



Trends of Urbanisation in Jhunjhunu District

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Abstract

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Urbanisation is an index of transformation from traditional rural economies to modern industrial one. It is a long term process. This paper endeavored to illuminate on the process of urbanisation in Jhunjhunu district in Rajasthan over a century with emphasis on level, tempo of urbanisation and urban morphology using Indian Census data during 1901-2011. It will try to trace urban problems and challenges. At the moment, Jhunjhunu is among the districts of low level of urbanisation. Number of urban agglomeration /town has grown from 8 in 1901 to 18 in 2011. Number of population residing in urban areas has increased from 72144 in 1901 to 489079 in 2011. Only 22.89% of population was living in urban areas as per 2011 census. Over the years there has been continuous concentration of population in class I towns. On the contrary the concentration of population in medium and small towns either fluctuated or increased. Urbanisation is a product of demographic explosion and poverty induced rural-urban migration and occurring not due to urban pull but due to rural push.

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Introduction

Urbanisation is an index of transformation from traditional rural economies to modern industrial one. It is progressive concentration (Davis, 1965) of population in urban unit. Quantification of urbanisation is very difficult. It is a long term process. Kingsley Davis has explained urbanisation as process of switch from spread out pattern of human settlements to one of concentration in urban centers. It is a finite process--- a cycle through

which a nation pass as they evolve from agrarian to industrial society (Davis and Golden, 1954). He has mentioned three stages in the process of urbanisation. Stage one is the initial stage characterized by rural traditional society with predominance in agriculture and dispersed pattern of settlements. Stage two refers to acceleration stage where basic restructuring of the economy and investments in social overhead capitals including transportation, communication take place. Proportion of urban population gradually increases from 25% to 40%, 50%, 60% and so on. Dependence on primary sector gradually dwindles. Third stage is known as terminal stage where urban population exceeds 70% or more. At this stage level of urbanisation remains more or less same or constant. Rate of growth of urban population and total population becomes same at this terminal stage. Historical evidence suggests that urbanisation process is inevitable and universal. A majority of the developing countries, on the other hand started experiencing urbanisation only since the middle of 20th century.

Study Objective

This paper endeavors to illuminate on the process of urbanisation in Jhunjhunu district in Rajasthan State of India with emphasis on level, tempo of urbanisation and urban morphology using Indian Census data during 1901- 2011. It will try to trace distribution and pattern of urbanisation, related urban problems and challenges.

Indian Census Definition of Urban Area in Census of India, 2011 two types of towns were identified:

- a) Statutory towns: All places with a municipality, corporation, Cantonment board or notified town area committee, etc. so declared by state law.
- b) Census towns: Places which satisfy following criteria:-
 - i) a minimum population of 5000;
 - ii) at least 75% of male working population engaged in non agricultural pursuits; and
 - iii) a density of population of at least 400 persons per sq km

Urbanisation Trend in India and Rajasthan

Urbanisation in India is now catching up fast with that of the rest of the world. The percentage share of India's urban population in its total population increased from 17.97 % (1961) to 27.81% (2001) and further to 31.14% in 2011.

Similar trends can be observed in Rajasthan as percentage share of Rajasthan's urban population in its total population increased from 16.28% in 1961 to 23.39% (2001) and later 24.87% in 2011. The total population living in urban areas of Rajasthan in 2011 was 1.70 crore which include 89.09 lakh of male population and 81.39 lakh of female population.

Study Area

Jhunjhunu district is situated in the north-eastern portion of Rajasthan and lies between 27^o 38' and 28^o 31' north latitudes and 75^o 02' and 76^o 06' east longitudes. It is bounded on the north-west by Churu district, on the north-east by Hisar and Mahendragarh districts of Haryana State and on the west, south and south-east by Sikar district.

