

RESEARCH PAPER ON TRENDS AND PATTERNS IN THE LEVELS OF URBANIZATION IN RAJASTHAN (1901 to 2011)

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ABSTRACT: Urbanization refers to the process of transformation of a society which is predominantly rural in character, economy, culture and life style, to the one that is predominantly urban which is basically engaged in industrial and service sector. Urbanization can be said to be an old process but the rapidity in urbanization is seen in recent decades. According to United Nations (2014) nearly two third of the world's population is poised to live in urban environments by 2050. Indian scenario in this regard is that the country has a low level of urbanization (31.2% in 2011) as compared to developed world but has a very large number of people living in urban areas and constitutes 10.6% of world's urban population. Urban areas are emerging as economic growth drivers for the entire country and Rajasthan is no exception. But the state is witnessing a moderate rise in urbanization in 2011 i.e. 24.87% as compared to 31.2 % of all India. Study of trends and levels of urbanization has been an important aspect of Urban Geography since beginning. In the present paper Census of India (1901 to 2011) data are used to demonstrate temporal change through excel based cartography and spatial pattern through ArcView GIS based choropleth map. Increase in urban population in Rajasthan is prominently due to rural-urban migration and inclusion of 100 rural settlements as census towns in 2011 census. The present paper is focused on understanding the trends and inter-district variation in the levels of urbanization in Rajasthan using Indian Census data during 1901 to 2011. Major findings of the study are that urban population in Rajasthan increased more than eleven times during the last eleven decades i.e. from 1.48 million in 1901 to 17.05 million in 2011. Level of urbanization in the state has increased from 14.41% in 1901 to 24.87% in 2011. Kota, Jaipur and Ajmer have a very high level of urbanization i.e. 60.3%, 52.4% and 40.1% respectively. While the districts of Dungarpur (6.4%), Barmer (7.0%), Banswara (7.1%), Pratapgarh (8.3%) and Jalore (8.3%) exhibit very low level of urbanization. Districts having high rate of poverty are less urbanized and vice versa.

Key Words: Urbanization, Levels of urbanization, Transformation, Economic growth drivers



Introduction: Urbanization refers to the process of transformation of a society which is predominantly rural in character, economy, culture and life style, to the one that is predominantly urban which is basically engaged in industrial and service sector. The level of urbanization is defined as the proportion of total

population, residing in urban places (**Trewartha, G.T.**). Urbanization can be said to be an old process but the rapidity in urbanization is seen in recent decades. The high growth in population of towns and also high increase in the number of towns are the main features of the modern period (**Bansal, S.C.**). Several factors like agricultural revolution, Industrial revolution, Transport revolution, revolution in education and technology, employment opportunity and push & pull factors have been mainly responsible for urbanization. Among the factors of urbanization, rural-urban migration under the influence of push & pull factors plays an important role in boosting urbanization. Around 3 million people are moving to cities every week (**International Organization for Migration -2015**). Industrialization and urbanization go hand in hand. Urbanization is a cyclic process through which nations pass as they evolve from agrarian to industrial societies (**Trewartha, G.T.**). In fact industrialization and urbanization has boosted urbanization process and consequently half of the world is already urbanized. Urbanization, in fact, represents a drastic change in the whole scenario of social life and economic activities of a community. Rapid rate of urbanization is undoubtedly one of the key processes affecting economic development in the 21st century (**Kundu, A.**). It is interesting to highlight that urbanization itself is a product of economic and technological changes in a society and in turn it further bring changes in economy and technology. It is the technology that shapes the economy as well as pace and character of urbanization. There are many different examples of the interdependence of urbanization and technological change, though it is often difficult to disentangle cause and effect (**Knox, Paul L.**). Urbanization according to **United Nations** (2014) nearly two third of the world's population is poised to live in urban environments by 2050. It is predicted that by 2050 about 64% of the developing world and 86% of the developed world will be urbanized (**The Economist. 27 October, 2012**). Indian scenario in this regard is that the country has a low level of urbanization (31.2% in 2011) as compared to developed world but has a very large number of people living in urban areas and constitutes 10.6% of world's urban population. Urban areas are emerging as economic growth drivers for the entire country and Rajasthan is no exception. But the state is witnessing a moderate rise in urbanization in 2011 i.e. 24.87% as compared to 31.2 % of all India.

