CHAPTER 5

RESULTS AND DISCUSSION

In this chapter results generated by Principal Component Method and Taxonomic Method are discussed at the sectoral levels for all the three sub regions i.e. Coastal Andhra, Rayalseema, Telengana and for the Total Andhra Pradesh for all the four benchmark years. Apart from that the aggregate composite indices has been formulated and analyzed using Principal Component, Taxonomic and Simple Averaging methods for the districts in the three sub regions separately and at the aggregate state levels are also analyzed.

5.1 PRINCIPAL COMPONENT METHOD:

5.1.1 Principal Component Analysis for 1961

5.1.1.1 Coastal Andhra Pradesh 1961:

In 1961 for Coastal Andhra there were 7 districts for which the sectoral analysis is as follows:

Agricultural Sector:

In this sector 6 components were retained. The analysis of the first component revealed that irrigation extent, Tractors per 100 hectares and Gross value of agricultural output per cultivator were the dominant variables. Emphasizing the fact that areas having better irrigation extent were having mechanization of farming to a certain extent and ultimately the gross value for their produce was also high. The second component recorded high positive and negative loadings on the cropping intensity and the ratio of iron plough to wooden plough respectively. This highlights the fact that although in certain districts gross sown area was high but still the traditional implements were being used there. Components three and four depicted the choice between irrigation by oil and electric pumpsets and the irrigation extent respectively. The rest of the two components were in a way residual and were retained only to maintain the statistical consistency. These four components explained around 94 % of the total variance. West Godavari (Table 5.1) was the leading district followed by East Godavari and Krishna. Rest of the districts were having negative scores.
**Industrial Sector:**

Here also six components were retained. In the first component industries per 100 sq km, industries per lakh population and percentage of industrial workers to total working population were found to be the dominant variables. This depicted the concentration of the industries and the industrial workers in the districts. The second component highlighted the importance of the availability of productive capital w.r.t per unit as well as per worker in the districts. In the third component value added per worker was found to be the dominant variable. These three components were explaining about 89% of the total variance together. And rest of the three components were again residuals. The composite score for the districts revealed that here also the districts like East Godavari, West Godavari were ahead of the rest of the districts. And Guntur also was having a positive index in this sector. And rest of the districts were having negative scores (Table 5.1).

**Banking Sector:**

In this sector 5 components were retained. In the first component, population served per bank with a negative sign, banks per 100 sq. kms and total credit per capita with positive signs were having the dominant component loadings. The correlation between these three variables also depicted the same emphasizing the fact that during this period the number of banks in a district were less and as a result the population served per bank was very high. And hence there exists a negative correlation between population served per bank and banks per 100 sq. kms and total credit per capita. In the second component total deposits per capita with a negative sign and credit deposit ratio with a positive sign were the dominant variables. These two components were together explaining around 95% of the total variance. For this sector West Godavari, Krishna and Guntur were having positive scores and the rest of the districts showed negative scores depicting under development in this sector for those districts (Table 5.1).

**Cooperative Sector:**

Here again six components were retained. In the first component percentage of membership of total societies to total population, percentage of membership of agricultural societies to total population and the loans per agricultural members were the dominant variables. This component reflects the involvement of the people in the cooperative movement across different districts. In the second component total cooperative societies per 100 sq. kms, Population served per cooperative society and agricultural societies per 100 sq. kms were the dominant variables. This depicted the spread of the cooperative movement in different districts. Here also the first two components were explaining about 89% of the total variance. And the rest of the four components were the residuals. Here four out of the seven districts were having positive scores.
reflecting a reasonable level of development in the cooperative sector in Coastal Andhra. West Godavari was the most developed district and Srikakulam was the least developed one (Table 5.1).

**Power Sector:**
Here four components were retained. In the first component power consumption per sq. km, per capita power consumption and percentage of electricity used for domestic purpose were the dominant variables. This component reflected the consumption pattern of electricity. The first two variables were having a negative sign implying that although electricity was being used but it had a limited use for domestic purpose because the correlation coefficient among the three variables was as follows:

(power consumption/s km & per capita power consumption): 0.98
(power consumption/s km & % used for domestic purpose): -0.98
(per capita power consumption & % used for domestic purpose): -0.95

In the second component percentage of villages electrified was the dominant variable with a very high negative loading. The two components together were explaining around 99 % of the total variance. For this sector Srikakulam, East Godavari, West Godavari and Guntur were having positive scores. Remaining ones were having negative scores (Table 5.1).

**Education Sector:**
In this sector four components were retained. For the first component percentage of total literates to total population, percentage of female literacy to total female population and percentage of male literacy to total population were the dominant variables. This depicted overall general literacy component for the districts. In the second component number of teachers at primary level per 1000 students was found to be the dominant variable. Emphasizing the importance of the primary education in the overall developmental process. In the third component Number of schools per 100 sq. kms and number of teachers at secondary level per 100 students were found to be the dominant variables. These three components together explained around 99 percent of the total variance. In this sector West Godavari, Krishna and Guntur were having positive scores where as rest of the four districts were below regional average (Table 5.1).

**Health Sector:**
In this sector total of four components were explaining the total variance. In the first component hospital beds per lakh population and doctors were lakh population were the dominant variables.
depicting a general index for the availability of the required infrastructure in this sector. In the second component population served per hospital was having the dominant negative loading. In the third component hospitals per 100 sq. kms was the dominant variable. These three components together explained 97% of the total variance. In this sector only two districts i.e., Vishkapatnam and Guntur were fairly developed and the remaining five districts were underdeveloped (Table 5.1).

Transport and Communication:
Here three components were retained. The first component was primarily dominated by Roads per 100 sq. kms. In the second component Post and telegraph offices per 100 sq. kms was the dominant variable. These two components together explained 95% of the total variance. In this sector West Godavari was the leading district followed by East Godavari, Krishna and Guntur (Table 5.1).

Urbanization:
In this sector also 3 components were retained. Although the first itself comprised all the three variables i.e. percentage of urban population to total population, average size of a town and the concentration of urban population per sq. km. This component was explaining 86% of the total variance. Krishna was the leading district in terms of urbanization. Except Srikakulam and Nellore rest of the districts were having positive scores (Table 5.1).

Aggregate Composite Index:
In order to arrive at an aggregate composite index of development for Coastal Andhra principal component method was again applied on the nine sectors composite scores. In total six components were retained. The first three components were explaining around 91 percent of the total variance. In the first component industrial, banking, education, transport & communication and urbanization were the dominant sectors. This component emphasized on the importance of secondary and tertiary sectors for the development. In the second component health with a negative loading was the dominant sector. In the third component cooperative with a negative loading was the dominant sector. The districts having the highest scores for the first component were lagging behind w.r.t the second and the third component. This figures out the dichotomy that although the districts were progressing but health facilities were not upto the required levels. Similarly in the districts were agriculture was a dominant sector cooperative movement was building up. Here also the four districts namely East Godavari, West Godavari, Krishna and Guntur were way ahead from rest of the districts. This pattern was already observed during the
sector wise analysis where again these districts were leading in the sectoral developments also. One interesting point which emerges is that, these four districts are lying in river basins of Godavari and Krishna. And these where under Madras Presidency during the British rule in India. These districts were having well developed canal irrigation as well as few industries prior to independence (Table 5.1).

| Table 5.1 : Aggregate and Sectoral Indices using PCA for Coastal Andhra Pradesh 1961 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                  | AGRI | INDUS | BANK | COOP | ELECT | EDUC | HEALTH | TRANS | URBAN | AGG INDEX |
| SRI               | -0.4535 | -0.6470 | -0.4555 | -0.7172 | 0.8305 | -0.6911 | -0.8140 | -0.0746 | -1.1963 | -0.0753 |
| VISHKA            | -0.2672 | -0.2487 | -0.5203 | 0.5868 | -0.9177 | -0.7991 | 1.2271 | -0.6469 | 0.1506 | -0.6246 |
| E GOD             | 0.4766 | 0.0087 | -0.1254 | 0.3537 | 0.1966 | -0.0325 | -0.1111 | 0.4689 | 0.4903 | 0.2406 |
| W GOD             | 1.0597 | 0.6114 | 0.8139 | 0.8665 | 0.1014 | 0.8861 | -0.2539 | 0.9821 | 0.1110 | 0.8102 |
| KRISH             | 0.1448 | 0.3035 | 1.2594 | 0.0983 | -1.2247 | 0.7259 | -0.0286 | 0.4291 | 1.1572 | 0.2983 |
| GUNT              | -0.5166 | 0.7049 | 0.0342 | -0.7029 | 0.4421 | 0.3915 | 0.2344 | 0.0285 | 0.4395 | -0.0793 |
| NELL              | -0.4438 | -0.7329 | -1.0064 | -0.4852 | 0.5820 | -0.4808 | -0.2538 | -1.1871 | -1.1621 | -0.5700 |

5.1.1.2 RAYALASEEMA 1961:

Agricultural Sector:

Here three components were retained which were explaining the total variance in the data. In the first component, irrigation intensity, oil engines per 100 hectares, electric engines per 100 hectares, electric engines per 100 cultivators and tractors per 100 hectares were the dominant variables. This component depicted the nature of irrigation and mechanization associated with it. Wherever irrigation intensity was high it was primarily due to the availability of the pumps both diesel and electric which again leading to mechanization of agriculture with the increased use of tractors. In the second component gross value per hectare and gross value per cultivator were the dominant variables with negative loadings. This factor in general depicted the productivity in agriculture for different districts, which was quite low. The third component was again a residual. The first two components were explaining around 87 percent of the total variance. Chittoor was the most developed district in Rayalaseema w.r.t to agricultural sector in 1961. Rest of the three districts were way behind it (Table 5.2).

Industrial Sector:

For this sector also 3 components were retained. In the first component, industries per 100 sq. kms, output per capita and productive capital per unit were the dominant variables. This component was related with the productivity aspect in the industrial sector. In the second
component value added per capita and productive capital per worker were the dominant variables both with negative loadings and a very high correlation coefficient among themselves. Which highlighted the fact that availability of capital is an important aspect for value addition by the workers. And these two were inadequate in the region. These two factors accounted for about 91 percent in the total variance. In this sector Kurnool was having the highest composite index followed by Anantapur. Rest of the two districts were way behind (Table 5.2).

**Banking Sector:**
Here again three components were retained. For the first component population served per bank with a negative loading and total credit per capita were the dominant variables. These variables were also having a very strong negative correlation coefficient. As number of banks was less hence the population served per bank was very high. For the second component credit deposit ratio was the dominant variable with a negative loading which again emphasized that banking services were not at all developed. These two components were explaining around 91 percent of the total variance. In this sector Kurnool and Anantapur were positive indices where Cuddapah was least developed district in terms of the banking sector (Table 5.2).

**Cooperative sector:**
Here three components were retained. For the first component population served per cooperative society and membership of agricultural society to total population were the dominant variables. This component shows the involvement of the people in the cooperative movement for the districts of Rayalaseema. In the second component cooperative societies per 100 sq. kms and the agricultural cooperative societies per 100 sq. kms were the dominant variables. This component showed the spread of the cooperative societies in the districts. In the third component loans per members in the agricultural societies was the dominant variable. These two components were explaining around cent percent of the total variance. For this sector three out of four districts were having positive scores which shows that cooperative movement was gaining support in Rayalaseema(Table 5.2).

