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## Urbanization and development in Kerala

**Dr. Sabida Das DS and Dr. Laya KS**

### Abstract

Urbanization in India has been relatively slow over the past forty or fifty years as compared with many other developing countries. The state of Kerala which had experienced a low level of urbanization till 2001 showed a rapid increase in its urban share in 2011. Hence the present study is designed to analyse urbanization and development in Kerala. The data for the study are taken from various reports of Census of India from 1961 to 2011 and various measures are used for analysis.

Kerala has an urban share of nearly 48 percent in 2011 and has the highest growth rate of urban population during the last decade. The districts of Kerala also have a huge growth in their urban population. The speed of urbanization has also increased sharply during the decade 2001-2011. The main reason for urban growth in Kerala is the manifold increase in the number of census towns in Kerala during the decade 2001-2011. Obviously, this is going to have serious implications in future. The level of development in Kerala is found to be highly positively correlated to the level of urbanization. The urban spread demands more investment in infrastructure development and hence the status of infrastructure in such growth centres should be improved to meet the increasing demand. Urban spread may result in the depletion of agricultural areas, an increase in transportation costs and energy consumption. The high density of population in urban areas has contributed to urban poverty also. This manifests in many forms, such as slums, unemployment, lack of social services and increasing violence and crime. Urban sanitation problems including drainage problems, disposal of solid waste and sewage water, lack of safe drinking water, housing problems, etc. are also among the invited problems of urbanization.

Urbanization and economic development have long been recognized as concomitant factors. Policies need to be enunciated to use urbanization as a positive factor to aid economic development. Proper development strategy should cater to the development needs of urban society ensuring modern comfort levels and standard of living while preserving natural, cultural and historical entity of the city.

**Keywords:** Kerala, urbanization, development, census town, urban growth

### Introduction

Urbanization refers to the population of a nation living in urban areas and is an indicator of modernization, the sign of growth and economic progress. The most distinctive feature of the twentieth century has been the rapid and massive urbanization taking place everywhere in the world as a consequence of the process of modernization. The rate of urbanization is much more in developing countries than in developed countries in the 21<sup>st</sup> century (Babu, *et al.*, 2007) <sup>[1]</sup>.

Urbanization reveals itself through temporal, spatial and sectoral changes in the demographic, social, economic, technological and environmental aspects of life in a given society. These changes manifest themselves in the increasing concentration of population in human settlements larger than villages, in the increasing involvement of the people in secondary and tertiary production and in the progressive adoption of certain social traits which are typical of traditional rural societies (Misra, 1972) <sup>[2]</sup>.

Urbanization is being considered as a symbol of development and has become the essential part of the growth as well as an important index of material progress and prosperity of the society. The country which is most urbanized is being regarded as a developed nation (Tripathi, 1991) <sup>[3]</sup>. Urbanization has both positive and negative effects. It is associated with improved access to education, employment and health care. At the same time rapid urbanization poses some serious challenges also (Cohen, 2006) <sup>[4]</sup>. The rapid growth of cities and urban agglomerations had led to the concentration of population at a particular region and created imbalance in the total development (Cohen, 2006; Nagendra *et al.*, 2013) <sup>[4, 5]</sup>.

Urbanization in India has been relatively slow over the past forty or fifty years as compared with many other developing countries. 20<sup>th</sup> century Census has documented a slow but great increase of urban population in India. The state of Kerala which had experienced a low level of urbanization till 2001 showed a rapid increase in its urban share in 2011 (Census of India, 2011) [6]. Kerala has an urban share of nearly 48 percent in 2011 and has the highest growth rate of urban population during the last decade among the major states of India. The pattern of urbanization is not even across its districts also. Obviously, this is going to have serious implications in future. Hence the present study is designed to analyse urbanization and development in Kerala.

**Objectives**

The objectives of the study are to analyze the trends and levels of urbanization in Kerala during 1961-2011 and to analyze the relationship between urbanization and development in Kerala during 2001-2011.

**Material and Methods**

The data for the study are taken from various Census of India Reports from 1961 to 2011. The analysis for the districts is restricted to the period 1991-2011 by considering jurisdictional changes. Since 1991 Kerala has 14 districts. Speed of Urbanization and Degree of Urban Concentration In order to analyze the trends in urbanization, two measures, speed of urbanization and degree of urban concentration are used. Speed of urbanization refers to the rate of change in the proportion of urban population over a period of time.

$$\text{Speed of Urbanization} = \frac{(U_2/T_2) - (U_1/T_1)}{(U_1/T_1)} * 100$$

where T<sub>1</sub>, U<sub>1</sub>, T<sub>2</sub> and U<sub>2</sub> are the total and urban populations of two successive periods.