About this paper: Study of trends and levels of urbanization has been an important characteristic of Urban Geography since beginning. Present study is focused to the state of Rajasthan only and for a period from 1901 to 2011. Long term data is used to find out the trends in urbanization, compiled from the 2011 census district census handbooks (DCHB) of various districts of Rajasthan. The present paper is an effort to highlight the trends in urbanization in the state of Rajasthan (India) from 1901 to 2011. Spatial patterns of urbanization for the year 2011 and Decadal growth rate for the decade 2001-11 are computed and presented on map. Census of India data for the census years 1901 to 2011 are used to find out trends in the growth of urban population. The present paper is focused on understanding the trends, inter-district variation in the levels of urbanization and decadal growth in Rajasthan using Indian Census data for the census years from 1901 to 2011.

Objectives : While writing the present research paper “ Trends and patterns in the levels of urbanization in Rajasthan (1901 – 2011)” following objectives were reserved in mind.

- To assess the trends in urbanization in the state of Rajasthan from 1901 to 2011.
- To highlight the spatial patterns of urbanization in Rajasthan for the year 2011.
- To find out the urbanization processes involved.
- To find out correlation between rate of poverty and urbanization.

Methodology : While writing this research paper following methodology was adopted. The methodology for this paper is quite clear and simple. While establishing trends in urbanization in Rajasthan, Census of India data for the study period (1901 to 2011) is used. Simple line graph, prepared using Excel based cartography, is used to depict trends in urbanization. While demonstrating patterns of urbanization in Rajasthan for the year 2011 and spatial patterns of decadal growth of urban population for the decade 2001-11, ArcView GIS software is used for preparing choropleth maps. Data pertaining to urbanization and decadal growth in urban population are computed from district census hand books -2011 of various districts of Rajasthan.

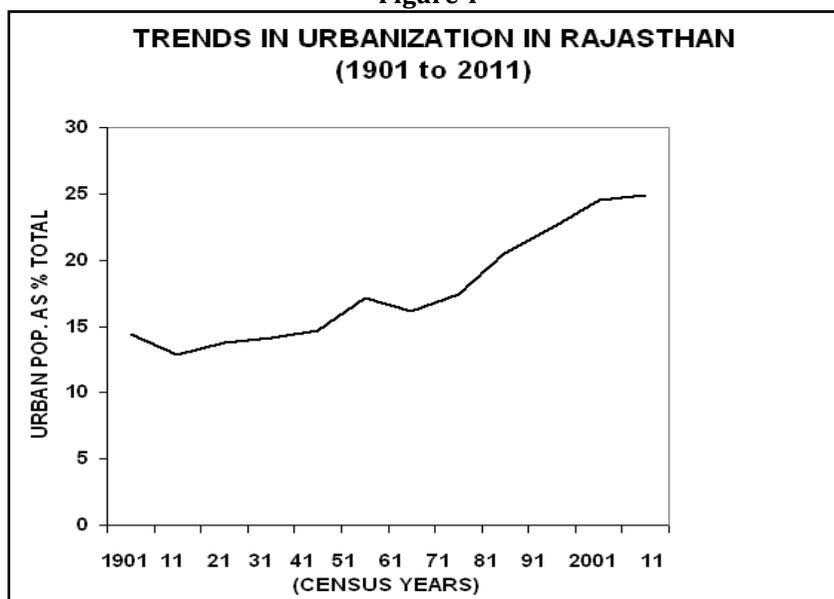
Result and Discussion: The present study focuses on the analysis of data for obtaining result and discussion primarily on i) Trends in the levels of urbanization in Rajasthan ii) Spatial patterns of urbanization in Rajasthan in 2011.

Trends in urbanization in Rajasthan: Urban population in Rajasthan increased from 1.48 million in 1901 to 17.05 million in 2011. It indicates that absolute urban population in Rajasthan

Table-I
 RAJASTHAN TREND IN THE LEVELS OF URBANIZATION
 (1901 to 2011)

Census Year	Level of Urbanization in %	Census Year	Level of Urbanization in %
1901	14.41	1961	16.18
1911	12.87	1971	17.4
1921	13.73	1981	20.49
1931	14.15	1991	22.39
1941	14.67	2001	24.52
1951	17.1	2011	24.87