**Power Sector:**
In this sector 3 components were retained. In the first component, power consumption per sq. km, per capita power consumption with positive loadings and the percentage used for domestic purpose with negative loading were the dominant variables. This was depicting the general consumption pattern of power in the region. In the second component percentage of villages electrified with a negative loading was the dominant variable. This highlighted the fact that rural
electrification was a neglected aspect of the development. The third component was a residual. The first two components were explaining about 96 percent of the total variance. Chittoor and Kurnool were the two districts with a positive index where as Anantapur and Cuddapah were way behind (Table 5.2).

**Education sector:**
In this sector three components were retained. In the first component percentage of literacy to total population and the number of primary teachers per 1000 students were found to be the dominant variables. Which again highlights the importance of elementary education. In the second component number of teachers at secondary level per 1000 students was the dominant variable. Whereas the third component was a residual. The first two components were explaining about 93 percent of the total variance. Kurnool and Cuddapah were the developed districts where as Anantapur and Chittoor were way behind (Table 5.2).

**Health Sector:**
Here also three components were retained. For the first component hospitals per 100 sq. kms and doctors per lakh population were the dominant variables which is a general indicator for the availability of medical facilities in the districts. For the second component hospital beds per lakh population was the dominant variable emphasizing on the quality of the medical facilities. The first two components were explaining about 99 percent of the total variance. Kurnool and Chittoor were the two districts which were having a developed medical facilities as compared to the rest of the two districts (Table 5.2).

**Transport And Communication:**
For three retained components, the first component comprised the availability of roads per 100 sq. kms as its dominant variable. In the second component availability of the post and telegraph offices was emphasized. These two components explained about 84 percent of the total variance. Here only Chittoor was the only district having a positive index which displays that Rayalaseema as a whole was quite underdeveloped w.r.t this sector (Table 5.2).

**Urbanization:**
In the first component percentage of urban population to total population and average size of a town were the dominant variables. Whereas in the second component concentration of urban population per sq. km was the dominant variable with a negative loading. Which implies that the number of towns and cities were less as well as the average size of them was also small. These
two components were explaining around 99 percent of the total variance. Kurnool and Anantapur were the leading urban centers in Rayalaseema (Table 5.2).

**Aggregate Composite Index:**

Here three components were retained. In the first component agriculture, power, transport and communication and urbanization (with a negative loading) were the dominant sectors. In the second component agriculture, banking and health were the dominant sectors. In the third component education was the dominant variable. Chittoor was the leading district followed by Kurnool with regard to overall developmental levels in Rayalseema. Cuddapah was the least developed district in the region (Table 5.2).

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<th>COOP</th>
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<th>HEALTH</th>
<th>TRANS</th>
<th>URBAN</th>
<th>AGG INDEX</th>
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5.1.1.3 **TELANGANA 1961:**

**Agricultural Sector:**

In this sector eight eigen were retained which were explaining some part of the total variance. In the first component cropping intensity with a positive loading and gross value of the agricultural produce per hectare with negative loading were the dominant variables. This highlights the fact that, although cropping intensity was very high, productivity was low within the districts in Telengana. For the second component irrigation extent and tractors per 100 hectares were the dominant variables both with negative loadings leading to the inference that irrigation extent was very low and hence mechanization of agriculture had not picked up. For the third component the type of irrigation facilities was highlighted where electric engines per 100 cultivators as well as well per 100 hectares were the dominant variables. Which shows that due to the lack of proper irrigational canals pumpsets were being used. Rest of the five variables were residuals in nature. These three components were explaining about 82 percent of the total variance. Here the Nalgonda was the district which was comparatively more developed than the rest of the districts. Only Hyderabad and Karimnagar were having positive scores whereas the rest of the districts were underdeveloped (Table 5.3).
**Industrial Sector:**

Here six components were retained. In the first component industries per 100 sq. kms, output per capita, value added per capita and productive capital per unit were the dominant variables. This component highlights the industrial productivity in the region. For the second component productive capital per worker with a negative loading was the dominant variable which shows a low capital labour ratio in the region. These two variables were explaining 89 percent of the total variance. Hyderabad, Nizamabad and Adilabad were the three districts which were industrially developed as compared to other districts in Telengana (Table 5.3).

**Banking Sector:**

In the banking sector five components were retained. In the first component banks per sq. km, total deposits per capita and total credit per capita were the dominant variables. In the second component credit deposit ratio was the dominant variable with a negative loading. Which implies that although banks are there but still banking functions had not developed. These two components were explaining about 93 percent of the total variance. The composite indices show that Hyderabad was the only district with a well developed banking sector. And the rest of the districts were way behind (Table 5.3).

**Cooperative Sector:**

In this sector the first component constituted percentage of membership in all cooperative societies to total population and agricultural cooperative societies per 100 sq. kms as the dominant variables. In the second component cooperative societies per 100 sq. kms was the dominant variable. These two components together were explaining 81 percent of the total variance. The composite indices for the districts showed that Nizamabad was the leading district followed by Medak, Karimnagar and Hyderabad. Rest of the five districts were underdeveloped w.r.t to this sector (Table 5.3).

**Power sector:**

Here the first component was constituted by power consumption per sq. km and per capita consumption of power as its dominant variables. In the second component percentage of the villages electrified was the dominant variable. These two components were 81 percent of the total variance. Here Hyderabad was the most developed district followed by Adilabad and Warangal.
The rest of the districts were underdeveloped (Table 5.3).

**Education Sector:**
In the first component percentage of total literacy to total population, percentage of female literacy to total female population, percentage of male literacy to total male population and number of schools per 100 sq. kms were the dominant variables. This in general lighted the importance of the general literacy levels in the developmental process. In the second component and third component the availability of the teachers at secondary and primary levels was emphasized. These two were explaining about 98 percent of the total variance. Hyderabad was the most developed district in this sector followed by Khammam and Warangal. Rest of six districts were underdeveloped (Table 5.3).

**Health Sector:**
In this sector the first component was dominated by hospitals per 100 sq. kms, beds per lakh population and doctors per lakh population. This was a general health index. In the second component population served per hospital was the dominant variable. The total variance explained by these two components accounted for 99 percent of the total variance. In this sector all the districts except Hyderabad were underdeveloped w.r.t the health sector (Table 5.3).

**Transport And Communication:**
In the first component roads per 100 sq. kms and post and telegraph offices per sq. km were the dominant variables. Which reflects the importance of the availability of the basic transport and communication facilities. In the second component post and telegraph offices per lakh population was the dominant variable which emphasized upon the accessibility of basic communication facilities by the people. These two components were explaining 89 percent of the total variance. All the districts except Khammam and Adilabad were having positive scores. Nizamabad was having the highest score w.r.t this sector (Table 5.3).

**Urbanization:**
In this sector the first component was having all the three variables as its dominant loadings. This component was explaining around 98 percent of the total variance. Except Hyderabad rest of the districts were not having developed urban concentrations. This was due to the fact that Hyderabad was the state capital (Table 5.3).
Aggregate Composite Index:

In the first component industrial, cooperative, urbanization and power (with a negative loading) were the dominant sectors. In the second component banking and education were the dominant sectors. In the third component transport and communication with a negative loading were the dominant sectors. At the aggregate level only Hyderabad and Adilabad were having positive scores. Whereas the rest of districts were having negative scores (Table 5.3).

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5.1.1.4 TOTAL ANDHRA PRADESH:

Agricultural Sector:

In this sector irrigation extent, tractors per 100 hectares and tractors per 100 cultivators were the variables having the dominant loadings. This component was reflecting the fact that the areas with higher irrigation extent were having mechanization of agriculture to a certain extent. In the second component ratio of iron plough to wooden plough, oil engines per 100 hectares and oil engines per 100 cultivators were found to be the dominant variables with negative loadings indicating the dual nature of irrigation existing in the state. These two components were explaining 67 percent of the total variance. Here the above mentioned phenomenon becomes quite evident. Because with the exception of Srikakulam rest of the districts in coastal Andhra were having positive scores. Whereas in the rest of the regions all the districts were having negative scores (Table 5.4):

Industrial Sector:

In this sector the first component was dominated by the variables like industries per 100 sq. kms,
industries per lakh population, percentage of industrial workers to total workers and output per capita. This component was a general index for industrial development. In the second component productive capital per worker and productive capital per unit were the dominant variables highlighting the importance of the availability of capital for the industrial development. These two components were explaining 73 percent of the total variance. Except for Srikakulam, Vishkapatnam and Nellore rest of the districts in coastal Andhra were having positive scores for the industrial sector. In Rayalaseema except for Kurnool rest of the three districts were having negative scores. In Telengana only Hyderabad, Nizamabad and Warangal were having positive scores were as the rest of the districts were having negative scores (Table 5.4)

**Banking Sector:**

In this sector the first component was dominated by banks per 100 sq. kms and credit per capita were the dominant variables. This component represented the spread of banking activities. The higher concentration of banks in a district would yield a higher credit per capita ratio i.e. in other words the spread of banking network would also enhance banking activities. This component itself was explaining 72 percent of the total variance. From the composite scores it was observed (Table 5.4) that Hyderabad was the leading district in this sector. But all the other districts in Telengana as well as Rayalaseema were having negative scores. Whereas in Coastal Andhra Pradesh except for Srikakulam and Nellore rest of the districts were having positive scores (Table 5.4).

**Cooperative Sector:**

The first component was dominated by cooperative societies per 100 sq. kms and the ratio of total membership in all cooperative societies to total population. This component depicted the strength of the cooperative movement in the districts. In the second component population served per cooperative society was the dominant variable. In the third component primary cooperative societies per 100 sq. kms was the dominant variable. These three components were explaining about 90 percent of the total variance. In terms of composite scores (Table 5.4) West Godavari was the most developed district followed by East Godavari. In coastal Andhra Pradesh except for Guntur and Nellore rest of the districts were having positive scores. Where as in Rayalaseema and Telengana except for Anantapur and Nizamabad rest of the districts were having negative scores.
Power Sector:

In the first component consumption of electricity per sq. km and per capita consumption of electricity were the dominant variables. In the second component percentage of villages electrified was the dominant variable. These two components were explaining around 85 percent of the total variance. Krishna (Table 5.4) was the leading district in the state followed by Vishkapatnam. Except for Srikakulam and Nellore rest of the districts were having positive scores in Coastal Andhra. In Rayalaseema and Telengana except for Chittoor, Hyderabad and Adilabad, rest of the districts were having negative scores.

Education Sector:

In the first component percentage of total literates to total population, percentage of female literates to total female population and percentage of male literates to male population were the dominant variables. This component thus measured general literacy levels in the districts. In the second component number of teachers per 1000 students at secondary level was the dominant variable with a negative loading. These two components were explaining around 84 percent of the total variance. Hyderabad (Table 5.4) was the leading district in this sector followed by Krishna and West Godavari. Except for Srikakulam, Vishkapatnam and Nellore rest of the districts in Coastal Andhra were having positive scores. In Rayalaseema and Telenga except for Chittoor and Hyderabad rest of the districts were having negative scores.

Health Sector:

In the first component number of hospital beds per lakh population and doctors per lakh population were the dominant variables. This component highlighted the importance of the availability of medical facilities. In the second component population served per hospital was the dominant variable. These two components were explaining around 91 percent of the total variance. Hyderabad (Table 5.4) was the leading district in this sector. In Coastal Andhra except for Srikakulam and Nellore rest of the districts were having positive scores. In Rayalaseema Kurnool and Chittoor were having positive scores. In Telengana except for Hyderabad rest of the districts were having negative scores.
Transport and Communication Sector:

In the first component surfaced roads per 100 sq. kms and number of post and telegraph offices per sq. km were the dominant variables. In the second component number of post and telegraph offices per 10,000 population was the dominant variable. These two components were explaining around 94 percent of the total variance. West Godavari (Table No.) was the leading district in this sector. Except for Visakhapatnam and Anantapur rest of the districts in Coastal Andhra and Rayalaseema were having positive scores. In Telengana except for Nizamabad rest of the districts were having negative scores.