Degree of urban concentration refers to the extent or level to which the population of an area is urbanized.

$$\text{Degree of Urban Concentration} = \frac{P_i}{P_1} * 100$$

where P<sub>i</sub> is the percentage of urban population of areal unit and P<sub>1</sub> is the percentage of urban population of study area.

**Composite Index of Development**

In order to calculate district-wise composite index of development, ten development indicators are selected. They are literacy rate, total work participation rate, male work participation rate, percentage of non-agricultural labourers, density of population, percent of households having improved drinking water facility, having electricity, having toilet facility, drainage facility and percent of households availing banking services. The Composite Index of Development is calculated as

$$CID = \frac{CD_{i1} + CD_{i2} + CD_{i3} + \dots + CD_{in}}{N}$$

Where CD<sub>i</sub> is the coefficient of development for the variable i and is given by

$$CD_i = \frac{P_i}{P_1} * 100 \text{ where,}$$

P<sub>i</sub> is the percentage of variable in areal unit and P<sub>1</sub> is the percentage of variable in study unit.

**Findings**

The share of urban population to total population in Kerala and India are shown in Table 1. The percent of urban population in India has increased from 18 in 1961 to 31 in 2011, that is an increase of 13 points; whereas in Kerala it increased from 15 to 48 nearly, an increase of 33 points. It is clear from the table that the process of urbanization in India was slow over the decades. The share of urban population in

Kerala was either less or nearly the same compared to India as a whole till 2001. A rapid increase in the share of urban population has occurred in Kerala between 2001 and 2011.

**Table 1:** Percent of urban population, 1961-2011

Year	% Urban Population	
	India	Kerala
1961	18.0	15.1
1971	19.9	16.2
1981	23.3	18.7
1991	25.7	26.3
2001	27.8	26.0
2011	31.2	47.7

The trend in the percent of urban population in the districts during 1991-2001 is also examined (Table: 2). It is clear from the table that in all the districts except Idukki and Pathanamthitta the share of urban population has increased between 1991 and 2001. In Idukki, the percent has decreased during 2001-2011, while it increased in Pathanamthitta. The most urbanized district in Kerala in 2011 is Ernakulam followed by Thrissur, Kozhikode and Kannur while the least urbanized is Wayanad followed by Idukki and Pathanamthitta. Most of the districts showed a rapid increase in the share of urban population during the decade 2001-2011 with the highest increase in the district of Malappuram.

**Table 2:** Percent of urban population, Districts, 1991-2011

District	1991	2001	2011
Kasaragod	16.45	19.41	38.78
Kannur	50.87	50.35	65.05
Wayanad	3.41	3.79	3.87
Kozhikode	38.34	38.25	67.15
Malappuram	9.12	9.82	44.19
Palakkad	15.72	13.62	24.09
Thrissur	26.31	28.22	67.19
Ernakulam	48.35	47.56	68.07
Idukki	4.82	5.1	4.7
Kottayam	17.55	15.35	28.58
Alappuzha	30.46	29.46	54.06
Pathanamthitta	13.05	10.03	11.0
Kollam	18.53	18.02	45.11
Thiruvananthapuram	33.88	33.75	53.80

The trends in the number of towns in Kerala is also analysed and compared with that in India (Table:3). The number of towns include both statutory and census towns. The number of towns in India has increased continuously over the census years; whereas the number of towns in Kerala has decreased between 1991 and 2001. It is noticeable that there occurred an unprecedented growth in the number of towns in Kerala between 2001 and 2011. The unprecedented increase in the share of urban population in Kerala during the last decade could be attributed to the manifold increase in the number of census towns in the state between 2001 and 2011.

**Table 3:** Number of Towns, 1961-2011

Year	No. of Towns	
	India	Kerala
1961	2657	92
1971	3081	88
1981	3981	106
1991	4615	197
2001	5161	167
2011	7935	520

The number of towns increased tremendously in all the districts except Wayanad and Idukki (Table 4). In Wayanad the number has not changed and in Idukki the number decreased from 2 during 2001 to 1 during 2011 due to reclassification of one of the towns as rural. Among the districts Thrissur (135) has the highest number of towns in 2011 followed by Kannur (67), Pathanamthitta (58) and Ernakulam (56). It is quite interesting that the number of towns in the districts of Malappuram and Kollam has increased by nine fold between 2001 and 2011.