Figure-I



increased more than eleven times during the last eleven decades. While the level of urbanization (urban pop. as percentage to total population) could not even get doubled as there has been little difference between the growth rate of rural and urban populations. The level of urbanization in Rajasthan shows an increasing trend consistently from 14.41% in 1901 to 24.87% in 2011. It is interesting to note that during the period between 1901 and 1941 the levels of urbanization in Rajasthan were much higher than the all India. 14.41% of population was living in urban areas of Rajasthan in the year 1901 as compared to 10.84% in all India. These figures for Rajasthan and all India in the year 1941 were 14.67% and 13.86% respectively. In the year 1951 the level of urbanization in Rajasthan was at par with all India, But from 1961 onwards Rajasthan lagged behind all India in terms of level of urbanization. In the year 2011 about 31.16% population was living in urban areas of India while in Rajasthan only 24.87% population was living in urban areas. In the year 2011 the proportion of urban population in Rajasthan was 24.87% which is below the national average of 31.16%. If we compare the urbanization levels of 2011 in the adjoining states like Gujarat (42.6%), Punjab (37.5%), Haryana (34.9%). and Madhya Pradesh (27.6%) we find that Rajasthan is lagging behind.

After having a glance of data in table-I, the entire study period can be divided logically into three major periods of urbanization in the state of Rajasthan. These are :

- i. Period of Slow Urbanization (1901 to 1941)
- ii. Period of Moderate Urbanization (1951 to 1971)
- iii. Period of Rapid Urbanization (1981 to 2011)

i. Period of Slow Urbanization (1901 to 1941): The period between 1901 and 1941 has exhibited slow urbanization not only in Rajasthan but throughout the country. This was a period of primitive agricultural economy. Actually this period was marked by famines and epidemics particularly in the years 1905, 1908,

1911 and 1918. During this period many epidemics such as cholera, malaria, smallpox, plague and influenza occurred. Generally these epidemics were associated with famines, consequently population declined almost in all of the cities in the state. Proportion of population living in urban places declined 14.41% in 1901 to 12.87% in 1911. Pandemic influenza of 1918-19 caused heavy mortality in the urban areas of the state. It was only after 1920 that the population in urban areas of the state started increasing but at a very slow pace. In 1941 the level of urbanization reached to 14.67% which was just 0.26 % higher than the urbanization level in 1901. Average value of level of urbanization for this period remained 14%.

ii. Period of Moderate Urbanization (1951 to 1971): The period between 1951 and 1971 experienced moderate urbanization in Rajasthan. Proportion of urban population to total population jumped from 14.67% in 1941 to 17.1% in 1951. It happened so because Rajasthan provided refuge to millions of migrants from Sind, Baluchistan and Bahawalpur Princely States at the time of partition of the country. These migrants were housed and established almost in all the cities of Rajasthan. The fact is endorsed by the existence of Sindhi Colonies in almost all the major cities of Rajasthan. In the year 1961 the urbanization level dropped to 16.18% as the growth of rural population remained higher (27.6%) as compared to urban population (19.5%) during the decade 1951-61. In 1971 the level of urbanization increased slightly and reached to 17.4%. In fact the average level of urbanization during this period remained 17%.

iii. Period of Rapid Urbanization (1981 to 2011): The period between 1981 and 2011 can be said to be a period of rapid urbanization in Rajasthan. This was an era of reforms not only in Rajasthan but all over the country. Industrial development attracted surplus manpower from rural areas and rural-urban migration took place, consequently rapid population growth took place in urban areas. Proportion of urban population to total population jumped from 17.4% in 1971 to 20.49% in 1981. In the successive census years of 1991, 2001 and 2011 level of urbanization in the state reached to 22.39% , 24.52 and 24.57% respectively. Average Level of urbanization for this period remained 23%.