Table 1: Population of Jhunjhunu district, 1901-2011

Census Year	Total Population	Urban	Rural
1901	341572	72144	269428
1911	369081	73806	295275
1921	353140	67586	285554
1931	405519	81055	324464
1941	491003	93719	397284
1951	588736	140326	448410
1961	719650	127320	592330
1971	929230	162036	767194
1981	1211583	251267	960316
1991	1582421	325044	1257377
2001	1913689	395116	1518573
2011	2137045	489079	1647966

Source: Census of India, 1901-2011

Table 2: Population of Jhunjhunu by sex, 2011

Jhunjhunu	Male	Female	Total Person	Sex Ratio
Urban	253178	235901	489079	932
Rural	842718	805248	1647966	956
Total	1095896	1041149	2137045	950

Source: District Census Handbook, 2011

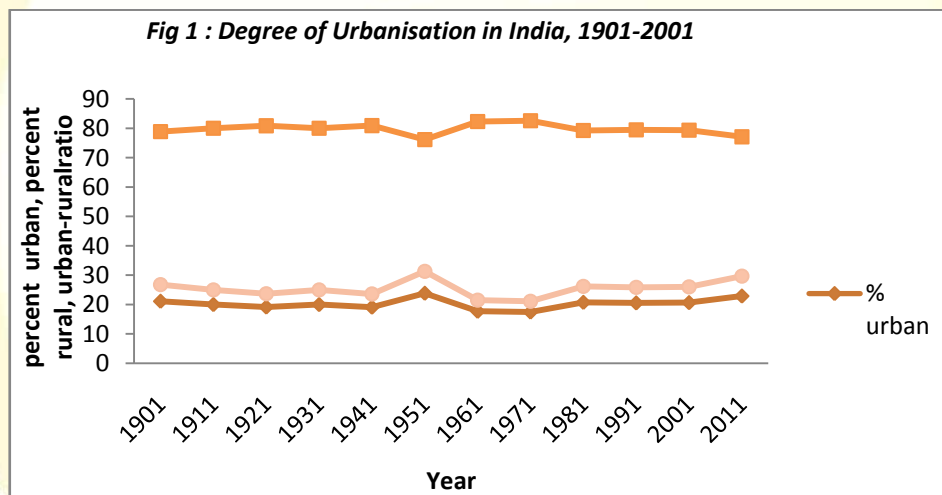
Degree of Urbanisation

The degree or level of urbanisation is defined as relative number of people who live in urban areas. Percent urban $[(U/P)*100]$ and percent rural $[(R/P)*100]$ and urban-rural ratio $[(U/R)*100]$ are used to measure degree of urbanisation. These are most commonly used for measuring degree of urbanisation. The ratio U/P has lower limit 0 and upper limit 1 i.e. $0 < U/P < 1$. The index is 0 for total population equal to rural population. When whole population is urban, this index is one. When 50 percent of the population is rural, it means that there is one urbanite for each rural person. The urban-rural ratio has a lower limit of zero and upper limit ∞ i.e 0

Table 3: Degree/Index of Urbanisation, 1901-2011

Census Year	Percent Urban	Percent Rural	Urban-Rural Ratio (percent)
1901	21.12	78.88	26.78
1911	20.00	80.00	25.00
1921	19.14	80.86	23.67
1931	19.99	80.01	24.98
1941	19.09	80.91	23.59
1951	23.84	76.16	31.29
1961	17.69	82.31	21.49
1971	17.44	82.56	21.12
1981	20.74	79.26	26.17
1991	20.54	79.46	25.85
2001	20.65	79.35	26.02
2011	22.89	77.11	29.68