Urbanization:

In the first component all of the three variables under consideration were the dominant variables. This component was explaining around 96 percent of the total variance. In this sector Hyderabad (Table 5.4) was the leading district. In Coastal Andhra except for Srikakulam and Nellore rest of the districts were having positive scores. In Rayalaseema all the districts were having negative scores. In Telengana except for Hyderabad rest of the districts were having negative scores.

Aggregate Composite Index:

In the first component banking and education were the dominant sectors. In the second component cooperative, Transport and communication and Urbanization were the dominant sectors. In the third component Industrial and power were the dominant sectors. Krishna was leading district with respect to the aggregate composite index, followed by West Godavari and East Godavari. Except for Srikakulam and Nellore rest of the districts in Coastal Andhra were having positive scores. Where as in Rayalaseema and Telengana Chittoor and Hyderabad were the only districts with positive scores. The aggregate composite scores for the districts were as follows (Table 5.4):

58
5.1.2 Principal Component Analysis 1971

5.1.2.1 Coastal Andhra Pradesh 1971:

Agricultural Sector:
In this sector 7 components were retained. In the first component irrigation extent, electric engine pumps per 100 hectare, electric engine pumps per 100 cultivators, tractors per 100 hectares and tractors per 100 cultivators were the dominant variables. This component measured the degree of mechanization of agriculture. In the second component the productivity of the agricultural output was reflected through the dominance of cropping intensity and gross value of agricultural produce per hectare. These two components were together explaining around 81 percent of the total variance. West Godavari (Table 5.5) was the leading district for this sector followed by Krishna, East Godavari, Nellore and Guntur. Rest of the districts in the region were having negative scores.

Industrial Sector:
In this sector again 7 components were retained. In the first component availability of productive capital per industrial unit and availability of productive capital per industrial worker were the dominant variables. This reflected the importance of capital for industrial development. In the second component industries per 100 sq. kms and industries per 10,000 population were the dominant variables. In this component concentration of the industries was highlighted. In the third component percentage of industrial workers to total population was the dominant variable. All these components were explaining about 84 percent of the total variance. In this sector Visakhapatnam (Table 5.5) was the leading district followed by East Godavari, West Godavari and Krishna. Rest of the districts were having negative scores.

**Banking Sector**:

In this sector 5 components were retained. In the first component population served per bank with a negative sign and deposits per capita were the dominant variables. In the second component credit deposit ratio was the dominant variable. These two components were explaining around 87 percent of the total variance. For this sector Krishna (Table 5.5) was the leading district followed by Guntur, West Godavari and East Godavari. Rest of the districts were having negative scores.

**Cooperative Sector**:

In this sector 6 components were retained. In the first component cooperative societies per 100 sq. kms, ratio of total membership in all cooperative societies to total population and ratio of total membership in all primary societies to total population were the dominant variables. In the second component ratio of loans per primary society member was the dominant variable. In the third component primary cooperative societies per 100 sq. kms was the dominant variable. These three components were explaining around 93 percent of the total variance. Here again Krishna (Table 5.5) was the leading district followed by East Godavari, West Godavari, Srikakulam and Vishakhapatnam. Rest of the districts were having negative scores.

**Power Sector**:

In this sector four components were retained. In the first component consumption of electricity per sq. km, per capita consumption of electricity (both with negative signs) and percentage of electricity used for domestic purpose to total consumption of electricity were the dominant variables. In the second component percentage of villages having electricity was the dominant variable. These two components were explaining about 98 percent of the total variance. Here Ongole (Table 5.5) was the leading district followed by Krishna, West Godavari, Guntur,
Aggregate Composite Index:
In this analysis seven components were retained. In the first component agriculture, banking, education and urbanization were the dominant sectors. In the second component industrial sector was the dominant sector. In the third component cooperative sector with a negative sign was the dominant sector. These three components were explaining about 89 percent of the total variance.
At the aggregate level Krishna (Table 5.5) was the most developed district followed by Guntur, Visakhapatnam, West Godavari and East Godavari. Srikakulam was the least developed district.

Table 5.5: Aggregate and Sectoral indices using PCA for Coastal Andhra Pradesh 1971

<table>
<thead>
<tr>
<th>District</th>
<th>AGRI</th>
<th>IND</th>
<th>BANK</th>
<th>COOP</th>
<th>ELECT</th>
<th>EDUC</th>
<th>HEALTH</th>
<th>TRANS</th>
<th>URBAN</th>
<th>AGG INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRIK</td>
<td>-0.645</td>
<td>-0.4839</td>
<td>-1.2261</td>
<td>0.1460</td>
<td>-1.4700</td>
<td>-1.1838</td>
<td>-0.6236</td>
<td>0.3618</td>
<td>-1.4259</td>
<td>-0.3626</td>
</tr>
<tr>
<td>VISHKA</td>
<td>-0.6151</td>
<td>1.2722</td>
<td>-0.0791</td>
<td>0.0148</td>
<td>-1.1065</td>
<td>-0.4919</td>
<td>0.9537</td>
<td>-0.5531</td>
<td>0.3563</td>
<td>0.2781</td>
</tr>
<tr>
<td>E GOD</td>
<td>0.3826</td>
<td>0.1847</td>
<td>0.2742</td>
<td>0.5108</td>
<td>0.1934</td>
<td>0.4335</td>
<td>0.0393</td>
<td>0.3320</td>
<td>0.4944</td>
<td>0.3036</td>
</tr>
<tr>
<td>W GOD</td>
<td>1.0573</td>
<td>0.1612</td>
<td>0.5346</td>
<td>0.4613</td>
<td>0.4413</td>
<td>0.5125</td>
<td>-0.5163</td>
<td>1.1383</td>
<td>0.2498</td>
<td>0.4156</td>
</tr>
<tr>
<td>KRISH</td>
<td>0.3921</td>
<td>0.0058</td>
<td>0.8842</td>
<td>0.8715</td>
<td>0.6024</td>
<td>0.6798</td>
<td>-0.1318</td>
<td>0.5548</td>
<td>0.8514</td>
<td>0.4195</td>
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<td>GUNT</td>
<td>0.0440</td>
<td>-0.1986</td>
<td>0.5413</td>
<td>-0.4608</td>
<td>0.3739</td>
<td>0.3039</td>
<td>0.7408</td>
<td>0.3439</td>
<td>0.7030</td>
<td>0.0334</td>
</tr>
<tr>
<td>ONGOL</td>
<td>-0.7428</td>
<td>-0.5580</td>
<td>-0.3468</td>
<td>-0.7359</td>
<td>0.6289</td>
<td>-0.2756</td>
<td>-0.6715</td>
<td>-1.2233</td>
<td>-0.0304</td>
<td>-0.9470</td>
</tr>
<tr>
<td>NELL</td>
<td>0.1272</td>
<td>-0.3834</td>
<td>-0.5823</td>
<td>-0.8076</td>
<td>0.3365</td>
<td>0.0216</td>
<td>0.2095</td>
<td>-0.9545</td>
<td>-1.1987</td>
<td>-0.1406</td>
</tr>
</tbody>
</table>

5.1.2.2 RAYALASEEMA 1971

Agricultural Sector:
In this sector three components were retained. In the first component oil engine pumps per 100 cultivators, electric engine pumps per 100 cultivators and gross value of agricultural produce per cultivator were the dominant variables. In the second component cropping intensity, irrigation intensity and tractors per 100 hectares were the dominant variables. In the third component irrigation extent ratio of oil engine pumps per 100 hectares were the dominant variables. These three components were explaining cent percent variance. In this sector Kurnool (Table 5.6) was the leading district followed by Cuddapah. Anantapur was the least developed district for this sector in Rayalseema.

Industrial Sector:
In this sector three components were retained. In the first component industries per 100 sq. kms, industries per 100,000 population and percentage of industrial workers to total population were the dominant variables. In the second component value added per capita and availability of
Education Sector:
In this sector six components were retained. In the first component percentage of total literates to total population, percentage of female literates to total female population and percentage of male literates to total male population were the dominant variables. In the second component number of teachers per 1000 students at secondary level was the dominant variable. In the third component number of teachers per 1000 students at primary level was the dominant variable. These three components were explaining around 90 percent of the total variance. In this sector Krishna (Table 5.5) was the leading district followed by West Godavari, East Godavari, and Guntur. Rest of the districts were having negative scores.

Health Sector:
In this sector four components were retained. In the first component number of hospital beds per lakh population and doctors per lakh population were the dominant variables. In the second component hospitals per 100 sq. kms was the dominant variable. These two components were explaining 82 percent of the total variance. In this sector Vishkapatnam (Table 5.5) was the leading district followed by Guntur, Nellore and East Godavari. Rest of the districts were having negative scores.

Transport And Communication:
In this sector three components were retained. In the first component surfaced roads per 100 sq. kms and number of post and telegraph offices per sq. km were the dominant variables. In the second component number of post and telegraph offices per 10,000 population was the dominant variable. These two components were explaining 95 percent of the total variance. In this sector West Godavari (Table 5.5) was the leading district followed by Krishna, Srikakulam, Guntur and East Godavari. Rest of the districts were having negative scores.

Urbanization:
In this sector three components were retained. In the first component percentage of urban population to total population and average size of a town were the dominant variable. In the second component the concentration of urban population per sq. km was the dominant variable. Krishna (Table 5.5) was the most urbanized district followed by Guntur, East Godavari, Visakhapatnam and West Godavari. Rest of the districts were having negative scores.
productive capital per industrial unit were the dominant variables. In the third component output per capita was the dominant variable. These three components were explaining 100 percent variance. Chittoor (Table 5.6) was the most developed district followed by Cuddapah. Anantapur was the least developed district.

**Banking Sector:**
In this sector the first component was dominated by population served per bank (with a negative sign), credit per capita and credit deposit ratio. In the second component banks per 100 sq. kms and deposits per capita were the dominant variables. These two components were explaining around 92 percent of the total variance. Kurnool (Table 5.6) was the leading district. Cuddapah was the least developed district for this sector.

**Cooperative Sector:**
In this sector the first component was dominated by cooperative societies (with a negative sign) and population served per cooperative society. In the second component loans per primary society was the important variable. These two components were explaining 99 percent of the total variance. Anantapur (Table 5.6) was the most developed district followed by Kurnool. Cuddapah was the least developed district.

**Power Sector:**
For this sector the first component comprised of per capita consumption of electricity (with a negative sign) and percentage of electricity used for domestic purpose. In the second component percentage of villages having electricity was the dominant variable. These two components were explaining about 97 percent of the total variance. Kurnool (Table 5.7) was the most developed district followed by Chittoor. Cuddapah was the least developed district.

**Education Sector:**
In this sector percentage of total literates to total population and percentage of male literates to total male population were the dominant variables in the first component. In the second component the number of teachers per 1000 students at secondary level was the dominant variable. These two components were explaining 91 percent of the total variance. In this sector Cuddapah (Table 5.6) was the most developed district followed by Chittoor and Kurnool. Anantapur was the least developed district.

**Health Sector:**
In this sector hospitals per 100 sq. kms (with a negative sign) and number of hospital beds per lakh population were the main constituents of the first component. In the second component doctors per lakh population was the dominant variable. These two components were explaining 97 percent of the total variance. Kurnool (Table 5.6) was most developed district followed by Chittoor and Anantapur. Cuddapah was the least developed district for this sector.