**Table 4:** Number of Towns, Districts, 1991-2011

District	2001	2011
Kasaragod	7	27
Kannur	45	67
Wayanad	1	1
Kozhikode	13	51
Malappuram	5	44
Palakkad	5	21
Thrissur	28	135
Ernakulam	25	56
Idukki	2	1
Kottayam	6	17
Alappuzha	11	38
Pathanamthitta	11	58
Kollam	3	27
Thiruvananthapuram	5	31

Speed of urbanization is the rate of change in the percent of urban population over a period of time and is calculated for the period 1961-2011 for India and Kerala (Table 5). The speed of urbanization for Kerala is manifold higher as compared to that of India during the last decade that is 2001-2011. The trend over the decades is not the same for India and Kerala. The speed of urbanization in India increased continuously from 1961 to 1981; it decreased continuously till 2001 and increased thereafter. At the same time, the speed of urbanization for Kerala increased continuously till 1991, a steep decrease in the next decade and a sharp increase in the last decade. The speed of urbanization for Kerala became negative during the decade 1991-2001.

Table 6 presents the speed of urbanization calculated for the districts of Kerala during 1991-2011. In all the districts except Wayanad and Idukki the speed of urbanization increased sharply over the decades. It is very interesting to note that in most of the districts the speed of urbanization was negative during 1991-2001 and the district Idukki shows a negative speed during the decade 2001-2011. The speed of urbanization was the highest in the district of Kasaragod and the lowest in Pathanamthitta during 1991-2001. This picture has changed after 10 years. Malappuram shows the highest and Idukki shows the lowest values during the decade 2001-2011. It is to be noted that in Malappuram the speed of urbanization increased from 8 percent during 1991-2001 to 350 percent during 2001-2011.

**Table 5:** Speed of Urbanization, 1961-2011

Decade	Speed of Urbanization	
	India	Kerala
1961-1971	1.5	7.5
1971-1981	27.9	15.4
1981-1991	10.2	40.8
1991-2001	8.01	-1.26
2001-2011	12.15	83.75

**Table 6:** Speed of Urbanization, Districts, 1991-2011

District	1991-2001	2001-2011
Kasaragod	18.01	99.8
Kannur	-1.03	29.2
Wayanad	11.10	2.1
Kozhikode	-0.25	75.6
Malappuram	7.69	350
Palakkad	-13.36	76.9
Thrissur	7.27	138.1
Ernakulam	-1.63	43.1
Idukki	5.75	-7.8
Kottayam	-12.57	86.2
Alappuzha	-3.27	83.5
Pathanamthitta	-23.10	9.7
Kollam	-2.71	150.3
Thiruvananthapuram	-0.37	59.4

The extent to which the population of an area is urbanized refers to the degree of urban concentration of that area. A value less than 100 implies poor concentration of urban population. The degree of urban concentration is calculated for the districts of Kerala from 1991 to 2011 (Table 7). The districts of Kerala showed large variations in their urban concentration with respect to the state as a whole. The three districts Kasaragod, Malappuram and Thrissur show a continuous increase in the degree of urban concentration from 1991 to 2011 and the increase is rapid between 2001 and 2011. Whereas, in the districts Kannur, Kozhikode, Palakkad, Ernakulam, Pathanamthitta and Thiruvananthapuram a continuous decrease in the degree of urban concentration can be observed. In the districts Wayanad and Idukki it increased during 1991-2001, but decreased during 2001-2011. The two districts Kottayam and Alappuzha did not show much variation over the decades, whereas the district Kollam showed a sharp increase between 2001 and 2011. It is quite interesting that only six districts have values more than 100 in 2011. That is out of the fourteen districts of Kerala eight districts have poor urban concentration. In 2011, the degree of urban concentration is the highest in Ernakulam and the lowest in Wayanad. It is to be noted that the district Kannur stood in the first position in 1991 and 2001. Another interesting matter is that Malappuram showed a sharp increase between 2001 and 2011.

