CHAPTER V

SUMMARY AND CONCLUSIONS
Urbanization is a process wherein there has been an increase of urban population to total population of a state or country. This is normally expressed as $U/T \times 100$. Urbanization is understood as a stage and at the same time a pre-requisite of the process of human interaction.

The term urbanization is normally used to denote large concentration of the productive forces and social and informative activity reaching its apex in metropolises and emergence of individual urban settlements sparsely located in the vast nearly developed areas. These are often distinguished by the extremely varied living condition of the population.

Urbanization is a process of becoming urban, moving to cities, changing from agriculture to other economic activities common to cities and corresponding change of behavior patterns. It is also believed that
urbanisation is a continuous process which is not merely a concomitant of industrialisation but concomitant of economic growth and social change.

According to Clark, D (1976) urbanisation is a universal process which is manifested in the growth of population living in cities and especially big cities. Further this process is interlinked with scientific and technological process which changes the mode of life, different aspects of social relationships and even psychology of urban people.

Urbanisation is perceived as a continuous and complex process. This is continuous in the sense that it involves becoming urban moving to town, and cities, shifting from agricultural to non-agricultural activities common to urban centers and corresponding change in behavioural pattern. It is a complex process in the sense that it is related to the transformation of society including some drastic social, economic and geographical changes (Clyde, M.N. 1956). He also felt that urbanisation is a product of increasing economic specialization and advancing technology.

It may be stated that urbanisation is a continuous and complex process wherein there is a change in the economic activity from agricultural to non-agricultural pursuits, in societies which ultimately brings in changes in social and economic, and even in the behavior of the urban people.
Development generally denote any state of change, positive or negative. Conceptually, development is the state of change from a given situation of a region to become better within the given period of time. Development refers to a complicated process of economic, social, cultural and political change, that takes place in a community as it progress from a traditional to a modern state. Regions with their higher literate, urbanisation, industrialisation, communication, economic growth, political participation etc. are stated as models of development.

Development is seen as a multi-dimensional phenomenon, involving changes in structure and capacity as well as output. Development is perceived as one that brings reduction in poverty, unemployment and inequality. It is not possible to measure development as such but level or stage of development can be measured.

The concept of development may be taken to imply an overall improvement in the material and cultural well-being of the people in a region. This could be identified with the increase in the employment opportunities, availability of infrastructural facilities, amenities and services, proper distribution of resources, increased production, investment and consumption and so on (Rama Gowda, 1972).
There is a debate on whether urbanisation is a positive or negative factor in regional development or whether there exists any relationship between the two. The inferences draw from the contradicting views is that the proper size of a number of urban centers at optimum level of urbanisation measured in respect of the total development of a nation or region put an impact on socio-economic development. Further it is felt that urbanisation is not only an excellent indicator of economic development and social development but also a stimulus to such change.

Differences in the degree of development are attributed to the reflection of disparities in the degree of urbanisation and industrialisation among regions. The fact that the world's developed countries are highly urbanised and industrialized justify the fact that urbanisation and industrialisation constitute the idea of economic development.

Therefore this investigation has been made to study urbanisation in the Rayalaseema region, one of the three regions of Andhra Pradesh and to identify the levels of development in comparison to other regions in the state.
Locational Aspects of Rayalaseema Region:

Rayalaseema region comprising of out four districts namely, Anantapur, Chittoor, Cuddapah and Kurnool stretches between 76°65' and 79°55' E longitude and 12°03' N to 16°15' N latitude. This Region had a total population of 116,68,004 (1991) spread over an area of 69,045 Sq.Km. This region lies in the south-western part of the state of Andhra Pradesh.

The region has an undertaking terrain dotted with ridges and clusters of rocky hills that falls within the range of Eastern Ghats. The only prominent mountain in this region is the 'Nallamala' which extends in Kurnool and Cuddapah districts in the north-south direction. The elevation of this mountain is about 900 meters above mean sea level. The other prominent mountain ranges are Erramala and Velikonda in Kurnool district. Generally this region is a continuation of Mysore plateau from the south and Telangana plateau from the north and Eastern Ghats on the east. The general slope of Rayalaseema region is from north-west to south-east. The important rivers that drain this region are the Krishna, the Tungabhadra, the Pennar, the Hundri, the Papagni, the Chitravati, the Araniar, the Kushestali and the Swarnamuki. Except the Krishna river, all other rivers are non-perennial and rain-fed. Rayalaseema is endowed with a wide variety of mineral resources. They are asbestos, barytes, calcite, stealite and high
calcium limestone. Cuddapah and Kurnool formation contains minerals of high economic value and industrial importance.

Rayalaseema region experiences a semi-arid climate. In fact, it is the second driest part in India. Maximum temperature in summer touches 45°C while in winter it goes down to 15 to 30°C with an annual temperature range of 30°C. The relative humidity is always low except during the rainy season. The region receives maximum rainfall during south-west monsoon season. The rainfall in this region varies between 500 mm to 1000 mm. The average annual rainfall for this region is around 700 mm. Droughts and prolonged dry spells are not uncommon to this region.

