urban Population (million)	Growth Rate of Urban Population (%)	Urban Population as % of Total Population
2001	295.79	2.57	28.0	471.76	4.14	37.0
2002	304.10	2.81	28.0	491.99	4.29	38.0
2003	312.51	2.76	29.0	512.43	4.15	40.0
2004	321.00	2.72	29.0	533.25	4.06	41.0
2005	329.52	2.65	29.0	554.36	3.96	43.0
2006	338.05	2.59	30.0	575.11	3.74	44.0
2007	346.63	2.54	30.0	595.67	3.57	45.0
2008	355.28	2.49	30.0	616.48	3.49	47.0
2009	364.02	2.46	31.0	637.40	3.39	48.0
2010	372.89	2.44	31.0	658.49	3.31	49.0
2011	381.92	2.42	31.0	679.76	3.23	51.0
2012	391.17	2.42	32.0	700.86	3.10	52.0
2013	400.60	2.41	32.0	721.69	2.97	53.0
2014	410.20	2.40	32.0	742.29	2.85	54.0
2015	428.86	4.54	32.7	762.59	2.73	56.0
2016	438.77	2.31	33.1	782.77	2.64	57.0
Mean	361.95	2.65	30.48	627.30	3.47	47.18
SD	44.21	0.52	1.05	99.17	0.53	6.35

Source: World development Indicators 24-4-18

The above table represents the urban population, growth rate of urban population and percentage of urban population in both countries. Urban population in India and China was 295.79 and 471.76 in 2001 which has reached to 438.77 in India and 782.77 in China respectively in 2016. The average growth rate of urban population of India was 2.65 with standard deviation of 0.52 whereas in China, the average value of urban population was 3.47 per cent with Standard Deviation of 0.53. The average growth rate of urban population is 2.65 per cent in India and 3.47 per cent in China from 2001 to 2016 which is lower as compared to 1980 to 1990 and 1991 to 2000. The highest growth rate of urban population was recorded 4.54 per cent in 2015 of India. The maximum value of urban population in china was 4.29 per cent in 2002. Urban population as a percentage of total population in both countries has increased with SD of 1.05 in India and 6.35 in China respectively. From 2001 to 2016, urban population in India has increased from 28 per cent to 33.1 per cent whereas in China from 37 per cent to 57 per cent. Better health and education facilities, infrastructure, water and sanitation facilities etc are responsible for high growth rate of urban population in India and China.

Figure 2 Pattern of Urban growth in India and China



Source: According to tables

The above figure 2 indicates the urban growth rate in India and China from the period of 1980 to 2016. The figure highlights the rising trend of urban population in both countries. In 1980, the urban population in India was 23 per cent and 19 per cent recorded in China. Till 1987, urban population in India was higher than China. However, the urban population in both countries was same in the period of 1988. Further, the urban population in 2016 soared to 33.1 per cent in India and 57 per cent in China. The figure analysed urban population and their growth rate of urban population is uneven and

different trend in India whereas China has always maintained its lead over India in the level of urbanisation. In 2016, China's urban population is continuous to be (24 per cent) higher than in India.

Table 7 Annual compound growth rate of rural, urban and total population in India

Year	Compound Growth Rate of Population in India (%)		
	Rural population	Urban population	Total population
1981-85	2	3.2	2.2
1986-90	1.8	3	2.1
1991-95	1.6	2.7	1.9
1996-00	1.2	2.5	1.7
2001-05	1.1	2.8	1.6
2006-10	0.8	2.6	1.4
2011-15	1.2	2.4	1.7
Aggregate 1981-2015	1.4	2.7	1.7

Source: World development Indicators 24-4-18

The above table shows compound annual growth rate of rural population, urban population and total population in India. Growth rate of rural population, urban population and total population has declined in India. Compound growth rate of rural population has decreased from 2 per cent to 1.2 per cent, urban population from 3.2 per cent to 2.4 per cent and total population from 2.2 per cent to 1.7 per cent respectively. Overall data represents that compound annual growth rate of rural population is 1.4 per cent, 2.7 per cent of urban population and 1.7 per cent of total population in India during 1981 to 2015. Data indicates that majority of population live in urban areas. Compound annual growth rate of urban population was higher than rural population and total population during 1981 to 2015.

Table 8 Annual compound growth rate of rural, urban and total population in China

Year	Compound Growth Rate of Population in China (%)		
	Rural population	Urban population	Total population
1981-85	0.6	4.7	1.4
1986-90	0.6	4.4	1.6
1991-95	-0.1	4.3	1.2
1996-00	-0.6	4.0	0.9
2001-05	-1.6	4.1	0.7
2006-10	-2.1	3.5	0.5
2011-15	-2.2	3.4	0.7
Aggregate 1981-2015	-0.8	4.1	0.9

Source World development Indicators 24-4-18

The above table represents compound annual growth rate of rural population, urban population and total population in China. Growth rate of rural population, urban population and total population in China has decreased. Compound growth rate of rural population has reduced from 0.6 per cent to negative 2.2 per cent, urban population from 4.7 per cent to 3.4 per cent and total population from 1.4 per cent to 0.7 per cent respectively in China. Overall data represents that compound annual growth rate of rural population in China is negative 0.8 per cent, 4.1 per cent of urban population and 0.9 per cent of total population during 1981 to 2015. Data indicates that majority of population in China live in urban areas. Compound annual growth rate of urban population was higher than rural population and total population during 1981 to 2015.

2.6 CONCLUSION

The rate of urbanisation has increased rapidly in India and China. Many factors like rural urban migration, health and education facilities, better living standard, developed infrastructure facilities, change occupational structure, etc are responsible for high urban growth rate. The percentage of urban population in India was higher than China till 1987. Subsequently, the urban population in China had increased very speedily. Compound annual growth rate of urban population is high in both countries. However, the position of China in annual growth rate of urban population is superior to India. The male female ratio in both countries is almost same.

Since 1980's, the urban population in both of countries have been growing very rapidly. Till 1987, the percentage of urban population in India was higher than China. But afterwards, urban population in China had grown-up very speedily. Land reforms, health and education facilities, rural urban migration, change in occupational structure, etc are responsible for the soaring urban growth rate in China.

Total population, rural population and urban population have been escalating rapidly in both countries. But, rural population in China has been deteriorating after 1990. It shows that China has furnished better living conditions in urban

areas. Annual compound growth rate in urban population is higher as compared to rural and total population growth rate in both countries. However, the position of China is superior to India in urban population growth rate to the great extent. Considering the overall period of time (1981 to 2015) indicated the negative growth rate of rural population in China.

Birth rate, death rate and natural growth rate in both countries have been found to be declining from 1980 to 2015. Birth rate, death rate and natural growth rates are higher in India than China. It is pertinent to mention here that China had adopted single child policy in 1978. But presently, it has adopted two child policy. However, India never adopted any policy relating to regulate its population. Though, total population of China is higher than India, Males-Females ratio (percentage of total population) is same in both countries (males (51) and females (49)

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