Spatial patterns of urbanization in Rajasthan in 2011: Spatial patterns in urbanization are the outcome of a series of interrelated processes of change. These processes are economic, technological, demographic, social, cultural and political. At the core of the dynamics that boost and shape urbanization are economic factors. Variation in these processes brings spatial variation in the patterns of urbanization. It was this variation in interrelated process of change that has brought difference in the levels of urbanization among various districts of Rajasthan. Mining and industrial development has played a major role in the urbanization process of Rajasthan. Industries contribute nearly 32.5% GDP of the state. Industrial development in Bhilwara, Kota, Jaipur, Udaipur, Bhiwadi, Neemrana etc has affected the spatial pattern in urbanization in the state. The trickle down effects of New Delhi can easily be seen on the industrial and economic development of Bhiwadi-Neemrana (Alwar), the closest district to the national capital. Among other important factor that influenced the spatial patterns in the levels of urbanization in Rajasthan is high spatial variation in geographical environment. Rajasthan, in fact, is a dividing belt between the developed region of south-western region and northern plains, hence goods in bulk quantity pass through the state. Consequent upon development of a good transport network took place. National Highways no.8, 11(A, B & C), 12, 14, 15, 65, 76, 89, 112, 113, 114, 116, 158,162 and 927A have also played a major role in the urbanization process of Rajasthan and definitely affected the patterns of urbanization in the state. Towns located on the highways attracted industries and consequently grew at faster rates. Among the historical and cultural factors, tourism has played an effective role in the urbanization process of Rajasthan as it contributes 8% share to the state's GDP. Jaipur, Udaipur, Jodhpur, Bikaner and Chittorgarh have great attraction for tourists; consequently lot of tourist infrastructural development took place that boosted the urbanization process. Development of academic institutions like University of Rajasthan and Malaviya NIT in Jaipur, IIT at Jodhpur, at Jaipur and a galaxy of coaching institutes in Kota have also played a role in shaping the urbanization pattern in the state.

It is interesting to highlight that urbanization itself is a product of economic, industrial and technological development in a society and in turn it further bring changes in economical, industrial and technological development. It is actually the economic development that shapes the spatial patterns in urbanization. When we compare the district wise rate of poverty and rate of urbanization in Rajasthan, we find that the districts which have higher rate of poverty are, generally, least urbanized and vice versa. There exist a moderate degree negative correlation (-0.66) between rate of poverty and urbanization level in the state (computed on the basis of urbanization data in table II and poverty data used by Bhandari & Chakraborty).

Table-II
LEVELS OF URBANIZATION IN RAJASTHAN
(2011)

Sr. No.	District	Total Population	Urban Poplation	Urban Pop. As % to Total Pop.
1	Kota	1951014	1176604	60.3
2	Jaipur	6626178	3471847	52.4
3	Ajmer	2583052	1035410	40.1
4	Jodhpur	3687165	1264614	34.3
5	Bikaner	2363937	800384	33.9
6	Churu	2039547	576235	28.3
7	Ganganagar	1969168	535432	27.2
8	Sikar	2677333	633906	23.7
9	Jhunjunun	2137045	489079	22.9
10	Pali	2037573	460006	22.6
11	Tonk	1421326	317723	22.4
Sr. No.	District	Total Population	Urban Poplation	Urban Pop. As % to Total Pop.
12	Bhilwara	2408523	512654	21.3
13	Nagaur	3307743	637204	21.3
14	Baran	1222755	254214	20.8
15	Dhaulpur	1206516	247450	20.5
16	Sirohi	1036346	208654	20.1
17	Bundi	1110906	222701	20.0
18	Sawaimadhopur	1335551	266467	20.0
19	Udaipur	3068420	608426	19.8
20	Hanumangarh	1774692	350464	19.7
21	Bharatpur	2548462	495099	19.4
22	Chittaurgarh	1544338	285264	18.5
23	Alwar	3674179	654451	17.8
24	Jhalawar	1411129	229291	16.2
25	Rajsamand	1156597	183820	15.9
26	Karauli	1458248	218105	15.0
27	Jaisalmer	669919	89025	13.3
28	Dausa	1634409	201793	12.3
29	Pratapgarh	867848	71807	8.3
30	Jalor	1828730	151755	8.3
31	Banswara	1797485	127621	7.1
32	Barmer	2603751	181837	7.0
33	Dungarpur	1388552	88743	6.4
	All Rajasthan	68548437	17048085	24.87

Table-III
Spatial variation in the levels of urbanization in Rajasthan (2011)

Sr. No.	Levels in Urbanization	Districts
1	Very Low (8.3% and below)	Dungarpur, Barmer , Banswara , Jalor & Pratapgarh.

2	Low (8.4 to 16.0%)	Dausa, Jaisalmer, Karauli & Rajsamand.
3	Moderate (16.1 to 24.0%)	Jhalawar, Alwar, Chittaurgarh, Bharatpur, Hanumangarh, Udaipur, Sawaimadhopur, Bundi, Sirohi, Dhaulpur, Baran, Nagaur, Bhilwara, Tonk, Pali, Jhunjunun, Sikar, Ganganagar & Churu.
4	High (24.1 to 40%)	Ganganagar, Churu, Bikaner & Jodhpur.
5	Very High (More than 40%)	Ajmer, Jaipur & Kota.