Red soils are dominant in this region. The organic content in red soils is low. Even the water holding capacity of this soil is low. In north-western part of this region black soil is dominant. So without irrigation the crops cannot be cultivated successfully.

Since the rainfall is low and precarious the natural vegetation is also poor. The forests in this region are confined to the eastern and southern part. The forests of commercial value occurs in parts of Kurnool, Cuddapah and Chittoor districts. Anantapur is the district is the poorest one in the matter of timber. The area under forest in this region is far below the expected norm.
The total population of this region as per the 1991 census was 116,68,004 and this accounts for about 17.58 per cent of the total population of the state. Chittoor district has more population (32.5 lakhs), followed by Anantapur (31.79 lakhs), Kurnool and Cuddapah. In terms of area, Anantapur is the largest while Chittoor is the smallest district in the region. There has been a significant variation among the four districts in term of population density. For example, highest density is confined to Chittoor district (251 persons/Sq.Km). While the lowest density is observed in Cuddapah 147 persons/Sq.Km.

The growth of population in the Rayalaseema region has shown a marked variation over space and time. The total population of this region during 1901 was 34 lakhs and it touched 110 lakhs by 1991. Between 1901 and 1911 the region has registered a decrease of 30,000 in its total population. From 1921 onwards there was a continuous increase in the total population in the region. However, the increase was more significant after independence, especially between 1971 and 1981 and 1991. This could be attributed to the development that has taken place in the primary, secondary and tertiary sectors. Increased transportation, and increased literacy, increased awareness and utilization of health care facilities that have considerably brought down the death rate.

In this region the rural population is dominant since 1901 to 1991. The rural population account for about 90 per cent the total
population of this region during 1901. This has come down to 77 per cent by 1991. It is clear from this figure that it took almost a century to bring out an increase of 12 percent in the urban population. This may also be due to higher growth of population in rural areas over urban areas.

The overall literacy rate in this region as per the 1991 census was 38.0 per cent as against 29.9 per cent during 1981. Among the four districts in this region, Chittoor has registered the highest literacy of 43 per cent which above the state as well as the region.

Rayalaseema is industrially a backward region of the state. This backwardness is evident from the fact that this region accounts for only 10 per cent of the factory employment and chemical industries. Kurnool district ranks first in industrial sector among the four districts. Textile industry is common in all the districts of the region except Cuddapah. Metal products are the specific industries in Chittoor while chemical industries are specified in Cuddapah.

Transport network and communication are very important for the development of any sector of activity. There is an airport at Tirupathi. The Madras-Bombay broad gauge railway line is running from south east to north-west almost through the heart of the region. The second railway line is from Secunderabad- Bangalore, meter gauge, running from north-east to south-west which also cuts across the whole region.
There are two national highways persisting through this region one is from south to north connecting Bangalore with Hyderabad passing through Anantapur and Kurnool districts. The second one is from Madras to Bangalore covering only a short distance in Chittoor district. Of course, there are number of state highways and other district roads connecting different places in this region. Road transport is better developed in this region rather than rail transport.

The Pattern of Urbanisation in Rayalaseema Region

Urbanisation is a processing involving the multiplication of points of population concentration as well as increase in the size of individual urban concentration (Gibbs, J.B. 1966). The expansion of the size of urban centers depends on natural increase of population and migration of people from rural areas to urban areas or from smaller urban areas to big urban areas.

The migration of people from rural areas is due to push factors. Unemployment, non-availability of socio-economic facilities and services and lower level of income are the push factors that pushes out people to urban areas in search of employment and livelihood (Bhat. L.S. and Deshpande, C.D. 1976). Migration is an important aspects of progress of urbanisation. Industrialisation is an important factor that promotes migration. But the degree of association has greatly varied. Industrialisation and urbanisation have some hand in hand in some
places. In some places, industrialisation and urbanisation are both still very much in the process of development and one may eventually exceed the other. It is also possible to have industrialisation with a high degree of urban section.

Urbanisation with its manifestation of advancement on economic, social, cultural and political fronts in the very epitome of progress on the urban centers emergence as dominant settlement in an area in which they lie. In fact, urbanisation is an important concomitant of economic development and social change (Laxshman, T.C. 1982).

Scholars have made various attempts to measure urbanisation. it is generally expressed as the proportion of urban population to total population. This is the most widely used measure. However, Singh R.B.(1975) used percentage of urban population and total population of each district was taken as an index and the same was correlated with urban density and concentration of urban centers in a region to measure urbanisation. The same method was adopted by Indian Geographers like Alam, M (1976), Shafi, M. (1981). Singh, R.B. (1983) and Verma, S.S. (1989) to determine the level of urbanisation in different parts of India.

Even statistical methods like multivariate techniques such as principle component analysis, multiple regression etc., are being used. Berry, B.J.L. (1962) has used several variables such as percentage of population in cities, percentage of products manufactured, per capita
income and percentage of literates among the population. He ranked each country on the basis of these variables and each is broken down with the quarter. Each quartile position was then used to construct typology of the countries at different stages of urban development.