**Transport and Communication:**

In this sector the first component comprised surfaced roads per 100 sq. kms as its main variable. In the second component number of post and telegraph offices per sq. km was the dominant variable. These two components explained about 91 percent of the total variance. Chittoor (Table 5.6) was the most developed district followed by Cuddapah and Kurnool. Anantapur was the least developed district.

**Urbanization:**

In the first component percentage of urban population to total population were the main variables. In the second component concentration of urban population per sq. km was the main variable. These two components explained about 99 percent of the total variance. Anantapur (Table 5.6) was most urbanized district in Rayalaseema followed by Kurnool and Cuddapah. Chittoor was the least urbanized district.

**Aggregate Composite Index:**

In this analysis three components were retained. In the first component industrial, cooperative, transport and communication (with a negative sign) and urbanization were the dominant sectors. In the second component agriculture, power and health were the dominant sectors. These two sectors were explaining about 91 percent of the total variance. At an aggregate level Kurnool was the most developed district followed by Anantapur and Chittoor. Cuddapah was the least developed district.

### Table 5.6: Aggregate and Sectoral Indices using PCA for Rayalaseema 1971

<table>
<thead>
<tr>
<th></th>
<th>AGRI</th>
<th>IND</th>
<th>BANK</th>
<th>COOP</th>
<th>ELECT</th>
<th>EDUC</th>
<th>HEALTH</th>
<th>TRANS</th>
<th>URBAN</th>
<th>AGG INDEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>KURN</td>
<td>0.7140</td>
<td>-0.0857</td>
<td>0.9546</td>
<td>0.3463</td>
<td>0.9624</td>
<td>-0.1437</td>
<td>0.8418</td>
<td>-0.5058</td>
<td>0.0751</td>
<td>-0.1992</td>
</tr>
<tr>
<td>ANANT</td>
<td>-0.7690</td>
<td>-0.9504</td>
<td>-0.0289</td>
<td>0.6566</td>
<td>-0.2658</td>
<td>-0.8688</td>
<td>-0.5333</td>
<td>-0.6304</td>
<td>0.9947</td>
<td>-0.5579</td>
</tr>
<tr>
<td>CUDD</td>
<td>0.1875</td>
<td>0.3271</td>
<td>-0.5070</td>
<td>-0.9920</td>
<td>-0.9913</td>
<td>0.7339</td>
<td>-0.6571</td>
<td>0.4821</td>
<td>-0.5199</td>
<td>-0.0853</td>
</tr>
<tr>
<td>CHITT</td>
<td>-0.1325</td>
<td>0.7090</td>
<td>-0.4187</td>
<td>-0.0109</td>
<td>0.2947</td>
<td>0.2787</td>
<td>0.3485</td>
<td>0.6541</td>
<td>-0.5499</td>
<td>0.8424</td>
</tr>
</tbody>
</table>
Agricultural Sector:
In this sector eight components were retained. In the first component irrigation intensity (with a negative sign) and oil engine pumps per 100 cultivators were the dominant variables. In the second component irrigation extent gross value of agricultural produce per hectare were the important variables. In the third component tractors per 100 hectares was the dominant variable. In the fourth component ratio of iron plough per 100 wooden plough (with a negative sign) gross value of agricultural produce per cultivator were the dominant variables. These four components were explaining about 91 percent of the total variance. In this sector Khammam (Table 5.7) was the most developed district followed by Nizamabad and Hyderabad. Medak was the least developed district.

Industrial Sector:
In this sector seven components were retained. In the first component industries per 100 sq. kms, industries per 100,000 population and percentage of industrial workers to total workers were the dominant variables. In the second component availability of productive capital per industrial unit and availability of productive capital per industrial worker were the dominant variables. These two components were explaining about 90 percent of the total variance. Mahbubnagar was the leading district (Table 5.7) followed by Hyderabad and Medak. Khammam turned out to be the least developed district in this sector.

Banking Sector:
In this sector five components were retained. In the first component population served per bank (with a negative sign), banks per 100 sq. kms, deposits per capita and credit per capita were the dominant variables. In the second component credit deposit ratio was the dominant variable. These two components were explaining 95 percent of the total variance together. In this sector Hyderabad was the leading district followed by Medak and Nizamabad. Mahbubnagar was the least developed district.

Cooperative Sector:
In this sector six components were retained. In the first component primary cooperative societies per 100 sq. kms and the ratio of total membership in all primary societies to total population were
the dominant variables. In the second component ratio of loans per primary society members was the dominant variable. In the third component ratio of total membership in all cooperative societies to total population was the dominant variable. All these three components were explaining 91 percent of the total variance. In this sector Nizamabad (Table 5.7) was the leading district followed by Karimnagar, Medak, Adilabad and Hyderabad. Khammam was the least developed district.

**Power Sector:**
In this sector four components were retained. In the first component consumption of electricity per sq. km and per capita consumption of electricity were the dominant variables. In the second component percentage of electricity used for domestic purpose to total consumption of electricity was the dominant variable. In the third component percentage of villages having electricity was the dominant variable. These three components were explaining 99 percent of the total variance. In this sector Hyderabad (Table 5.7) was the leading district followed by Nizamabad and Khammam. Medak was the least developed district.

**Education Sector:**
In this sector six components were retained. In the first component percentage of total literates to total population, percentage of female literates to total female population and percentage of total male literates to total male population were the dominant variables. In the second and third component number of teachers per 1000 students at primary and secondary levels were the dominant variables respectively. These three components were explaining 91 percent of the total variance. In this sector Hyderabad (Table 5.7) was the leading district and Adilabad was the least developed district.

**Health Sector:**
In this sector four components were retained. In the first component hospitals per 100 sq. kms, number of hospital beds per lakh population and doctors per lakh population were the dominant variables. In the second component population served per hospital was the dominant variable. These two components were explaining 95 percent of the total variance. With regard to the sectoral index Hyderabad (Table 5.7) was the most developed district followed by Warangal. Adilabad was the least developed district.

**Transport And Communication Sector:**
In this sector three components were retained. In the first component surfaced roads per 100 sq.
kms was the dominant variable. In the second component number of post and telegraph offices per 10,000 population was the dominant variable. These two components were explaining 91 percent of the total variance. In this sector again Hyderabad (Table 5.7) was the most developed district followed by Nizamabad and Medak. Adilabad was the least developed district in Telengana for this sector.

**Urbanization:**
In this sector although three components were retained but the first component itself comprised of all the three variables as its dominant variables. This component was explaining 95 percent of the total variance. In this sector again Hyderabad (Table No.) was the most developed district. And Nalgonda was the least developed district.

**Aggregate Composite index:**
Here total of eight components were retained. In the first component banking, power, education, health and urbanization were the dominant sectors. In the second component agriculture (with a negative sign) and industrial sectors were dominant. In the fourth component cooperative sector with a negative sign was the dominant variable. These three components were explaining 91 percent of the total variance. At the aggregate level Hyderabad (Table 5.7) was the most developed district followed by Mahbubnagar. Karimnagar was the least developed district.

| Table 5.7: Aggregate and Sectoral Indices using PCA for Telengana 1971 |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                       | AGR1  | IND   | BANK  | COOP  | ELECT | EDUC  | HEALTH | TRANS | URBAN | AGG INDEX |
| HYD                   | 0.3108| 0.4989| 1.9645| 0.0439| 1.5737| 1.9930| 1.8996 | 1.0918| 2.5001| 1.1867     |
| NZMD                  | 0.5888| -0.5139| 0.0761| 1.1030| 0.1619| -0.1763| -0.1442| 0.8150| -0.1181| -0.2653    |
| MEDAK                 | -0.5583| 0.4989| 0.3192| 0.1527| -0.4563| -0.1255| -0.3201| 0.2995| -0.4641| -0.0159    |
| MABNG                 | -0.5112| 1.4017| -0.5501| -0.3969| -0.1984| -0.3330| -0.1548| -0.1820| -0.4769| 0.3226     |
| NALG                  | -0.5512| -0.1915| -0.3455| -0.0036| -0.4521| -0.2142| -0.4100| 0.0733| -0.4923| -0.1850    |
| WARN                  | -0.0138| -0.2464| -0.3670| -0.6697| -0.0509| -0.1571| 0.1452| -0.1235| -0.0065| -0.1418    |
| KHAMM                 | 0.9148| -0.5919| -0.4348| -0.7253| 0.0520| -0.1585| -0.4240| -0.6579| -0.2668| -0.2819    |
| KARNG                 | -0.1460| -0.5024| -0.4655| 0.3842| -0.4115| -0.2351| -0.1203| -0.0480| -0.3738| -0.2984    |
| ADBLBD                | -0.0339| -0.3532| -0.1968| 0.1116| -0.2184| -0.5933| -0.4713| -1.2683| -0.3015| -0.3210    |

5.1.2.4 Total Andhra Pradesh 1971

**Agriculture Sector:**
In this sector 12 components were retained. In the first component cropping intensity, irrigation extent, tractors per 100 cultivators, gross value of agricultural produce per hectare were the
dominant variables. In the second component oil engine pumps per 100 hectares and electric engine pumps per 100 cultivators were the dominant variables. In the third component irrigation intensity and ratio of iron plough per 100 wooden plough were the dominant variables. These three components were explaining 80 percent of the total variance. For this sector West Godavari (Table 5.8) was having the highest score followed by Krishna, East Godavari, Nellore, Kurnool, Guntur, Chittoor, Cuddapah and Nizamabad. In Coastal Andhra except for Srikakulam, Vishakapatnam and Ongole rest of the districts were highly developed. In Rayalaseema only Anantapur was less developed. In Telengana except for Nizamabad all other districts were way behind the average state level with Mahbubnagar as the least developed district in the state.

Industrial Sector:
In this sector 7 components were retained. In the first component industries per 100,000 population was the most dominant variable. In the second component availability of productive capital per industrial unit as well as per industrial worker were the most dominant variables. In the third and fourth component output per capita and value added per capita were respectively the dominant variables. These four components were explaining around 93 per cent of the total variance. In this sector Mahbubnagar (Table 5.8) was the most developed district followed by East Godavari, Vishakapatnam, West Godavari, Krishna, Chittoor, Medak, Hyderabad, Guntur, Anantapur and Srikakulam. In Coastal Andhra Ongole and Nellore were the least developed districts with a negative score. In Rayalaseema, Anantapur and Cuddapah were having negative scores. In Telengana except for the above mentioned districts rest of them were having negative scores with Khammam as the least developed district in the state.

Banking Sector:
In this sector 5 components were retained. In the first component banks per 100 sq. kms, deposits per capita and credit per capita were the dominant variables. In the second component credit deposit ratio with a negative sign was the dominant variable. In the third component population served per bank was the dominant variable. These three components were explaining 97 percent of the total variance. In this sector Hyderabad (Table 5.8) was the most developed district followed by Krishna, West Godavari, East Godavari, Vishkapatnam and Guntur. In Coastal Andhra Ongole, Srikakulam and Nellore were the least developed districts. In Rayalaseema all the four districts were having negative signs. In Telengana also except for Hyderabad rest of the other districts were having negative scores with Medak as the least developed district.