Source: District Census Handbook, 2011



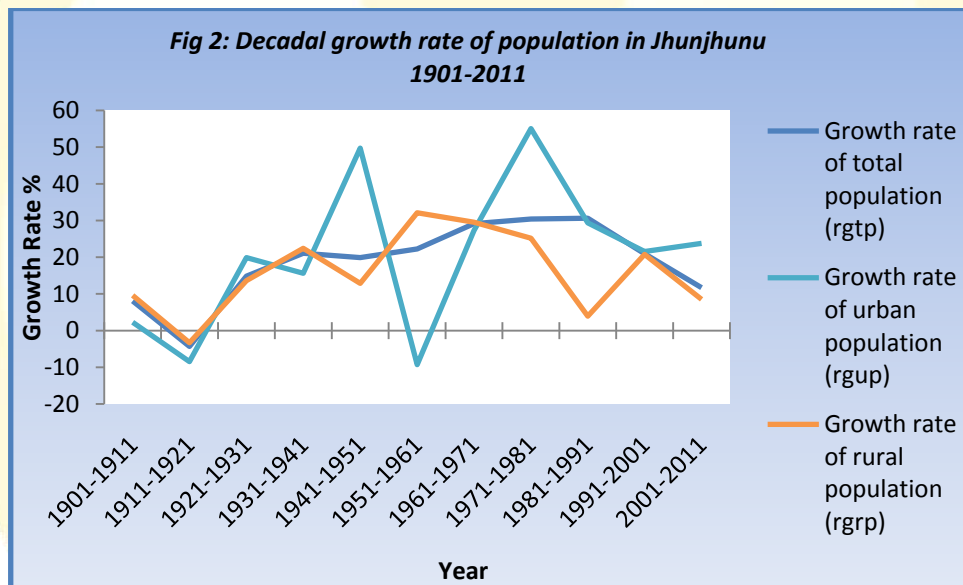
Pace of Urbanisation

Urbanisation in Jhunjhunu has been relatively slow compared to many developing countries. The percentage of annual growth rate of urban population reveals that in Jhunjhunu it grew at faster pace from the decade 1921 to until 1951. Thereafter it registered a sharp drop during the decade 1951-61. Afterwards 1991 it showed a significant improvement in the growth which has thereafter dropped to the present level. The sharp drop in urban rate during 1941-61 was mainly due to declassification of a very large number of towns during that period. Rural growth has been fluctuating since 1901. The decline in rural population growth was within small range during 1911-1921 and 2011. During the process of urbanisation it is natural that $rgup > rgtp > rgrp$, (table 5) where $rgup$ = rate of growth of urban population, $rgtp$ = rate of growth of total population, $rgrp$ = rate of growth of rural population. This fact is supported in case of Indian urbanisation also since 1911.

Table 4: Decadal Growth Rate of Population

Year	Growth rate of total population (rgtp)	Growth rate of urban population (rgup)	Growth rate of rural population (rgrp)
1901-1911	8.05	2.3	9.59
1911-1921	-4.32	-8.43	-3.29
1921-1931	14.83	19.93	13.63
1931-1941	21.08	15.62	22.44
1941-1951	19.9	49.73	12.87
1951-1961	22.24	-9.27	32.1
1961-1971	29.12	27.27	29.52
1971-1981	30.39	55.07	25.17
1981-1991	30.61	29.36	30.93
1991-2001	20.93	21.56	20.77
2001-2011	11.67	23.78	8.52

Source: District Census Handbook, 2011



Tempo of urbanisation refers to speed of urbanisation and is measured as change registered in the level or degree of urbanisation over the years. If the degree of urbanisation is measured by the percent of population living in urban places, the urban-rural ratio by the city of the median inhabitant, or by the mean city size, the speed of urbanisation would be the change registered in these indices over a period of time. When the degree of urbanisation is measured either as the absolute change in the percent points or change in the percent of population urban between two dates.

Annual Change of percent points: To measure the Tempo of urbanisation as an absolute urban change in percentage point, we calculate

$$TA = \frac{1}{n} (PU^{t+n} - PU^t)$$

Where TA is the tempo of urbanisation, n is the number of years, and PU is the percent of population urban at the year's t and t+n.

From the following table, it is clear that tempo or speed of urbanisation is not uniform over the years. It shows a fluctuating trend over the years 1901-2011 and a declining trend

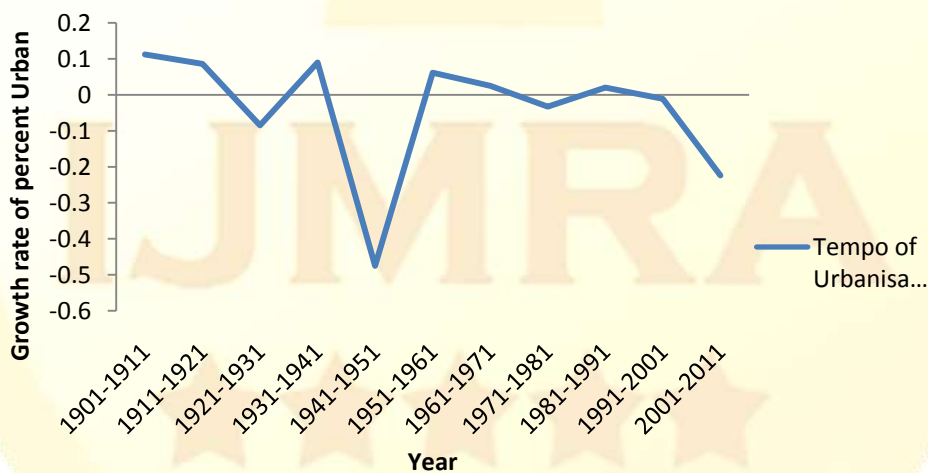
during 1901-1921, 1931-1941, 1951-1971, 1981-1991. Again it is required to mention tempo of urbanisation measured as a per cent will tend toward zero as the urban population reaches the 100 percent level, since the urban and total population growth would become the same.