In order to get a comparative picture of urbanisation in Rayalaseema region, the urbanisation in India and Andhra Pradesh has been attempted. The proportion of urban population in India in 1901 was 10.84 per cent. But the next decade 1911 it decreased to 10.28 per cent. From then onwards it increased slowly by one per cent or two up to 1941. From then onwards there is a continuous but very slow increase was observed during 1971-81 where the increase was more than 3 per cent. The percentage of urban population eighty 1991 has touched 25.72 per cent. This clearly shows that the process of urbanisation in India was slow. It took eighty years to double its urban population. In the post-independence period there is an accelerated growth in urban population. This could be attributed to construction of large multi-purpose dams, industrialisation, increased transport facilities, increased medical facilities and reduction in death rates, increased literacy social change and increased mobility.

Andhra Pradesh, though the fifth biggest state in the country it had only 10 per cent of its population living in urban areas during 1901. By 1991, this has increased to 26.90 per cent. From 1901 to 1971, the urban population in the state was less than the average increase of urban population in India. During 1991, the urban population in
Andhra Pradesh has exceeded the country’s average by 1.8 per cent. However, the process of urbanisation in Andhra Pradesh contributed to be slow over the last nine decades. This may be due to the fact that importance was given to promote agriculture in this state, since it was considered as a granary of South India. This is because of the huge fertile deltas of Godavari and Krishna. The development of transport and communication facilities was made only in the last two decades. The industrialisation though initiated in the coastal districts (agro-based), actual fillip was given only after independence, especially in 1970’s. The literacy rate is low in the state when compared with the southern states.

Rayalaseema a well known drought-prone area of the state and the second driest region of the country had 9.6 per cent its population living in urban areas during 1901. This has decreased to 7.6 per cent in 1911 and this has increased slowly. Significant increase in the proportion of urban population in this region took place between 1971 and 1981, and 1981 and 1991. This region took seven decades to double its urban population (1901-1971). Here also, it is observed that urbanisation process was slow before independence period and it is accelerated from 1971 onwards. From 1901 to 1991 the proportion of urban population in Rayalaseema region was below than the country’s average urban population. The important reason for the slow pace of urbanisation may be due to the fact that rainfall in this region is low, droughts are frequent, though mineral wealth is there, it has not been
exploited till recently, no significant progress in the industrial front; low literacy, low development of road and rail transport and culturally this region is backward.

The actual total urban population of Rayalaseema during 1901 was 3,26,472. This has increased to 27,03,499 by 1991. This is almost nine fold increase in nine decades. It took nearly five decades in the first phase (1901-1991) to double itself. But subsequently (1951-71 and 1971-91) took only two decades to double it self. This shows that after independence the urban population increase is significant. This is significant because the rural population has also registered significant increase in the last four decades.

The analysis regarding the emergence of towns from 1901 to 1991, shows about their spatial variation over time. They were only 24 towns in Rayalaseema region during 1901. Among these 24 towns, 10 were in Anantapur district, three in Kurnool, six in Cuddapah and five in Chittoor. Kurnool and Adoni was the medium size towns and the rest were small form (less than 20,000 on population). Over the decades, the number towns found increase. The number of towns in this region has increased to 25 in 1911, 28 in 1921, 29 in 1931, 33 in 1941, 37 in 1951, 38 in 1961, 42 in 1971, 48 in 1981, and 57 in 1991. This clearly shows that the growth in the number of towns has been right from 1901 upto 1951. Then ordinary the increase in the number of town is significant (1961-1991). Kurnool district had only 3 towns in 1901 has increased to 12 by 1991. In the case of Cuddapah there was
significant increase, because in 1901 there were only 6 towns in 1901 has gone up to 20 in 1991. The phenomenal increase is observed between 1981 and 1991. Chittoor on the other hand had only 5 towns and remained stagnant till 1941. Then between 1941 and 1951 there was almost 100 per cent increase by 1951. There after the increase was almost insignificant. The most interesting feature is found in the case of Anantapur district. Because Anantapur had 10 towns, during 1901 and this position has remained stagnant over 9 decades. This clearly shows that the second driest district in the country has no potential in terms of agriculture and industry. Since there is an absence of purchasing power the existing towns in the district were able to cater to the demands from rural and urban areas. Further the district has only urban growth and no urbanisation in terms of the increase in the number of towns.

The total urban population in the Rayalaseema region during 1901 was only 3,26,472 confined to class III, IV, V and VI towns. Among them 14.8 per cent lived in Class III towns while the rest of 85.2% lived in small towns. The same trend continued up to 1951 but the proportion of people who lived in Class III towns has increased from 14.8 per cent in 1901 to 14.75 per cent in 1911, 15.55 per cent in 1921, 31.9 per cent in 1931 and 49.5 per cent in 1941. During the pre-independence period, of the Class IV towns show a considerable decrease in the share of total urban
population. For example in 1901, about 57 per cent of total urban population of Rayalaseema lived in Class IV towns and this is has come down to 28.9 per cent by 1941. During this period (1901-1941) it is observed that Class III towns have grown at the cost of small towns.

The post independent period has registered a significant progress in the total urban population of Rayalaseema. This is evident from the fact that during 1951 the total urban population was 6,73,364 and this has increased to 27 lakhs by 1991, this is-almost four-fold increase in 4 decades whereas the increase during per pre-independence period (1901-1951) was only a two fold increase. This could be attributed to the progress made in the industrial sector, re-organization of administrative head-quarters at various levels, emergence of towns at nodal centers along major roads as market centers and improved transport network.