Cooperative Sector:
In this sector 6 components were retained. In the first component cooperative societies per 100 sq. kms and ratio of total membership in all cooperative societies to total population were the dominant variables. In the second component population served per cooperative society (with a negative sign) was the dominant variable. In the third and fourth component ratio of loans per primary society members and population served per cooperative society were the most dominant variables. These four components were explaining around 95 percent of the total variance. In this sector Nizamabad (Table 5.8) was the most developed district followed by Krishna, East Godavari, Karimnagar, Hyderabad, Adilabad, Srikakulam, Medak, West Godavari and Nalgonda. Nellore was the least developed district in Andhra Pradesh. In Rayalaseema all the districts were below state average. Khammam was the least developed in Telengana.

**Power Sector:**

In this sector 4 components were retained. In the first component consumption of electricity per sq. km and per capita consumption of electricity (both with negative signs) were the dominant variables. In the second and third component percentage of villages having electricity and percentage of electricity used for domestic purpose to total consumption of electricity were respectively the most dominant variables. These three components were explaining about 98 percent of the total variance. In this sector Ongole (Table 5.8) was the most developed district followed by Nizamabad, Krishna, Khammam, Warangal, Cuddapah, Nellore, Guntur, East Godavari, West Godavari, Mahbubnagar, Anantapur and Chittoor. Srikakulam was the least developed district in the state.

**Education Sector:**

In this sector 6 components were retained. In the first component percentage of total literates to total population, percentage of total female literates to total female population and percentage of total male literates to total male population were the dominant variables. In the second and third component number of teachers per 1000 students at secondary as well as primary levels were respectively the dominant variables. These three components were explaining around 93 percent of the total variance. In this sector Hyderabad (Table 5.8) was the most developed district followed by West Godavari, Krishna, Guntur, Nellore, Cuddapah, Chittoor and Ongole. In Coastal Andhra Srikakulam and Vishkapatnam were least developed districts with negative scores. In Rayalaseema, Kurnool and Anantapur were having negative scores. In Telengana except for Hyderabad all the other districts were having negative scores with Adilabad was the least developed district in the state.
**Health Sector:**

In this sector 4 components were retained. In the first component number of hospital beds per lakh population and doctors per lakh population were the dominant variables. In the second and third components population served per hospital and hospitals per 100 sq. kms were respectively the dominant variables. These three components were explaining around 99 percent of the total variance. In this sector Hyderabad (Table 5.8) was the most developed district followed by Warangal, Chittoor, Vishkapatnam, Guntur, Kurnool and Mahbubnagar. In Coastal Andhra except for the above mentioned two districts rest of them were having negative scores. In Rayalaseema, Cuddapah and Anantapur were the least developed districts. In Telengana also except for the above mentioned districts rest of them were having negative scores with Medak as the least developed district in the state.

**Transport and communication:**

In this sector 3 components were retained. In the first component surfaced roads per 100 sq. kms and ratio of post and telegraph offices per sq. km were the dominant variables. In the second component surfaced roads and telegraph offices per 10,000 population was the dominant variable. These two components were explaining 95 percent of the total variance. In this sector West Godavari (Table 5.8) was the most developed district followed by Krishna, Guntur, Srikakulam, East Godavari, Hyderabad, Nizamabad, Nellore and Vishkapatnam. In Coastal Andhra only Ongole was having a negative score. In Rayalaseema all the districts were having negative scores. In Telengana except for the above mentioned two districts rest of them having negative scores with Adilabad as the least developed district.

**Urbanization:**

In this sector again 3 components were retained. But the first component itself comprised all the three variables as its dominant variables. This component was explaining around 94 percent of the total variance. In terms of the composite index Hyderabad (Table 5.8) was the most urbanized district followed by Krishna, Guntur, East Godavari, Vishkapatnam, West Godavari and Warangal. Except for the three districts namely Srikakulam, Ongole and Nellore rest of the districts were developed. In Rayalaseema no district was having developed urban centres. In Telengana except for the above mentioned districts rest of them were negative signs with Nalgonda as the least developed district.
Aggregate Composite Index:

In this analysis 9 components were retained. In the first component banking, education and urbanization were the dominant variables. In the second, third and fourth components, agriculture, power and industrial (with a negative loading) were respectively the dominant variables. These four components were explaining around 89 percent of the total variance. At an aggregate level West Godavari (Table 5.8) was the most developed district followed by Hyderabad, Krishna, Guntur, East Godavari, Nellore, Kurnool, Nizamabad, Chittoor and Cuddapah. In Coastal Andhra except for Srikakulam, Vishakapatnam and Ongole rest of the districts were having positive scores. In Rayalaseema only Anantapur was having a negative score. In Telengiuia except for the above mentioned two districts rest of them having negative scores with Adilabad as least developed district in the state.

Table 5.8: Aggregate and Sectoral Indices using PCA for Total Andhra Pradesh 1971

<table>
<thead>
<tr>
<th>District</th>
<th>AGRI</th>
<th>IND</th>
<th>BANK</th>
<th>COOP</th>
<th>ELECT</th>
<th>EDUC</th>
<th>HEALTH</th>
<th>TRANS</th>
<th>URBAN</th>
<th>AGG INDEX</th>
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<td>-0.0856</td>
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<td>-0.4039</td>
<td>-0.6986</td>
<td>-0.3615</td>
</tr>
<tr>
<td>WARNGL</td>
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<td>-0.2714</td>
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<td>-1.5005</td>
<td>-0.4301</td>
<td>-0.4818</td>
</tr>
</tbody>
</table>
5.1.3. Principal Component Analysis 1981:

5.1.3.1 Coastal Andhra 1981

Agricultural Sector:
In this sector 8 components were retained. In first component irrigation extent, electric engine pumps per 100 hectare, electric engine pumps per 100 cultivators, tractors per 100 hectares and tractors per 100 cultivators were the dominant variables. In second component cropping intensity, irrigation intensity and gross value of agricultural produce per cultivator were the dominant variables. These two components were explaining 88 percent of the total variance. For this sector West Godavari (Table 5.9) was the leading district followed by East Godavari, Nellore and Krishna. Vizianagaram was the least developed district.

Industrial Sector:
In this sector 7 components were retained. In the first component output per capita, value added per capita, availability of productive capital per industrial unit and availability of productive capital per industrial worker were the dominant variables. In the second component industries per 100 sq. kms, industries per 100,000 population and percentage of industrial workers to total population were the dominant variables. These two components were explaining around 88 percent of the total variance. For this sector Vishkapatnam (Table 5.9) was the most developed district followed by East Godavari, Krishna, Guntur and West Godavari. Ongole was the least developed district.

Banking Sector:
In this sector 5 components were retained. In the first component banks per 100 sq. kms (with a negative sign) and deposits per capita were the dominant variables. In the second component credit deposit ratio was the most dominant variable. These two components were explaining around 86 percent of the total variance. In this sector Guntur (Table 5.9) was the most developed district followed by Krishna, West Godavari, Vishkapatnam and East Godavari. Vizianagaram was the least developed district.

Cooperative Sector:
In this sector 5 components were retained. In the first component primary cooperative societies per 100 sq. kms and ratio of loans per primary society members were the dominant variables. In the second component population served per cooperative society (with a negative sign) was the dominant variable. These two components were explaining around 88 percent of the total
variance. In this sector Krishna (Table 5.9) was the leading district followed by Srikakulam, East Godavari, Guntur and West Godavari. Vishkapatnam was the least developed district.

**Power Sector:**
In this sector 4 components were retained. In the first component consumption of electricity per sq. km and per capita consumption of electricity (both with negative signs) were the dominant variables. In the second component percentage of villages having electricity (with a negative sign) was the dominant variable. These two components were explaining 93 percent of the total variance. In this sector Srikakulam (Table 5.9) was the leading district followed by Ongole, East Godavari, Krishna and Nellore. Vizianagaram was the least developed district.

**Education Sector:**
In this sector 5 components were retained. In the first component percentage of total literates to total population, percentage of female literates to total female population and percentage of male literates to total male population were the dominant variables. In the second component number of schools per 100 sq. kms (with a negative sign) was the dominant variable. These two components were explaining around 82 percent of the total variance. In this sector Krishna (Table 5.9) was the leading district followed by Guntur, West Godavari, East Godavari, Nellore and Ongole. Vizianagaram was the least developed district.

**Health Sector:**
In this sector 4 components were retained. In the first component number of hospital beds per lakh population and doctors per lakh population were the dominant variables. In the second component hospitals per 100 sq. kms (with a negative sign) was the dominant variable. In the third component population served per hospital was the dominant variable. These three components were explaining around 96 percent of the total variance. In this sector Vishkapatnam (Table 5.9) was the leading district followed by Guntur, East Godavari and Krishna. Srikakulam was the least developed district.

**Transport and Communication:**
In this sector 3 components were retained. In the first component number of post and telegraph offices per sq. km was the dominant variable. In the second component surfaced roads per 100 sq. kms (with a negative sign) and number of post and telegraph offices per 10,000 population were the dominant variables. These two components were explaining around 97 percent of the total variance. In this sector Srikakulam (Table 5.9) was the leading district followed by East
Godavari, Krishna, West Godavari and Nellore. Vizianagaram was the least developed district.

**Urbanization:**
In this sector 3 components were retained. The first component itself was comprising all the three variables as its dominant variables. This component was explaining 83 percent of the total variance. In this sector Vishakapatnam (Table 5.9) was the leading district followed by Krishna, Guntur, Nellore and West Godavari. Srikakulam was the least developed district.

**Aggregate composite Index:**
In this analysis 8 components were retained. In the first component industrial, banking, education and urbanization were the dominant sectors. In the second component agriculture and cooperative were the dominant sectors. In the third component power and health were the dominant sectors. These three components were explaining 86 percent of the total variance. In this analysis Krishna (Table 5.9) turned out to be the most developed district followed by Guntur, East Godavari, Visakhapatnam and West Godavari. Vizianagaram was the least developed district.

| Table 5.9: Aggregate and Sectoral Indices using PCA for Coastal Andhra Pradesh 1981 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                | AGRI            | IND             | BANK            | COOP            | ELECT           |
| SRIK                           | -0.5598         | -0.5636         | -0.5919         | 0.5009          | 1.5497          |
| VIZI                           | -0.7728         | -0.2933         | -0.8296         | -0.6363         | -0.7241         |
| VIEK                           | -0.6269         | 1.5555          | 0.2648          | -0.7839         | -0.5950         |
| E GOD                          | 0.6496          | 0.1938          | 0.0273          | 0.3632          | 0.0931          |
| W GOD                          | 1.0831          | 0.0185          | 0.3318          | 0.0969          | -0.8028         |
| KRISH                          | 0.3702          | 0.1566          | 0.3779          | 1.1202          | 0.0899          |
| GUNT                           | -0.0966         | 0.0683          | 1.1926          | 0.3058          | -0.0761         |
| ONGOL                          | -0.4248         | -0.5812         | -0.6567         | -0.7590         | 0.3757          |
| NELL                           | 0.3799          | -0.5546         | -0.3161         | -0.2079         | 0.0875          |

**Agriculture Sector:**
In this sector three components were retained. In the first component irrigation extent, ratio of oil engine pumps per 100 hectares, oil engine pumps per 100 cultivators, electric engine pumps per 100 hectare, tractors per 100 hectares and gross value of agricultural produce per hectare were the dominant variables. In the second component cropping intensity and irrigation intensity were the dominant variables. These two components were explaining around 95 percent of the total variance. In this sector Chittoor (Table 5.10) was the most developed district and Kurnool was

5.1.3.2 Rayalaseema1981
the least developed district.

**Industrial Sector:**
In this sector 3 components were retained. In the first component output per capita and availability of productive capital per industrial worker were the dominant variables. In the second and third components percentage of industrial workers to total workers and industries per 100,000 population (with a negative sign) were respectively the dominant variables. These three components were explaining 96 percent variance. In this sector Kurnool (Table 5.10) was the leading district and Chittoor was the least developed district.