Table 5: Tempo of Urbanisation, Jhunjhunu district, 1901-2011

Year	Tempo of Urbanisation
1901-1911	0.112
1911-1921	0.086
1921-1931	-0.085
1931-1941	0.09
1941-1951	-0.475
1951-1961	0.0615
1961-1971	0.025
1971-1981	-0.033
1981-1991	0.02
1991-2001	-0.011
2001-2011	-0.224

Source: District Census Handbook, 2011

Fig 3: Tempo of Urbanisation, 1901-2011



Urban Morphology

The following table 8 shows number of towns and percentage of urban population by size class of city during 1901- 2011. This is manifested in a high percentage of urban population being concentrated in class 3 and 4 cities and its population has systematically gone up over the decades in the last century. As per 1961 census percentage of population in class I, III, IV, were 0%, 39.12%, and 19.24 percent respectively. According to 2001 Census, about 25.43% of the districts urban population lived in Class -1 city. In 2011 it has decreased to 13.08%. Over the years there has been continuous concentration of population in class I towns and the concentration of population in medium and small town either fluctuated or increased. It may be observed that in 1901 there were no class I city that has gone up to only 1 in 2011 which explains gradually increase in the share of population in this size category over the years.

Table: Number of towns by size class

Table 6: Number of towns by size class

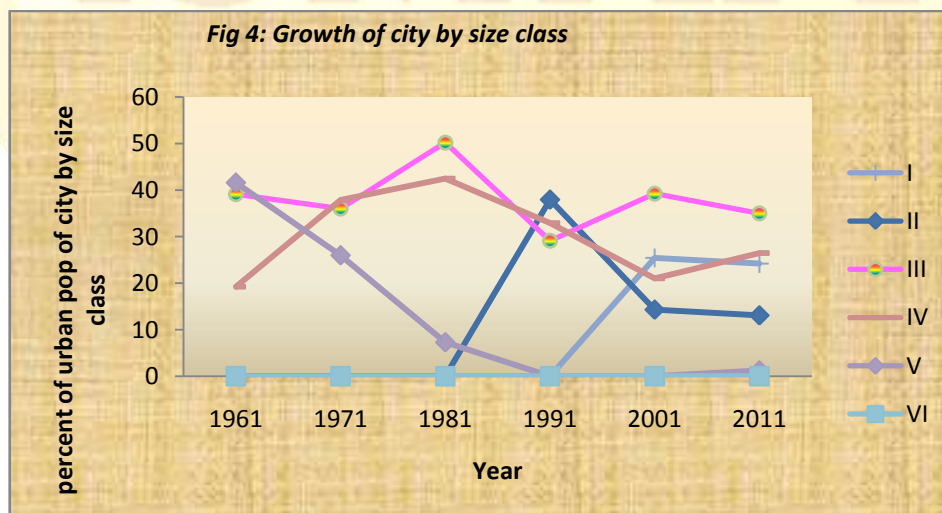
Census year	No of Towns by size class					
	I	II	III	IV	V	VI
1901	0	0	0	2	6	0
1911	0	0	0	2	6	0
1921	0	0	0	2	6	0
1931	0	0	0	2	6	0
1941	0	0	1	2	5	0
1951	0	0	2	2	7	0
1961	0	0	2	2	7	0
1971	0	0	2	5	5	0
1981	0	0	4	8	2	0
1991	0	2	4	7	0	0
2001	1	1	6	5	0	0
2011	1	1	6	9	1	0