Only during 1951 Kurnool and Adoni have estimated class II status and accounted for 17 per cent of total urban population. This is followed by Class III towns which contributed to 41.52 per cent of this region's total urban population. The Class IV towns accounted for 28.4 per cent. The first city, Kurnool came into existence in 1961 accounting for one-tenth of the region's urban population. During this period Class II, III and IV towns were also equally important. The Class IV towns almost disappeared in this region by now. Since 1961 the cities had increased in number and they have accounted for about 53.3 percent of the total urban population of the region. This shows that the cities have
grown faster than other class of towns and the insignificance of Class VI towns. The same trend is observed in the case of India too.

The urban population of the districts of Rayalaseema show variation over space and through time. The attempt has been made to analyse this feature shows that the actual urban population of Chittoor, Cuddapah, Anantapur and Kurnool during 1901 was 58,807; 94,256; 1,33,411 and 92,567 respectively.

The study of the Chronological evolution of towns in Rayalaseema shows certain interesting aspects. During 1901 there were 24 towns in this region and an addition of one or two towns were added every decade till 1941. Then again between 1951 and 1961 there was an addition one town. But 1961 there was a significant increase in the evolution of towns especially between 1971-81 and 1981-91. Most of the old towns are found in Anantapur district (10) followed by Cuddapah (6) and Chittoor. Kurnool over nine decades has added 9 towns while in Cuddapah it is 14 and in Chittoor 8. Anantapur district had one new town in 1921 and after seven decades it has added one more small town (1000 population). The evolution of towns in Kurnool from 1901 to 1991 was very slow and gradual. In Cuddapah upto 1971 it was slow and phenomenal between 1981 and 1991 because there was an addition of 7 new towns. It may be concluded that this region has potential, still this was not exploited till recent decades. Therefore, there is urban growth rather than urbanisation. Relatively most of the
new towns are found in Cuddapah while majority of the old towns are confined to Anantapur district. The other two districts come in between the two.

The towns and cities of Rayalaseema show varying amount of growth over nine decades. The overall growth rates from 1901 to 1991 were computed. The growth rates vary from less than 250 per cent to more than 1000 per cent. Very high growth rates observed in the case of Anantapur (2002 per cent). Renigunta (3956 per cent), Gunțakal (1380 per cent), Chittor (1233 per cent) and Tirupathi (1126 per cent). High growth rate in Anantapur may be due to the fact that it is the district head quarters of Anantapur district, it is a well educational center for decades. In the case of Renigunta a very small town to begin with has registered the highest growth rate in this region. This is because of its location near to Tirupathi, a Universally known religious center, an educational center and in the recent years it is becoming industrially important. Renigunta, being a railway junction in the South Central Railway chittoor is located in the intensively cultivated area with well irrigation. This acts not only as the district head quarters of the district, it is also an important market center for agricultural surplus. It may be out of place to say that the yield levels of crops are very high. Therefore it has registered very high growth rate.

About seven towns in Rayalaseema region registered a high growth rate (750-1000 per cent). They are Kurnāol, Nandikotkur, Dhone, Nandyal, Proddatur, Puttur and Banaganapalli. Among these
towns, Kurnool and Nandyal are located in the Kurnool- Cuddapah canal irrigated tract. Kurnool acted as former state capital before Hyderabad is made as the capital. This is an important market center and educational center. A few large scale industries known as paper mill, chemical industries are located near this town. This is well connected with all district head quarter and state capital. Dhone's growth could be attributed to its nodal location and its importance to agricultural marketing. Proddatur is a well known marketing center for textiles and gold as well as silver apart from its importance as educational center. Puttur is the taluk head quarters located on the high from Madras to Tirupathi. This also acts an important market center for the surrounding areas.

Moderate growth is observed from eleven towns. Dharmavaram, Hindupur, Kadiri and Tadipatri, are acting as respective taluk head quarters. Hindupur is known as an important market center. But recently the industrial estate is located just out side the city might be responsible for its growth. Further, this located on National High Way No.7 and is nearer to Bangalore, an important metropolis. Cuddapah, Rayachoti are in Cuddapah district. Madanapalli, Palamaneru, Punganur and Srikalahasti are in Chittoor district. They too act as respective taluk head quarters, as well as important market centers.

Low growth rates are noticed from Adoni, Banaganapalli, Yemmiganur (Kurnool district), Gooty, Kalyandurg, Penukonda,
Uravakonda (Anantapur district), Pulivendula (Cuddapah district), Kuppam, Nagari, Pakala and Tirumala (Chittoor district). Among the 13 towns, except Tirumala others have registered low growth. In the case of towns in Anantapur district they are taluk headquarters of respective taluks and they are located in the dry rainfed areas dominated by groundnut or millets. Yemmiganur is a medium town right from the beginning. It has grown steadily over the decades. The towns of Chittoor district are centrally located villages, due to main roads and their royal location they have grown recently. Hence the growth rates are low. There are about eight towns that have registered very low growth rate (less than 250 per cent). Among this category towns except Rajampet the other towns have came hence into existence in the recent decades.