**Table 7:** Degree of Urban Concentration, Districts, 1991-2011

District	1991	2001	2011
Kasaragod	63.2	74.8	81.3
Kannur	195.5	194.3	136.3
Wayanad	13.1	14.5	8.1
Kozhikode	147.4	147.3	140.7
Malappuram	35.1	37.9	92.6
Palakkad	60.4	52.5	50.4
Thrissur	101.1	108.6	140.8
Ernakulam	185.8	183.5	142.7
Idukki	18.5	19.5	9.9
Kottayam	67.5	59.1	59.9
Alappuzha	117.1	113.1	113.3
Pathanamthitta	50.1	38.6	23.1
Kollam	71.2	69.4	94.5
Thiruvananthapuram	130.2	130.1	112.7

**Level of Urbanization and Development**

The relationship between the level of urbanization and development in Kerala during 2001-2011 is analyzed in this

section. The level of urbanization of a population is a meaningful indicator of economic development. The concept of development can be identified with the increase

in employment opportunities, availability of infrastructural facilities, amenities and services, educational attainment and so on.

**Table 8:** Development Variables

District	Year	U	L	TW	MW	AL	PD	DW	E	T	D	B
Kasaragod	2001	16.45	84.57	34.7	49.11	10.05	604	13.8	57.2	68.4	21.8	60.2
	2011	38.94	90.09	35.41	51.72	8.37	657	100	88.76	100	38.4	82.46
Kannur	2001	50.87	92.59	31.85	49.93	13.25	812	6.9	67	87.2	24.2	96.6
	2011	65.04	95.1	32.66	51.58	10.07	852	100	94.1	100	57.83	86.6
Wayanad	2001	2.94	85.25	39.53	55.82	30.5	366	17.1	42	85.2	19.8	52.4
	2011	3.86	89.03	41.6	56.92	29.88	384	100	80.83	100	38.54	75.53
Kozhikode	2001	38.34	92.24	27.89	48.66	8.23	1228	12.7	64.2	92	20	50.2
	2011	67.15	95.08	30.75	51.15	6.76	1316	100	93.83	100	57.59	72.37
Malappuram	2001	9.12	89.61	24.12	42.76	17.81	1021	10.1	63.8	87.4	13.3	50.2
	2011	44.18	93.55	25.83	45.82	11.05	1157	100	94.26	100	45.17	68.19
Palakkad	2001	15.72	84.35	36.11	52.0	33.56	584	31.9	60.3	68.4	20	52.1
	2011	24.09	89.31	37.09	54.88	23.98	627	100	93.52	100	40.35	76.42
Thrissur	2001	26.31	92.27	32.12	50.58	11.4	981	26.8	77.3	90.9	22.4	47.9
	2011	67.17	95.08	35.11	53.32	6.75	1031	100	97.01	100	55.25	74.67
Ernakulam	2001	48.35	93.2	35.97	55.11	7.97	1012	48.5	84.9	91.9	28.5	59.5
	2011	68.07	95.89	38.06	56.39	5.71	1072	100	97.42	100	61.61	78.37
Idukki	2001	4.82	88.69	43.16	58.11	27.07	259	26.4	56.8	76	22.9	51.5
	2011	4.69	91.99	46.56	60	28.22	255	100	88.4	100	39.57	76.61
Kottayam	2001	17.55	95.82	32.87	52.24	13.22	885	19.4	77.7	85.3	24.6	59.2
	2011	28.63	97.21	37.26	54.77	8.57	895	100	96.58	100	52.12	79.79
Alappuzha	2001	30.46	93.43	34.3	49.41	13.7	1492	36.5	74.6	80	14.2	40.6
	2011	53.96	95.72	37.81	52.98	8.91	1504	100	96.15	100	37.01	68.31
Pathanamthitta	2001	13.05	94.84	29.66	47.5	19.86	468	15.1	71.6	81.7	20	51.5
	2011	10.99	96.55	32.8	50.18	14.12	452	100	94.48	100	44.62	77.88
Kollam	2001	18.53	91.18	32.05	48.39	14.69	1038	14.4	73	82.6	11.2	44.1
	2011	45.05	94.09	34.61	51.67	10.11	1061	100	95.1	100	34.15	69.48
Thiruvananthapuram	2001	33.88	89.28	32.4	51.38	12.95	1476	27.8	74.9	82.6	17.3	40.4
	2011	53.66	93.02	37.31	54.63	7.67	1087	100	94.58	100	32.96	67.37

U- percent of urban, L- percent of literates, TW- percent of total workers, MW- percent of male workers, AL- percent of agricultural labourers, PD- population density, DW- percent having improved drinking water facility, E- percent having electricity, T- percent having toilet facility, D- percent having drainage facility, B- percent availing banking services.