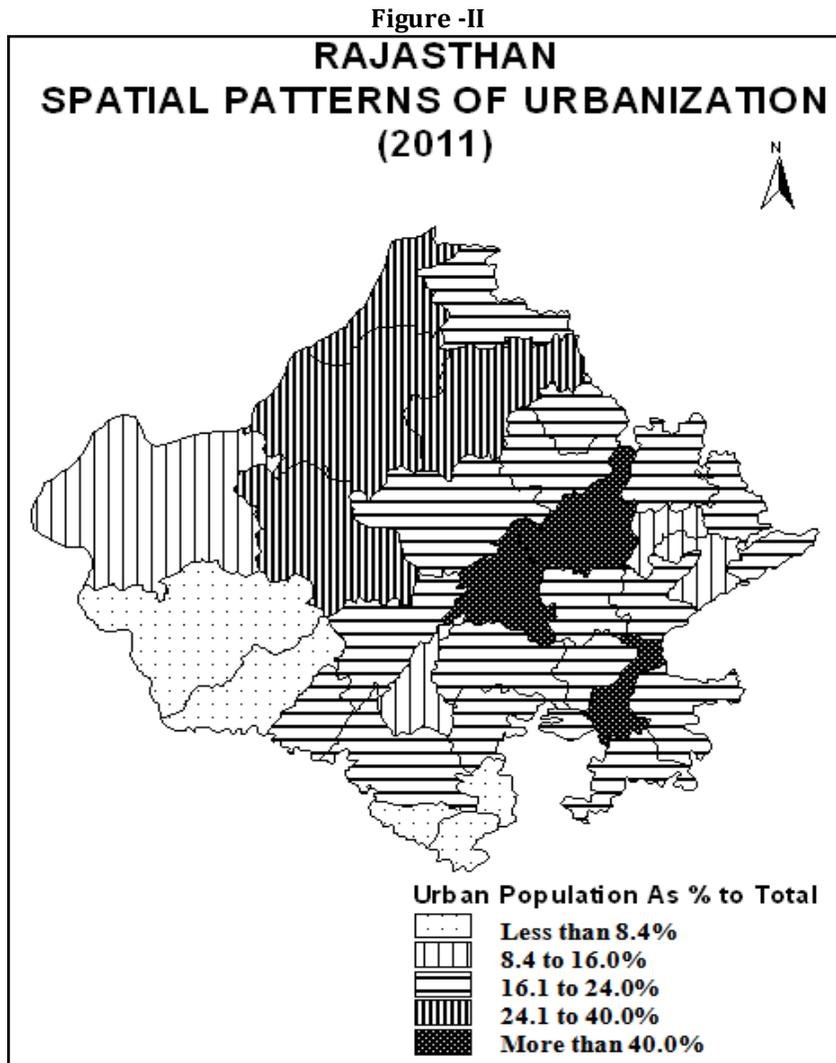


Figure-II and Table-III presents patterns of levels in urbanization in 2011. These patterns are described in the proceeding paragraphs.

1. Areas of Very Low Level of Urbanization:- The areas having level of urbanization below 8.4% % are designated as areas of very low level of urbanization. Five districts namely Dungarpur (6.4%), Barmer (7.0%), Banswara (7.1%), Jalore (8.3%) and Pratapgarh (8.3%) fall in this category. All these districts are economically backward as these lack in industries and rely on agriculture only. Economic development and urbanization has a very strong positive coorelation. The districts falling under this category has a very high percentage of population living below poverty line, hence are least urbanized districts of Rajasthan. According to **Bhandari & Chakraborty**, Banswara has the highest poverty rate in the state (24.9%), followed by Durgapur (24.8%) and Pratapgarh (21.4%). Barmer and Jalore districts, falling in this category

of urbanization level, also has a high poverty rate of 18.2% and 17.1% respectively.