Therefore their growth rates are very low. The object of this study is to analyse the variation in the decadal growth of towns through over space and through time. It is found that the towns in the Rayalaseema region have shown different type of growth rate, so they have been grouped into three categories according to their decadal growth. They are 1. Continuous positive growth rate of towns. 2. Fluctuating growth rate of towns 3. Positive and negative growth rate of towns.

It is observed that Penukonda and Tirupathi (NMA) are recognised under the category of continuous positive growth rate of towns. The continuous positive growth in Penukonda is due to the fact
that taluk head quarters of the taluk whereas Tirupathi (NMA) is located nearer to Tirupathi, a notable pilgrims center of the country. Further there are about 20 towns in Rayalaseema region show fluctuating growth rates. They are Kurnool, Anantapur, Cuddapah, Proddatur, Guntakal, Rayachoti, Pakala, Chittoor, Tirupathi, Palamaneru, Puttur, Kuppam, Dhone, Bugganapalli, nandyal, Atmakur, Nandikotkur, Pulivendula, Nagari and Renigunta. These towns in general shown a steep increase during 1951-61 and 1971-81. In the same it is observed that a decreased growth rate during 1911-21 and 1951-61. This might be due to outbreak of world war and epidemic disease in cities during 1911-21 and changes in the census definition of towns during 1961. It is also observed that most of the towns in this category recovered declining growth rate during 1981-1991 except Renigunta, Nagari and Dhone. The fact for this growth in Renigunta has growing importance of a railway junction in South Central railway and Dhone recognised as marketing center in the irrigated tract whereas Nagari town is a taluk head quarters on the highway from Arkonam and Tirupathi.

In the last category there are 19 towns such as Badvel, Srisailam, Punganur, Kamalapuram, Srikalahasti, Banaganapalli, Dharmavaram, Madanapalli, Yemmiganur, Kadiri, Hindupur, Jammalamadugu, Rayadurg, Adoni, Uravakonda, Gooty, Tadipatri, Kalyandurg and Rajampet identified under both positive and negative growth during 1901-1991. Among this category of towns about 8 are in
Anantapur district. The reason is that most of these towns are the taluk headquarters. It is observed that majority of the towns, show a declining growth rate in this group during 1981-91.

The following observations are made from the analysis:

- During pre-independence period there was relatively slow growth rate.
- Accelerated positive and significant growth rates are observed during the post independence period.
- There is a declining or even negative growth rates have been observed during 1911-21. This is due to out break of world war and epidemic diseases in the country.
- In the same manner negative trend during 1931-41 due to commercial results and World War II.
- The accelerated growth is found in 1961-71 and development of infrastructural facilities.

A comparative study of urbanisation in rayalaseema with that of Coastal Andhra and Telangana regions have been made right from 1901-1991. The striking feature is that Coastal Andhra region in the pre-independence period accounted for more number of towns and constituted to nearly 50 per cent of the total urban population. In the
post independence period (1951 onwards) their share has slowly declined and finally reached to 40.9 per cent. Since Coastal Andhra is known for its deltas, well developed agriculture, higher literacy, well developed agro-based and other industries and well developed transport network and communication has promoted better urbanisation in this region.

Rayalaseema region though accounted for almost fourth in the number of towns and one-fourth of the total urban population of the state in 1901 has slowly lost its importance decade after decade and by 1991 this has come down to 15.2 per cent. This clearly shows that in the driest region of the state and the country it has no potential for agricultural development without irrigation. The rainfall is low and precarious, droughts are not uncommon to this region. Though there are mineral potentials not much efforts were made to develop mineral based industries in this region. So the process of urbanisation in this region is low.

Telangana region during 1901 had out 26 towns and accounted for 24.7 per cent less than the other two regions. The process of urbanisation was slow upto 1951. But then onwards it has been accelerated on by 1991 and it has gone upto first place by accounting 43.9 per cent of the states urban population. In terms of the number of towns it has increased for 26 in 1901 to 104 in 1991.
This phenomenal increase in the Telangana region could be attributed to high concentration of all types of industries in Hyderabad, Rangareddy, Medak and Nizamabad districts. The other districts are also large in area but they are dry areas for cultivation of millets and oil seeds. Since the state capital is located in this region more emphasis was given to develop this region industrially by planners and decision makers. Therefore, this region has gained what Rayalaseema and coastal Andhra have lost over the decades. Unless concerted efforts are made Rayalaseema region will perpetually be a backward.

In order to understand the characteristics of towns and cities about 21 variables relating to population characteristics were considered for analysis. These variables have been subjected to inter-correlation and 21x21 matrix was obtained. This has shown the direction and magnitude of relationship among 21 variables in 42 towns of Rayalaseema region. About 15 towns were not included in the above analysis due to non-availability of data since data was available only for one or two decades. The correlation matrix (21x21) was subjected to factor analysis and that has resulted into seven components. These seven components put together have accounted for a total variance of 77.6 per cent. The first component with an eigen value of 4.868 accounted for a total variance of 23.2 percent. The eigen values of the II, III, IV, V, VI and VII. Components are 3.449, 2.214, 2.055, 1.0356, 1.300 and 1.050 respectively. They also explain a variance
of 16.4, 10.5, 9.8, 6.5, 6.2 and 5 per cent respectively. The eigen values and the variance explained by them decreases with the increasing number of components. The communalities \( h^2 \) of the most of the variables on seven components account for more than 70 per cent. Hence, it is understood that these are the appropriate and uni-dimension variables.