**Banking Sector:**
In this sector 3 components were retained. In the first component population served per bank, banks per 100 sq. kms, deposits per capita and credit deposit ratio (with a negative sign) were the dominant variables. In the second component credit per capita was the dominant variable. These two components were explaining 96 percent of the total variance. In this sector Chittoor (Table 5.10) was the leading district followed by Kurnool. Anantapur was the least developed district.

**Cooperative Sector:**
In this sector again 3 components were retained. In the first component ratio of total membership in all cooperative societies to total population and ratio of membership in all primary societies (with a negative sign) were the dominant variables. In the second component cooperative societies per 100 sq. kms and primary cooperative societies (both with negative signs) were the dominant variables. These two components were explaining 93 percent of the total variance. In this sector Kurnool (Table 5.10) was the leading district followed by Cuddapah. Anantapur was the least developed district.

**Power Sector:**
In this sector 3 components were retained. In the first component consumption of electricity per sq. km and per capita consumption of electricity (both with negative signs) were the dominant variables. In the second component percentage of electricity used for domestic purpose to total consumption of electricity and percentage of villages having electricity (with a negative sign) were the dominant variables. These two components were explaining 86 percent of the total variance. In this sector Anantapur (Table 5.10) was the leading district followed by Cuddapah and Chittoor. Kurnool was the least developed district.
**Education sector:**
In this sector 3 components were retained. In the first component percentage of total literates to total population, percentage of total female literates to total female population and number of schools per 100 sq. kms were the dominant variables. In the second and third components percentage of total male literates to total male population and number of teachers per 1000 students at primary level (with a negative sign) were respectively the dominant variables. These three components were explaining 100 percent variance. In this sector Chittoor (Table 5.10) was the leading district followed by Cuddapah. Anantapur was the least developed district.

**Health Sector:**
In this sector 3 components were retained. In the first component number of hospital beds per lakh population was the dominant variable. In the second component hospitals per 100 sq. kms and doctors per lakh population were the dominant variables. These two components were explaining 97 percent of the total variance. In this sector Kurnool (Table 5.10) was the leading followed by Chittoor. Anantapur was the least developed district.

**Transport and Communication Sector:**
In this sector 3 components were retained. In the first component surfaced roads per 100 sq. kms (with a negative sign) and number of post and telegraph offices per 10,000 population were the dominant variables. In the second component ratio of post and telegraph offices per sq. km was the dominant variable. These two components were explaining 97 percent of the total variance. In this sector Cuddapah (Table 5.10) was the leading district followed by Kurnool. Anantapur was the least developed district.

**Urbanization:**
In the first of the three components retained percentage of urban population to total population and average size of a town were the dominant variables. In the second component concentration of urban population per sq. km (with a negative sign) was the dominant variable. These two components were explaining 96 percent of the total variance. Kurnool (Table 5.10) was the most urbanized district followed by Anantapur. Cuddapah was the least urbanized district.

**Aggregate Composite Index:**
Here 3 components were retained. In the first component industrial, cooperative, power (with a negative sign) and urbanization were dominant sectors. In the second component banking and
education were the dominant sectors. In the third component transport and communication (with a negative sign) was the dominant variable. These three components were explaining cent percent variance. In this analysis Kurnool (Table 5.10) was the most developed district followed by Chittoor. Anantapur was the least developed district.

| Table 5.10: Aggregate and Sectoral Indices using PCA for Rayalaseema 1981 |
|--------------------------|-----------------|----------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| KURN                     | -0.6151         | 1.0431         | 0.2621        | 0.9477         | -0.0423         | -0.4209         | 0.7475          | 0.4925          | 1.0810          | -0.4468         |
| ANANT                    | -0.3828         | -0.2769        | -0.5958       | -0.5155        | 0.0199          | -0.7381         | -0.6334         | -1.0165         | 0.1793          | -0.1182         |
| CUDU                     | -0.0835         | -0.2228        | -0.5833       | 0.0536          | 0.2005          | 0.2341          | -0.5707         | 0.8700          | -0.6348         | -0.3269         |
| CHITT                    | 1.0814          | -0.5434        | 0.9169        | -0.4858         | 0.1231          | 0.9249          | 0.4565          | -0.3461         | -0.6225         | 0.8918          |

5.1.3.3 Telengana 1981:

Agricultural Sector:
In this sector 8 components were retained. In the first component cropping intensity, irrigation intensity and gross value of agriculture produce per hectare were the dominant variables. In the second component ratio of iron plough to 100 wooden plough (with negative loading), ratio of oil engine pumps per 100 hectares and oil engine pumps per 100 cultivators were the dominant variables. These two components were explaining 80 percent of the total variance. In this sector Karimnagar (Table 5.11) was the leading district followed by Nizamabad and Warangal. Adilabad was the least developed district.

Industrial Sector:
In this sector 7 components were retained. In the first component value added per capita, availability of productive capital per industrial unit and per industrial worker were the dominant variables. In the second component industries per 100 sq. kms and industries per 100,000 population (with negative loadings) were the dominant variables. These two components were explaining 92 percent of the total variance. In this sector Hyderabad (Table 5.11) was the leading district followed by Medak, Khammam, Mahbubnagar and Nalgonda. Nizamabad was the least developed district.

Banking Sector:
In this sector 5 components were retained. In the first component population served per bank, deposits per capita and credit per capita were the dominant variables. In the second component credit deposit ratio (with a negative loading) was the dominant variable. These two components
were explaining 93 percent of the total variance. In this sector Hyderabad (Table 5.11) was the leading district. Rest of the districts were having negative scores. And Medak turned out to be the least developed district.

**Cooperative Sector:**
In this sector 6 components were retained. In the first component cooperative societies per 100 sq. kms and ratio of total membership in all cooperative societies to total population were the dominant variables. In the second component ratio of total membership in all primary societies to total population was the dominant variable. In the third component ratio of loans per primary society members was the dominant variable. These three components were explaining around 91 percent of the total variance. In this sector Warangal (Table 5.11) was the leading district followed by Medak, Hyderabad, Nizamabad and Nalgonda. Adilabad turned out to be the least developed district.

**Power Sector:**
In this sector 4 components were retained. In the first component consumption of electricity per sq. km and per capita consumption of electricity were the dominant variables. In the second component percentage of villages electrified was the dominant variable. These two components were explaining around 86 percent of the total variance. In this sector Hyderabad (Table 5.11) was the most developed district followed by Karimnagar and Nizamabad. Adilabad was the least developed district.

**Education Sector:**
In this sector 6 components were retained. In the first component percentage of total literates to total population, percentage of total female literates to total female population, percentage of total male literates to total male population and number of schools per 100 sq. kms were having the dominant loadings. In the second component number of teachers per 1000 students at primary as well as at secondary level were having the dominant loadings. These two components were explaining 91 percent of the total variance. In this sector Hyderabad (Table 5.11) was the most developed district followed by Nizamabad. Again Adilabad turned out to be the least developed district in this sector also.

**Health Sector:**
In this sector 4 components were retained. In the first component hospitals per 100 sq. kms, number of hospital beds per lakh population and doctors per lakh population were having dominant loadings. In the second component population served per hospital was having dominant loadings.
loading. These two components were explaining 98 percent of the total variance. In this sector again Hyderabad (Table 5.11) was the leading district followed by Warangal. Khammam was the least developed district in this sector.

Transport and Communication:
In this sector 3 components were retained. In the first component surfaced roads per 100 sq. kms and number of post and telegraph offices per sq. km were having the dominant loadings. In the second component number of post and telegraph offices per 10,000 population was having dominant loading. These two components were explaining 94 percent of the total variance. In this sector again Hyderabad (Table 5.11) was the leading district followed by Medak, Nizamabad, Karimnagar, Warangal and Nalgonda. In this sector Adilabad turned out to be the least developed district.

Urbanization:
In this sector 3 components were retained. In the first component percentage of urban population to total population and concentration of urban population per sq. km were having the dominant loadings. In the second component average size of a town was the dominant variable. These two components were explaining 99 percent of the total variance. Hyderabad (Table 5.11) was the most developed urban district. And rest of the districts were having negative scores with Mahbubnagar as the least developed district.

Aggregate composite Index:
In this analysis 8 components were retained. In the first component banking, power, education, health and urbanization sectors were having dominant loadings. In the second component agriculture, cooperative and transport & communication (with negative loadings) were the dominant sectors. These two sectors were explaining 86 percent of the total variance. In this analysis again Hyderabad (Table 5.11) was the most developed district and rest of the districts were having negative scores with Warangal being the least developed district in the region.
5.1.3.4 Total Andhra Pradesh 1981

**Agricultural Sector:**
In this sector 12 components were retained. In the first component irrigation extent, tractors per 100 hectares, tractors per 100 cultivators, gross value of agricultural produce per hectare as well as per cultivators were having the dominant loadings. In the second component ratio of oil engine pumps per 100 hectares, electric engine pumps per 100 hectare and per 100 cultivators were having dominant loadings. In the third component irrigation intensity and ratio of iron plough per 100 wooden plough (with negative loading) were the dominant variables. These three components were explaining around 86 percent of the total variance. West Godavari (Table 5.12) was the most developed district in the state followed by Karimnagar, Nellore, East Godavari, Nizamabad, Krishna, Chittoor and Warangal. Rest of the districts were way below the state average.

**Industrial Sector:**
In this sector 7 components were retained. In the first component value added per capita, availability of productive capital per industrial unit as well as per industrial worker were having the dominant loadings. In the second component both industries per 100 sq. kms and industries per 100,000 were having negative dominant loadings. These two components were explaining 89 percent of the total variance. In this sector Vishkapatnam (Table 5.12) was the most developed district followed by Hyderabad, Kurnool, Medak, Khammam, Anantapur, East Godavari, Chittoor and Krishna. Rest of the districts were below the state average.

**Banking Sector:**
In this sector 5 components were retained. In the first component population served per bank, deposits per capita and credit per capita were having the dominant loadings. In the second component credit deposit ratio was having the dominant loading. These two components were explaining around 88 percent of the total variance. In this sector Hyderabad was the most developed district followed by Guntur, Krishna, West Godavari, Vishkapatnam, Medak and East Godavari. Rest of districts were having negative scores.

**Cooperative Sector:**
In this sector 6 components were retained. In the first component ratio of total membership in all
primary societies to total population (with negative sign) and ratio of loans per primary society members were the dominant variables. In the second and third components cooperative societies per 100 sq. kms and primary cooperative societies per 100 sq. kms were having the dominant loadings. These three components were explaining around 84 percent of the total variance. In this sector Krishna (Table 5.12) was the most developed district followed by Srikakulam, East Godavari, Hyderabad, West Godavari, Guntur, Karimnagar, Vizianagaram and Medak. rest of the districts were having negative scores.

**Power Sector:**

In this sector 4 components were retained. In the first component per capita consumption of electricity (with a negative sign) was the dominant variable. In the second component percentage of villages electrified was having the dominant loading. In the third component percentage of electricity used for domestic purpose to total consumption of electricity was the dominant variable. These three components were explaining around 98 percent of the total variance. In this sector Nizamabad was the leading district in the followed by Srikakulam, Krishna, Guntur, Warangal, Anantapur, Ongole, Mahbubnagar, East Godavari, Hyderabad and Cuddapah. Rest of the districts were having negative scores.