**Composite Index of Development**

Ten developmental indicators taken from the reports of Census of India for the years 2001 and 2011 are used to measure the level of development in Kerala. The variables used are percent of literates, percent of total workers, percent of male workers, percent of agricultural labourers, population density, percent of population having improved drinking water facility, percent having electricity, percent having toilet facility, percent having drainage facility, percent availing banking services. The variables are presented in Table 8. Clear interstate variations can be seen from the table. Composite Index of Development (CID) is calculated separately for the districts during 2001 and 2011 by using the selected variables (Table 9).

Seven of the fourteen districts had an index value above 100 in 2001. It was the highest for Ernakulam (132) followed by Kannur (112) and the lowest for Wayanad (83). The fact that only the districts that had CID values above 100 in 2001 had CID values above 100 in 2011. Half the number of districts showed an increase in the composite index of development; whereas the other half showed a decrease in the values. The district Ernakulam showed the highest index value and Wayanad the lowest in 2011.

**Table 9:** Composite Index of Development (CID), 2001-2011

District	CID	
	2001	2011
Kasaragod	90.43	95.00
Kannur	112.34	106.43
Wayanad	83.01	84.05
Kozhikode	104.43	109.68
Malappuram	83.92	97.93
Palakkad	94.02	91.26
Thrissur	106.90	108.32
Ernakulam	132.12	112.14
Idukki	90.17	86.19
Kottayam	102.80	100.34
Alappuzha	111.75	106.85
Pathanamthitta	87.63	87.80
Kollam	91.60	98.61
Thiruvananthapuram	110.34	101.35

**Correlation Analysis**

Correlation analysis is also done by taking percent of urban population in the districts as the dependent variable and the development variables and the composite index of development as the independent variables (Table 10). The analysis is done for the Census years 2001 and 2011 and the results are compared.

The variable percent of agricultural labourers in the population of Kerala was highly negatively correlated to the percent of urban population in 2001 (-0.68). The correlation was very high in 2011. That is, the percent of non-agricultural labourers in the population of Kerala increased corresponding to an increase in the percent of urban

population. The variables population density and the percent of population having electricity were highly positively correlated to the percent of urban population in 2001 (correlation coefficient of 0.60 and 0.59 respectively). The correlation between population density and percent of urban was very high in 2011 (0.82) and two other variables, percent of population having electricity and percent of population having drainage facility were highly correlated to the percent of urban population in 2011. All other variables showed low correlation. But when all the variables together are considered, the composite index of development had very high positive correlation with the percent of urban population in 2001 and 2011 (0.89 in 2001 and 0.96 in 2011). As far as the state Kerala is considered, rural-urban gap is narrow in many respects. At the same time, the level of development and the level of urbanization are highly correlated.

**Table 10:** Correlation between percent urban and development variables

Independent Variables	Correlation Coefficient	
	2001	2011
Percent of literates	0.44	0.46
Percent of total workers	-0.24	-0.48
Percent of male workers	-0.12	-0.34
Percent of agricultural labourers	-0.68	-0.83
Population density	0.60	0.82
Percent having improved drinking water facility	0.25	-
Percent having electricity	0.59	0.65
Percent having toilet facility	0.47	-
Percent having drainage facility	0.34	0.51
Percent availing banking services	0.42	-0.12
Composite Index of Development	0.89	0.96
Dependent variable: Percent of Urban Population		

### Conclusion

Kerala has an urban share of nearly 48 percent in 2011 and has the highest growth rate of urban population during the last decade among the major states of India. The districts of Kerala also have a huge growth in their urban population and the highest growth rate was observed in Malappuram. The speed of urbanization has also increased sharply during the decade 2001-2011.

The main reason for urban growth in Kerala is the manifold increase in the number of census towns in Kerala during the decade 2001-2011. The tremendous increase in urban population in the districts of Kerala may pose serious health, environmental, social and other problems in the population. The level of development in Kerala is found to be highly positively correlated to the level of urbanization. The urban spread demands more investment in infrastructure development and hence the status of infrastructure in such growth centres should be improved to meet the increasing demand. Urban spread may result in the depletion of agricultural areas, an increase in transportation costs and energy consumption. The high density of population in urban areas has contributed to urban poverty also. This manifests in many forms, such as slums, unemployment, lack of social services and increasing violence and crime. Urban sanitation problems including drainage problems, disposal of solid waste and sewage water, lack of safe drinking water, housing problems, etc. are also among the invited problems of urbanization.

Urbanization and economic development have long been recognized as concomitant factors. Policies need to be enunciated to use urbanization as a positive factor to aid economic development. Proper development strategy should cater to the development needs of urban society ensuring modern comfort levels and standard of living while preserving natural, cultural and historical entity of the city.

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