The seven components have successfully captured the dimensions underlying 21 variables in 42 towns of Rayalaseema region. This was subjected varimax rotation to maximise the variables loading on the components. This has finally given 42 x 7 factor loading matrix. Since the first five components have explained a total variance of 66.4 per cent, they were alone considered for analysis of the factors structure.

The first component is the most important dimension regarding the characteristics of towns and cities. In this component tertiary workers proportion has a moderate positive loading on high negative loading is and a proportion of primary workers-1991. It may be inferred that the tertiary activities are dominant in towns and cities of Rayalaseema while the primary workers are insignificant. This may be called as "Tertiary Activity Component".

The second component is the second important dimension. The eigen value of the component is 3.445 and explain a variance of 16.4 per cent. Scheduled Caste Population show a high loading along
with decadal growth of population 1971-81 and 1981-1991. It may be concluded that during the last two decades the growth of towns and cities are significant and migration of socially and economically backward people is very significant over the last three decades. This may be called as "Population Growth with Dominance of Scheduled Caste Population".

In component III variables such as workers and total workers show high loading. It may be concluded that the work force especially marginal workers and industrial workers are dominant in cities and towns. This component can be named as "Work Force Component with Dominance of Industrial and Marginal Workers".

Component IV has an eigen value of 2.055 and explain a variance of 9.8 per cent. In this component moderate to high loading are associated with female literacy, literacy and sex ratio. It may be inferred that there is an increasing literates in towns and cities especially female literates. The decadal growth rate during 1981-1991 is also having moderate loading. This component could be labeled as "Literacy Component".

The fifth dimension is revealed by component V. The eigen value of this component is 1.356 and explain a variance of 6.5 per cent. The proportion of Scheduled Tribe population during 1981 and 1971 show high loading in this components. This suggests that socially backward Scheduled Tribes and population migration have become
significant in the recent time. This component can therefore be called as "Socially Backward People Component".

**Levels of Development in Rayalaseema Region**

The concept of development may be taken to imply an overall improvement in the material and cultural well-being of the people in a region. The development of a region can be identified with the increase in the employment opportunities, availability of infrastructural facilities, amenities and services, proper distribution of resources, increased production, investment and consumption and so on (Verma, S.S.1980).

Various indicators relating to socio-economic characteristics were employed to identify levels of development, with the help of multivariate statistics such as factor analysis and cluster analysis.

In India, it is believed that the dimension of indicators determining regional disparities are population, education, health, economic characteristics, industry, agriculture and transport.

In the present investigation about 40 variables in 22 districts of Andhra Pradesh have been considered to identify the levels of development. Hyderabad district was not included in the analysis with the assumption that it is a highly developed district in Andhra Pradesh state. In order to identify the levels of development, 40 variables...
pertaining to population education, health, agriculture, industry, power, transport and communication and finance and recreation are chosen.

The forty variables were subjected to inter-correlation and a 40x40 matrix was obtained. This matrix has brought out the inter relationships among the forty variables in 22 districts. The inter correlation matrix was subjected to principle component analysis. This analysis identified ten dimensions under laying forty variables.

The first component has an eigen value of 9.59 and explained a variance of 24 per cent. The second component has an eigen value of 5.07 and explained a total variance of 12.7 per cent. As the component increases, the eigen value and the percentage variance explained by them decreases. Altogether the ten components account for a total variance of 88.6 per cent. This strengthens the fact that the indicators chosen are appropriate. Further the communalities of the most of the variables account for more than 70 per cent of the variance on ten components. This further confirms that not only the variables chosen are appropriate, they are unidimensional and pure. Since six components accounted for a total variance of 73.2 per cent, only those components are considered to be the important dimensions and on which the interpretation has been made.

The first component is the most important component and in this component literacy, primary workers and electrified villages and
towns show high loading. It may be inferred that there is an increasing literacy in the state. Agriculture is the most dominant economic activity in most of the districts of the state. This is supported by the fact that multiple cropped area to total cultivated has a high loading. The railway density also shows a high loading. This component may be called "Primary Activity Component".

In the second dimension high loadings are associated with decadal growth of population (1981-91), urban population growth (1981-91) and number of colleges and universities/lakhs population. It may be inferred that during the last decade there is a significant increase in the urban population as well as total population along with the increase in colleges in the state. Hence, this component can be lasted as "Population Growth and Education Component".

The component III with an eigen value of 4.7 accounts for a total variance of 11.7 per cent. Variables such as number of doctors for given population show high loading on this component. Even domestic consumption of electricity also shows moderate loading on this component. This component can be called as the "Health Care Component". Variables such as density workers in small scale industries and medium and large scale industries show high loading on component IV. This is the fourth dimension underlying variables. This component is called as "Industrial Employment".
Multiple cropped area and proportion of Scheduled Caste and Scheduled Tribe variables show high loading on component V. There is a strong association between agricultural operations and socially backward population. Hence this component is named as "Agricultural Component" with dominance of SC and ST population.