**Education Sector:**

In this 6 components were retained. In the first component percentage of total literates to total population and percentage of female literates to total female population were having the dominant loadings. In the second and third components number of teachers per 1000 students at primary level and number of schools per 100 sq. kms (with a negative sign) were respectively having the dominant loadings. These three components were explaining around 86 percent of the total variance. In this sector Hyderabad (Table 5.12) was the most developed district followed by Krishna, West Godavari, Guntur, East Godavari, Cuddapah, Nellore, Chittoor and Ongole. Rest of the districts were having negative scores.

**Health Sector:**

In this sector 4 components were retained. In the first component number of hospital beds per lakh population and doctors per lakh population were having the dominant loadings. In the second and third components population served per hospital and hospitals per 100 sq. kms were respectively the dominant variables. These three components were explaining 99 percent of the total variance. In this sector Hyderabad was the most developed district (Table 5.12) followed by Vishkapatnam, Guntur, East Godavari, Krishna, Chittoor, Warangal and Kurnool. Rest of the
districts were having negative scores.

_Transport and Communication:_
In this sector 3 components were retained. In the first and second components number of post and telegraph offices per sq. km and ratio of post and telegraph offices per lakh population were having the dominant loadings. These two components were explaining around 97 percent of the total variance. In this sector Srikakulam was the most developed district (Table 5.12) followed by East Godavari, Cuddapah, Krishna, Kurnool, West Godavari, Chittoor, Medak and Anantapur. Rest of the districts were having negative scores.

_Urbanization:_
In this sector 3 components were retained. In the first component percentage of urban population to total population and concentration of urban population per sq. km were having the dominant loadings. In the second component average size of a town (with a negative sign) was having the dominant loading. These two components were explaining around 98 percent of the total variance. Here Hyderabad was found to be most urbanized district (Table 5.12) followed by Krishna, Vishkapatnam, Guntur, West Godavari, Nellore and East Godavari.

_Aggregate Composite Index:_
In this analysis 9 components were retained. In the first component banking, health and urbanization sectors were having the dominant loadings. In the second component agriculture, cooperative and transport & communication sectors were having the dominant loadings. In the third component industrial sector with a negative loading was prominent. These three components were explaining around 80 percent of the total variance. Here Hyderabad (Table 5.12) was found to be the most developed district followed by Nellore, Krishna, West Godavari, East Godavari, Guntur, Nizamabad, Srikakulam and Cuddapah.
### Table 5.12: Aggregate and Sectoral Indices using PCA for Total Andhra Pradesh 1981

<table>
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<th>AGRI</th>
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<th>EDUC</th>
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<th>TRANS</th>
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### 5.1.4 Principal Component Analysis for 1991

#### 5.1.4.1 Coastal Andhra Pradesh 1991

**Agriculture Sector:**

In this sector 8 components were retained. In the first component irrigation extent, oil engine pumps per 100 cultivators, tractors per 100 hectares and tractors per 100 cultivators were having the dominant loadings. In the second component and third component cropping intensity (with negative sign) and ratio of iron plough to 100 wooden ploughs were having the dominant loadings. These three components were explaining around 90 percent of the total variance. In this sector Nellore (Table 5.13) was the most developed district followed by West Godavari and...
Krishna. Vizianagaram was the least developed district.

**Industrial Sector:**
In this sector 7 components were retained. In the first component output per capita, availability of productive capital per industrial unit and per industrial worker were having the dominant loadings. In the second component industries per 100 sq. kms and industries per 100,000 population were having the dominant loadings. In the third component value added per capita was the dominant variable. These three components were explaining around 96 percent of the total variance. In this sector Visakhapatnam (Table 5.13) was the most developed district followed by East Godavari, Krishna and Guntur. Srikakulam was the least developed district.

**Banking Sector:**
In this sector 5 components were retained. In the first component banks per 100 sq. kms (with a negative sign), ratios of total deposits per capita and total credit per capita were having the dominant loadings. In the second and third components credit deposit ratio (with a negative sign) and population served per bank were having the dominant loadings. These three components were explaining 96 percent of the total variance. In this sector Visakhapatnam (Table 5.13) was the most developed district followed by Krishna, Guntur, West Godavari and East Godavari. Srikakulam was the least developed district.

**Cooperative Sector:**
In this sector 6 components were retained. In the first component population served per cooperative society, ratio of total membership in all cooperative societies to total population and ratio of total membership in all primary societies to total population were having the dominant loadings. In the second component primary cooperative societies per 100 sq. kms was having the dominant loading. These two components were explaining 79 percent of the total variance. In this sector Ongole (Table 5.13) was the leading district followed by Nellore, Krishna, Guntur and Vizianagaram. West Godavari was the least developed district.

**Power Sector:**
In this sector 4 components were retained. In the first component per capita consumption of electricity was the most dominant variable. In the second and third components consumption of electricity per sq. km and percentage of electricity used for domestic purpose to total consumption of electricity were having the dominant loadings. These three components were explaining 97 percent of the total variance. In this sector Visakhapatnam (Table 5.13) was the
leading district followed by Nellore, Krishna and West Godavari. Vizianagaram was the least developed district.

**Education Sector:**
In this sector 6 components were retained. In the first component percentage of total literates to total population, percentage of total female literates to total female population and percentage of total male literates to total male population were the dominant variables. In the second and third component ratios of schools per 100 sq. kms and number of teachers per 1000 students at primary level were having the dominant loadings. These three components were explaining around 88 percent of the total variance. In this sector West Godavari (Table 5.13) was the most developed district followed by Krishna, East Godavari and Nellore. Vizianagaram was the least developed district.

**Health Sector:**
In this sector 4 components were retained. In the first component number of hospital beds per lakh population and doctors per lakh population were having the dominant loadings. In the second component population served per hospital and hospitals per 100 sq. kms (with negative sign) were having the dominant loadings. These two components were explaining around 82 percent of the total variance. In this sector Visakhapatnam (Table 5.13) was the leading district followed by East Godavari and Guntur. Ongole was the least developed district for this sector.

**Transport and Communication:**
In this sector 3 components were retained. In the first component surfaced roads per 100 sq. kms and number of post and telegraph offices per sq. km were having the dominant loadings. In the second component number of post and telegraph offices per 10,000 population was having the dominant loading. These two components were explaining around 95 percent of the total variance. In this sector Krishna (Table 5.13) was the leading district followed by Vizianagaram, Srikakulam, Nellore, and West Godavari. Ongole was the least developed district.

**Urbanization:**
In this sector 3 components were retained. In the first component percentage of urban population to total population and concentration of urban population per sq. km were having the dominant loadings. In the second component average size of town was having a dominant negative loading. These two components were explaining around 93 percent of the total variance. In this sector Krishna (Table 5.13) was the most urbanized district followed by Visakhapatnam, Guntur, and
East Godavari. Srikakulam was having the least developed urbanization.

**Aggregate composite Index:**

In this analysis 8 components were retained. In the first component industrial, banking, health and urbanization sectors were having dominant loadings. In the second component agriculture and education were having the dominant loadings. In the third component cooperative sector was having the dominant loading. These three components were explaining 86 percent of the total variance. In this analysis Visakhapatnam (Table 5.13) turned out to be the most developed district followed by Krishna, West Godavari, Guntur, Nellore and East Godavari. Vizianagaram was the least developed district.

### Table 5.13: Aggregate and Sectoral Indices using PCA for Coastal Andhra Pradesh 1991

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<th>AGRI</th>
<th>IND</th>
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<th>ELECT</th>
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<td>-0.8161</td>
<td>-0.7739</td>
<td>-0.4604</td>
<td>-0.8289</td>
<td>-0.9073</td>
<td>-0.2400</td>
</tr>
<tr>
<td>NELL</td>
<td>1.3740</td>
<td>-0.0753</td>
<td>-0.4295</td>
<td>0.5213</td>
<td>0.5759</td>
<td>0.0123</td>
<td>-0.3228</td>
<td>0.4139</td>
<td>-0.2517</td>
<td>0.8682</td>
</tr>
</tbody>
</table>

### 5.1.4.2 Rayalaseema1991:

**Agricultural Sector:**

In this sector 3 components were retained. In the first component irrigation extent, irrigation intensity, ratio of oil engine pumps per 100 hectares, ratios of electric engine pumps per 100 hectares as well as per 100 cultivators, ratios of tractors per 100 hectares as well as per 100 cultivators and gross value of agricultural produce per cultivators were having dominant loadings. In the second component cropping intensity with a negative sign was having the dominant loading. These two components were explaining around 95 percent of the total variance. In this sector Chittoor (Table 5.14) was the leading district followed by Cuddapah. Kurnool was the least developed district.

**Industrial Sector:**

In this again 3 components were retained. In the first component industries per 100 sq. kms (with
a negative sign), output per capita and availability of productive capital per industrial worker were having the dominant loadings. In the second component availability of productive capital with a negative sign was having the dominant loading. These two components were explaining around 94 percent of the total variance. In this sector Cuddapah (Table 5.14) was the most developed district followed by Anantapur. Chittoor was the least developed district.

**Banking Sector:**
In this sector 3 components were retained. In the first component banks per 100 sq. kms (with negative sign) and credit per capita were having the dominant loadings. In the second component ratio of deposits per capita and credit deposit ratio (with a negative sign) were the dominant variables. These two components were explaining around 82 percent of the total variance. Chittoor (Table 5.14) turned to be the most developed district followed by Kurnool. Anantapur was least developed district.

**Cooperative Sector:**
In this sector 3 components were retained. In the first component ratio of membership in all cooperative societies to total population and primary cooperative societies per 100 sq. kms were having the dominant loadings. In the second component population served per cooperative society (with a negative sign) and ratio of membership in all primary societies to total population were having the dominant loadings. These two components were explaining around 88 percent of the total variance. Here again Chittoor (Table 5.14) was having a developed cooperative sector where as rest of districts were having negative scores with Cuddapah being the least developed.

**Power Sector:**
In this sector 3 components were retained. In the first component consumption of electricity per sq. km and per capita consumption of electricity were having the dominant loadings. In the second component percentage of electricity used for domestic purpose was having the dominant loading. These two components were explaining around 98 percent of the total variance. In this sector again Chittoor (Table 5.14) was the leading district followed by Cuddapah. And Kurnool was the least developed district.

**Education Sector:**
In this sector 3 components were retained. In the first component percentage of total literates to total population, percentage of female literates to total female population, percentage of total male literates to total male population and number of teachers per 1000 students at primary level were
having dominant loadings. These two components were explaining around 98 percent of the total variance. In this sector again Chittoor (Table 5.14) was the leading district followed by Cuddapah and Kurnool being the least developed district.

**Health Sector:**
In this sector again 3 components were retained. In the first component population served per hospital and number of hospital beds per lakh population were having the dominant loadings. In the second component hospitals per 100 sq. kms and doctors per lakh population were the dominant variables. These two components were explaining around 98 percent of the total variance. In this sector Kurnool (Table 5.14) was the leading district followed by Chittoor. Anantapur was having the least developed health sector.

**Transport and Communication:**
In this sector again three components were retained. In the first component surfaced roads per 100 sq. kms and ratio of post and telegraph offices per 10,000 population (with a negative sign) were having the dominant loadings. In the second component number of post and telegraph offices per lakh population was having the dominant loading. These two components were explaining around 99 percent of the total variance. In this sector Anantapur (Table 5.14) was the leading district followed by Chittoor. Kurnool was the least developed district.