2. Areas of Low Level of Urbanization:- The areas having level of urbanization between 8.4% and 16.0% are designated as areas of low level of urbanization. Districts of Dausa (12.3%), Jaisalmer (13.3%), Karauli (15.0%), and Rajsamand (15.9%), comes under this category. These districts are also economically less developed, consequently less urbanized. Jaisalmer experience a typical desertic climate and scanty distribution population and human settlements. Rajsamand, dausa and Karauli rely mainly on agriculture. Karauli district falling in this category of urbanization level has a poverty rate of 19.4% followed by Jaisalmer (18.8%), Dausa (16.3%) and Rajsamand (15.2%). High poverty rate in these districts became a major hindrance in the process of urbanization.

3. Areas of Moderate Level of Urbanization:- The areas having level of urbanization between 16.1% and 24.0% are designated as areas of moderate level of urbanization. Districts of Jhalawar (16.2%) , Alwar (17.8%), Chittaurgarh (18.5%), Bharatpur (19.4%), Hanumangarh (19.7%), Udaipur (19.8%), Sawaimadhopur (20.0%), Bundi (20.0%), Sirohi (20.1%), Dhaulpur (20.5%), Baran (20.8%), Nagaur (21.3%), Bhilwara (21.3%), Tonk (22.4%), Pali (22.6%), Jhunjunun (22.9%) and Sikar (23.7%), fall in this category. These districts are agriculturally advance and have some industrial base also, resulting moderate level of urbanization.

4. Areas of High Level of Urbanization:- The areas having level of urbanization between 24.1% and 40.0% are designated as areas of high level of urbanization. Districts of Ganganagar (27.2%), Churu (28.3%), Bikaner (33.9%) and Jodhpur (34.3%) fall in this category. Construction of Gang canal and Indira Gandhi canal in these districts provided water for drinking and irrigation purposes, resulting agricultural and economic development. Ganganagar district has a poverty rate of 8.0% only and comes next to Hanumangarh, the district with lowest rate of poverty in the state. Poverty rate in Churu, Bikaner and Jodhpur districts is 10.9%, 12.2% and 13.9% respectively. These factors boosted the level of urbanization in these areas.

5. Areas of Very High Level of Urbanization:- The areas having level of urbanization above 40.0% are designated as areas of very high level of urbanization. Districts of Ajmer (40.1%), Jaipur (52.4%) & Kota (60.3%) fall in this category. Kota district has a highest percentage of urban population in the state. Kota has emerged as an educational centre and shown a remarkable growth in urban population after 1971. Kota district ranks third in the state so far as size of urban population is concerned with an urban population of approximately 1.2 million in 2011. According to 2011 census, Jaipur district has the the largest urban population (3.47 million) in the state. Jaipur city alone, being the state capital, has a population of 3.04 million in 2011. Ajmer district has also a large size of urban population of 1.03 million in 2011. All the three districts are economically developed and has a low rate of poverty (9.5 to 12.7%), consequently very high level of urbanization.

Conclusions: Urban population in Rajasthan increased more than eleven times during the last eleven decades i.e. from 1.48 million in 1901 to 17.05 million in 2011. While the level of urbanization could not even get doubled as there has been little difference between the growth rate of rural and urban populations. The level of urbanization in Rajasthan shows an increasing trend consistently from 14.41% in 1901 to 24.87% in 2011. The levels of urbanization in Rajasthan remained much higher than the all India during the period between 1901 and 1941. In the year 1951 the level of urbanization in Rajasthan was at par with all India but after that the state lagged behind. Proportion of urban population to total population in the state jumped from 14.67% in 1941 to 17.1% in 1951. It happened so because Rajasthan provided refuge to millions of migrants from Sind, Baluchistan and Bahawalpur Princely States at the time of partition of the country. In the year 2011 the proportion of urban population in Rajasthan was 24.87% which is below the national average of 31.16%. Level of urbanization in Rajasthan is lower than the adjoining states. There is huge spatial variation in the levels of urbanization in Rajasthan in 2011. According to 2011 census figures, Dungarpur district had the lowest level of urbanization with only 6.4% people living in urban areas, and Kota district had the highest level of urbanization i.e. 60.3% , while the figure for the state as a whole was 24.87%. Dungarpur, Barmer, Banswara, Jalor & Pratapgarh districts are least urbanized, while Ajmer, Jaipur & Kota districts are most urbanized. It is observed that generally the districts having high rate of poverty are less urbanized and vice versa. There exist a moderate degree negative correlation (-0.66) between rate of poverty and urbanization level in the state.

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