Component VI is of course less important than other earlier components. However, this is also one of the dimension underlying 40 developmental variables. This component has an eigen value of 2.55 and explain a total variance of 6.4 per cent. High loading in this component is associated with number of schools and student enrollment. Therefore, this component is labeled as "Lower Education Component".

The factor analysis has successfully captured the major dimensions underlying 40 developmental variables in 22 districts. Since the main objective was to identify the levels of development. This factor leading matrix (40x7) was further subjected to factor score and on the basis of factor score cluster analysis was computed by the computer to group the districts according to their level of development. The major level of development has been identified on the basis of the linkage tree/dendrogram drawn by the computer. They are high, moderate and low level of development.
Very high level of development is found in Hyderabad and Rangareddy districts of Telangana and Visakhapatnam district of Coastal Andhra. Very high level development in Hyderabad can be attributed to the locating of a number of large and small scale industries located in the district. Well developed infrastructural facilities available in the state capital, smaller area (217 Sq.Km), location of various state and Central Government Organisations, well developed road, rail and air-transportation and greater market. Since, space was not available in Hyderabad district and the availability of infrastructural facilities in the near by Rangareddy district, it has attracted a number of industries. This is mainly due to its nearness to Hyderabad. In the case of Visakhapatnam the development might be due to location of a number of large scale industries such as iron and steel, ship-building, metal industries apart from the fact that it is a major port on the East Coast. It's hinterland has greater mineral potential. Above all it is well connected with all parts of the country by road, rail and air.

High level development is found in East Godavari and Guntur of Coastal Andhra, Chittoor district of Rayalaseema and Nizamabad of Telangana. The high level development in East Godavari and Guntur could be attributed to the well developed Agriculture in the fertile deltas, location of a large number of agro based industries, well developed transport network, high literacy and higher level of culture. High level development in Chittoor district of Rayalaseema might be due to well developed intensive irrigation, and intensive of cultivation
development agro-based industries based on the cultivation of sugarcane and oil seeds, and well developed transport. Further Tirupathi a well known religious center is located in the district attracts people from far and wide through out the year. The Sri Venkateswara University is located in Tirupathi is having an Arts, Science and Professional (Medical, Engineering, Veterinary, Agriculture) Colleges and it is an important center of higher harming. In addition to Sri Venkateswara University. Sanskrit and Mahila Viswa Vidyalam are also located in Tirupathi had a tremendous effect on this region. The prosperous agriculture under pochasnpadu irrigation on project and related development of agro-based industries and forest based industries made the Nizamabad district put under high level development category.

Moderate level of development is found in about 8 districts of Andhra Pradesh. Among them Krishna, West Godavari, Vijayanagaram, Nellore, Prakasam and Srikakulam are in Coastal Andhra region. Kurnool is in Rayalaseema region while Warangal is in Telangana region. In Krishna and west Godavari districts agro based industries are well developed apart from the high development of agriculture in the deltas. In Vizianagaram, and Srikakulam gem stones, clay are available in large quantities. Mineral based industries and other industries are moderately developed. In terms of agriculture paddy commercial crops and oilseeds are dominant crops. Small scale industries are also well developed here. In Prakasam district the development might be due to
moderately developed agriculture and well developed agro based and mineral based industries. Nellore district has large quantities of Mica, Forest based industries are relatively developed while electric and electronic industries are well developed. In general the Coastal districts have relatively well developed in agriculture, aquaculture and also endowed with better transportation facilities. Kurnool district of Rayalaseema region shows moderate level of development. This is because of well developed agriculture due to K.C. Canal irrigation system and extraction of minerals such as Barytes, Limestone base metals agrobased, mineral, chemical and engineering and other industries located in the district has influenced the development. Iron ore, and coal are being mined in Warangal district. Agro - based, forest - based and chemical -based industries are moderately developed which inturn influenced the development in the district.

Cuddapah, Anantapur, Medak, Adilabad, Khammam,Nalgonda, Mahaboobnagar and Karimnagar show low level of development. Among these, Anantapur and Cuddapah districts are in Rayalaseema region and the rest are in Telangana region. Low level of development in Cuddapah and Anantapur may be due to low and precarious rainfall, droughts and low development of industries, especially, small scale industries, and relatively low literacy. Even though there is mineral wealth it has not been exploited to a expected level. There is a scope for development of industries on the basis of oil seeds (ground nut) in
Anantapur. But it was not given the required initiative and incentive by the planners and decision makers over the last decades for the development this large district in the state.

Most of the districts of Telangana are found with low level of development because of the lack of industrial development, low rainfall, predominance of tribal population, low literacy, low agricultural productivity. In the Telangana region, except Hyderabad, Rangareddy and Nizamabad all other district show low level of development.

Comparatively with the other districts of Coastal Andhra. Srikakulam and Vijayanagaram districts, are formed with the low levels of development which may be due to the presence of forests, tribal population and low level of agricultural and industrial development.