Source: Census of India, 1901-2011

Table 7: Percentage of urban population by size class

Year	I	II	III	IV	V	VI
1961	0	0	39.12	19.24	41.59	0
1971	0	0	36.03	37.87	25.98	0
1981	0	0	50.22	42.48	7.29	0
1991	0	37.96	29.12	32.92	0	0
2001	25.43	14.3	39.25	21.02	0	0
2011	24.22	13.08	35	26.47	1.24	0

Source: Census of India, 1961-2011



There were 15 towns in the district 1951 census, namely, Jhunjhunu, Pilani, Bagar, Mukundgard, Surajgarh, Nawalgarh, Udaipurwati, Khetri and Chirawa. Of these, Mandrela, Singhana, Gudha, Parasrampura and Bissau were declassified as towns and declared as rural areas during 1961 census and instead Vidya Vihar (a colony of Pilani town) having a population of 3463 persons was classed as a town, thus reducing the total number of towns from 15 to 11. During 1971, Bissau was again added to the list of towns.

Number of urban agglomeration /town has grown from 8 in 1901 to 18 in 2011. Of these 12 are statutory towns and 6 census towns.

Table 8: Urban Centres of Jhunjhunu District

Urban Centres/Towns	Area (sq. km)	Population
Jhunjhunu	50	1,18,473
Nawalgarh	18	63948
Chirawa	9	43953
Pilani	15	29741
Udaipurwati	35	29236
Mandawa	2	23335
Bissau	16	23227
Surajgarh	18.4	21666
Mukundgarh	13	18469
Khetri	11.31	18209
Gothra	9.8	16933
VidyaVihar	5	15644
Bagar	12	14238
Malsisar	20	13719
Singhana	2.99	11372
Babai	13.22	10620
Isalampur	14	10247
Nooah	6.32	6049
Total Jhunjhunu	5928 sq km	2137045

Component of Urban Growth

Urban growth can be attributed to mainly three components Natural increase, Net migration and Areal reclassification. An over-whelmingly large part of the population is indigenous, having been born in the place of enumerations or in the district itself. Since separate information in wake of change in the area and population due to extension of municipal boundaries during the inter-censal period is not available either for total or for migrant population it is difficult to estimate decadal migration to urban areas. Besides migration data for new and declassified towns are not available separately. The census of 1961 recorded that 73.44 % of the population were born in the place of enumeration, 18.12 % elsewhere in the district of enumeration and 5.51 % in other district of Rajasthan. Only 2.73 % were born in other States of India and the remaining 0.09 % outside India. It is clear that urbanisation process in India is not mainly "migration lead" but a product of demographic explosion due to natural increase. People migrate to cities not due to urban pull but due to rural push. Poverty led migration has induced very poor quality of urbanisation followed by misery, poverty, unemployment, exploitation, rapid growth of slum, inequalities, degradation in the quality of urban life.

Basic Feature and Pattern of Jhunjhunu's Urbanisation Basic feature of urbanisation in India can be highlighted as:

1. Urbanisation occurs without industrialization and strong economic base

2. Urbanisation is mainly a product of demographic explosion and poverty induced rural - urban migration.
3. Rapid urbanisation leads to massive growth of slum followed by misery, poverty, unemployment, exploitation, inequalities, degradation in the quality of urban life.
4. Urbanisation occurs not due to urban pull but due to rural push.
5. Poor quality of rural-urban migration leads to poor quality of urbanisation.

Problem of Urbanisation

Problem of urbanisation is manifestation of lopsided urbanisation, faulty urban planning, and urbanisation with poor economic base and without having functional categories. Hence Jhunjhunu's urbanisation is followed by some basic problems in the field of: 1) transport, 2) inadequate provision for social infrastructure (school, hospital, etc.) 3) water supply and sanitation, 4) water pollution and air pollution. Since these cities are suffering from of urban poverty, unemployment, crisis in urban infra-structural services, illiterate and unskilled agricultural laborers. So there is transfer of rural poverty to urban poverty. Poverty induced migration of illiterate and unskilled laborer occurs in cities addressing urban involution and urban decay. Hence it is urbanisation without urban functional characteristics and it becomes in-efficient and unproductive.

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