On the bases of the analysis of the levels of development in different districts of the state the following conclusions are made with special reference to Rayalaseema region.

- Among the four districts of Rayalaseema region, the only one district, Chittoor is well developed.
- Kurnool is the only district that show moderate level of development.
- Anantapur and Cuddapah are less developed districts.
• Even though the plenty of land and mineral resources are available in Anantapur and cuddapah districts, no concerted efforts have been made in the last four decades to develop industries as well as agriculture on sustainable levels with the available resource base.

• This could not only be attributed to physical, social and cultural factors, it is also mainly due to political neglect of this region which is mainly based on feudalistic attitudes.

• Chittoor district is the best example, where, even though the urban population is low, still, due to efforts of the people innovativeness has resulted in higher yield levels in crops comparable to the fertile deltaic districts of Coastal Andhra.

When the level of urbanisation and level of development are compared it is found that in more than 60 per cent of the districts there is a positive relationship between the districts having high proportion of urban population and high development and the districts with low proportion of urban population and low level of development. But only one district, Chittoor is a distinctive exception to this fact. Here the proportion of urban population is low (19.8 per cent) which is 7 per cent less than state average still it has registered a high level
of development in the entire Andhra Pradesh State. This could be mainly due to intensive agriculture, especially cultivation of paddy, sugarcane and groundnut under irrigation, producing very high yield levels, well organised dairy co-operatives, higher literacy and recent development in industrial sector. In the earlier studies, scholars have observed that sometimes, even the urbanisation is low, there could be higher development. An extensive in-depth study if done in Chittoor district it will putforth the important factors underlying this development and that could be a model to other districts of Andhra Pradesh.

CONCLUSION

The spatial unevenness in resource utilisation and the resultant economic structure are determined by the physical and socio-economic variations inherent in both rural and urban landscapes of Rayalaseema region. The pattern of urbanisation and the levels of development are well highlighted the organisation of man and his economic activities in this region. It is ironical to state that the Rayalaseema region is the most neglected part of Andhra Pradesh State in terms of development either before Independence or after Independence. Even after eight Five year plans, the Rayalaseema region is exposed neither strong in agriculture nor in manufacturing. It is clear that without sound and strong economically based hinterland, any urban centre can not be flourished well with wealthy and healthy
urban atmosphere. In view of both social and economic backwardness of this region, the process of urbanisation as well as the level of development is rather very poor. Whatever the urbanisation is made it is almost based upon the tertiary economic activity in many of the urban settlements of Rayalaseema region. It is paradoxical enough to state that no single urban center is developed as an industrial town/city at significant level. It indicates that apart from the primary economic activity, the secondary economic activity is totally neglected and paralysed. It is of the opinion that tertiary economic activity alone can not bring such a radical change in the process of urbanization and the level of regional development. Tertiary services are essential both in rural and urban areas for the interaction and functional development of primary and secondary economic activities. But this has not been carried out and inter-linked with the integrated economic development of the region. It is high time to bring a balanced activities for the integrated development of this region.

The Rayalaseema region has vast land and soil resources and plenty of mineral base. But the problem is ineffective and under utilisation of these resources. The frequent occurrences of drought, prolonged dry spells and failure of crops have had a devastating effect on agricultural economy of the region. Since the region has vast land resource base, much priority is to be given to strong then the primary sector. To strengthen the primary sector, concerted efforts are to be made to develop irrigation. By conjunctive utilisation of both surface
and sub-surface water resources. The present ongoing irrigation projects namely, Telugu Ganga and Handri-Neva etc. are to be completed on priority grounds. This will definitely bring considerable progress in agricultural production which in turn helps healthy and modernised urbanisation with high standard of living.

Industrilisation is an index of urbanisation. But this statement is far relevant in the process of urbanisation of Rayalaseema region. There is a good scope for the development of mineral-based industries in this region. But this is totally neglected. In this regard the Government has to take concerted efforts to identify the growth centers and to establish industries in this backward region. The enterprising entrepreneurs are to be encouraged to establish industries in the backward areas by providing attractive concessions. In addition some legal measures are also to be taken to impose restrictions in starting new industrial establishments in the already developed industrial areas. Unless the manufacturing sector is developed in this region, the present process of urbanisation and urban development in no way helpful for the development of the region.

The precarious nature of agriculture in the rural areas have been actively forcing upon rural-urban migration in the region. This in turn has been creating mush-room growth of slums, in all the urban centers and intimately creating number of urban problems and polluting the urban environment. At this junction, migration of people from rural to urban areas should be minimised by bringing down the
disparities in amenities and services and by creating more job opportunities in the rural areas. The rural literacy is to be improved at a greater scope in order to bring scientific and technological awareness about developmental aspects and also to bring change in the social outlook.

The Rayalaseema region, the most neglected and the backward part of Andhra Pradesh now calls for integrated area development planning. In this direction the development is to be made in all the frontiers - agriculture, industry, education, transport and communication, health, power and recreation. Such a multi-dimensional integrated effort certainly play a catalytic role in the process of urbanisation which in turn promotes regional development and arrest social unrest in this region.