**Urbanization:**
In this sector 3 components were retained. In the first component average size of a town and concentration of urban population per sq. km were having the dominant loadings. In the second component percentage of the urban population to total population was having the dominant loading. These two components were explaining around 94 percent of the total variance. Here Kurnool (Table 5.14) turned to be the most urbanized district followed by Anantapur. Cuddapah was the least urbanized district.

**Aggregate Composite Index:**
Here 3 components were retained. In the first component agriculture, banking, cooperative, power and education were the dominant sectors. In the second and third components health and transport and communication (with negative loadings) were the dominant sectors. These three components were explaining cent percent variance. In this analysis Chittoor (Table 5.14) was the most developed district followed by Cuddapah. Kurnool was the least developed district.
Table 5.14: Aggregate and Sectoral Indices using PCA for Rayalaseema 1991

<table>
<thead>
<tr>
<th>Sector</th>
<th>KURR</th>
<th>ANANT</th>
<th>CUDD</th>
<th>CHITT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRI</td>
<td>-0.7129</td>
<td>0.5537</td>
<td>0.3240</td>
<td>-0.9426</td>
</tr>
<tr>
<td>IND</td>
<td>-0.2535</td>
<td>-0.5453</td>
<td>-0.4342</td>
<td>-0.9472</td>
</tr>
<tr>
<td>BANK</td>
<td>0.9075</td>
<td>0.7380</td>
<td>0.4125</td>
<td>0.5017</td>
</tr>
<tr>
<td>COOP</td>
<td>-0.4203</td>
<td>-0.0813</td>
<td>-0.0360</td>
<td>-0.6965</td>
</tr>
<tr>
<td>ELECT</td>
<td>-0.7033</td>
<td>-0.5986</td>
<td>0.2626</td>
<td>0.5521</td>
</tr>
<tr>
<td>EDUC</td>
<td>-0.8438</td>
<td>-0.5555</td>
<td>-0.4856</td>
<td>0.9868</td>
</tr>
<tr>
<td>HEALTH</td>
<td>0.6715</td>
<td>0.7750</td>
<td>0.4125</td>
<td>0.5017</td>
</tr>
<tr>
<td>TRANS</td>
<td>-0.7688</td>
<td>-0.5079</td>
<td>-0.5079</td>
<td>0.5116</td>
</tr>
<tr>
<td>URBAN</td>
<td>0.9075</td>
<td>0.1640</td>
<td>-0.5079</td>
<td>-0.4965</td>
</tr>
<tr>
<td>AGG INDEX</td>
<td>0.5116</td>
<td>0.3475</td>
<td>0.5319</td>
<td>0.3475</td>
</tr>
</tbody>
</table>

5.1.4.3 Telangana 1991

**Agricultural Sector:**
In this sector 8 components were retained. In the first component cropping intensity, irrigation extent, electric engine pumps per 100 hectare, electric engine pumps per 100 hectare as well as per 100 cultivators, tractors per 100 hectares and gross value of agricultural produce per hectare were having the dominant loadings. In the second component ratio of iron plough per 100 wooden plough was the dominant variable. In the third component ratio of oil engine pumps per 100 hectares as well as per 100 cultivators (both with negative signs) were having the dominant loadings. These three components were explaining around 88 percent of the total variance. In this sector Karimnagar (Table 5.15) was the leading district followed by Nalgonda, Khammam, Nizamabad and Warangal. Mahbubnagar was the least developed district.

**Industrial Sector:**
In this sector 7 components were retained. In the first component industries per 100,000 population (with a negative sign), output per capita, value added per capita and availability of productive capital per industrial worker were having the dominant loadings. In the second component industries per 100 sq. kms and percentage of industrial workers to total workers were having the dominant loadings. These two components were explaining around 95 percent of the total variance. In this sector Medak (Table 5.15) was the leading district followed by Nalgonda, Khammam, and Hyderabad. Nizamabad was the least developed district.

**Banking Sector:**
In this sector 5 components were retained. In the first component population served per bank, deposits per capita as well total credit per capita were having dominant loadings. In the second component credit deposit ratio was having a dominant negative loading. These two components...
were explaining around 94 percent of the total variance. In this sector Hyderabad (Table 5.15) was the leading district followed by Nizamabad. Rest of the districts were having negative scores with Nalgonda as the least developed district.

**Cooperative Sector**:

In this sector 6 components were retained. In the first component ratio of membership in all cooperative societies to total population was having the dominant loading. In the second component cooperative societies per 100 sq. kms (with a negative sign) was the dominant variable. In the third component population served per cooperative society and primary cooperative societies per 100 sq. kms were having the dominant loadings. These three components were explaining around 82 percent of the total variance. In this sector Khammam (Table 5.15) was the leading district followed Karimnagar, Nalgonda, Nizamabad and Medak. Hyderabad turned out to be the least developed district in this regard.

**Power Sector**:

In this sector 4 components were retained. In the first component consumption of electricity per sq. km, percentage of electricity used for domestic purpose were having the dominant loadings. In the second component per capita consumption of electricity was having the dominant loading. These two components were explaining around 79 percent of the total variance. In this sector Hyderabad (Table 5.15) was the leading district followed by Nizamabad. Rest of the districts were having negative signs with Warangal being the least developed district.

**Education Sector**:

In this sector 6 components were retained. In the first component percentage of total literates to total population, percentage of total female literates to total female population and number of schools per 100 sq. kms were having the dominant loadings. In the second and third components ratios of number of teachers per 1000 students at secondary level and number of teachers per 1000 students at primary level (with negative sign) were having the dominant loadings. These three components were explaining around 85 percent of the total variance. In this sector Hyderabad (Table 5.15) was the leading district followed by Nalgonda, Khammam and Warangal. Medak was the least developed district.

**Health Sector**:

In this sector 4 components were retained. In the first component hospitals per 100 sq. kms,
number of hospital beds per lakh population and doctors per lakh population were having the dominant loadings. In the second component population served per hospital was the dominant variable. These two components were explaining around 99 percent of the total variance. In this sector again Hyderabad (Table 5.15) was the leading district followed by Nizamabad. Rest of the districts were having negative scores with Nalgonda being the least developed district.

Transport and Communication:
In this sector 3 components were retained. In the first component roads per 100 sq. kms was having the dominant loading. In the second component ratio of post and telegraph offices per 10,000 population and per sq. km were the dominant variables. These two components were explaining around 88 percent of the total variance. In this sector Medak (Table 5.15) was the leading district followed by Hyderabad, Karimnagar and Warangal. Adilabad was the least developed district.

Urbanization:
In this sector 3 components were retained. In the first component itself all the three variables were having dominant loading. And this component was explaining around 97 percent of the total variance. Here once again Hyderabad (Table 5.15) was the most urbanized district and rest of the districts were having negative scores. Mahbubnagar was the least urbanized district.

Aggregate composite Index:
In this analysis 8 components were retained. In the first component banking, power, health and urbanization sectors were having dominant loadings. In the second component agriculture and cooperative were the dominant sectors. In the third component industrial sector with a negative loading was the dominant sector. These three sectors were explaining around 88 percent of the total variance. In this analysis once again Hyderabad (Table 5.15) turned out be the most developed district followed by Nizamabad, Karimnagar and Nalgonda. Mahbubnagar was the least developed district in the region.
<table>
<thead>
<tr>
<th></th>
<th>HYD</th>
<th>NZMD</th>
<th>MEDAK</th>
<th>MABNG</th>
<th>NALG</th>
<th>WARN</th>
<th>KHAMM</th>
<th>KARNG</th>
<th>ADBLD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGRI</strong></td>
<td>-0.4546</td>
<td>0.6125</td>
<td>-0.2311</td>
<td>-0.6131</td>
<td>0.5412</td>
<td>0.2379</td>
<td>0.5018</td>
<td>0.6418</td>
<td>-1.0363</td>
</tr>
<tr>
<td><strong>IND</strong></td>
<td>0.1325</td>
<td>0.0025</td>
<td>1.1214</td>
<td>0.3736</td>
<td>0.7808</td>
<td>0.5630</td>
<td>0.7425</td>
<td>0.7425</td>
<td>-0.7135</td>
</tr>
<tr>
<td><strong>BANK</strong></td>
<td>2.0599</td>
<td>0.2397</td>
<td>-0.3001</td>
<td>-0.9798</td>
<td>0.3500</td>
<td>-0.2407</td>
<td>0.7425</td>
<td>0.5896</td>
<td>-0.3242</td>
</tr>
<tr>
<td><strong>COOP</strong></td>
<td>-0.7133</td>
<td>0.0477</td>
<td>0.1945</td>
<td>-0.5978</td>
<td>0.3300</td>
<td>-0.3178</td>
<td>0.6168</td>
<td>0.5896</td>
<td>-0.2381</td>
</tr>
<tr>
<td><strong>ELECT</strong></td>
<td>1.6025</td>
<td>0.0477</td>
<td>-0.2964</td>
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<td>0.4646</td>
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<td>0.0668</td>
<td>-0.2629</td>
</tr>
<tr>
<td><strong>EDUCAT</strong></td>
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<td>-0.5668</td>
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<tr>
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<td><strong>TRANS</strong></td>
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<td>-0.2019</td>
<td>-0.2608</td>
</tr>
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<td><strong>URBAN</strong></td>
<td>2.5664</td>
<td>-0.1837</td>
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<td>-0.5645</td>
<td>-0.0959</td>
<td>-0.0726</td>
<td>-0.3195</td>
<td>0.3024</td>
<td></td>
</tr>
<tr>
<td><strong>AGG INDEX</strong></td>
<td>0.9463</td>
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<td>0.1319</td>
<td>0.5441</td>
<td>-0.959</td>
<td>0.0659</td>
<td>-0.0350</td>
<td>0.3204</td>
<td></td>
</tr>
</tbody>
</table>

### 5.1.4.4 Total Andhra Pradesh 1991:

**Agricultural Sector:**
In this sector 12 components were retained. In the first component irrigation extent, tractors per 100 hectares as well as per 100 cultivators and gross value of agricultural produce per hectare were having dominant loadings. In the second component electric engine pumps per 100 hectare as well per 100 cultivators were having the dominant loadings. In the third component ratio of iron plough to 100 wooden plough with a negative sign was having the dominant loading. These three components were explaining around 81 percent of the total variance. In this sector Karimnagar (Table 5.16) was found to be the most developed district followed by West Godavari, Nellore, Warangal, Nalgonda, Chittoor, East Godavari, Krishna and Medak. Rest of the districts were having negative scores.

**Industrial Sector:**
In this sector 7 components were retained. In the first component industries per 100 sq. kms and per 100,000 population (both with negative sign) and output per capita were having prominent loadings. In the second component availability of productive capital per industrial unit as well as per industrial worker were having dominant loadings. In the third component value added per capita was having the most dominant loading. These three components were explaining around 97 percent of the total variance. Here Vishkapatnam was the most developed district in the state (Table 5.16) followed by Khammam, Medak, Nalgonda, East Godavari, Hyderabad, Nellore, Cuddapah and Anantapur. Rest of the districts were having negative scores.
**Banking Sector:**
In this sector five components were retained. In the first component population served per bank, ratios of total deposits per capita and total credit per capita were having the dominant loadings. In the second and third components credit deposit ratio (with a negative sign) and banks per 100 sq. kms were the dominant variables. These components were explaining around 96 percent of the total variance. In this sector Hyderabad was found to be the most developed district (Table 5.16) followed by Vishakhapatnam, Krishna, Guntur, West Godavari and East Godavari. Rest of the districts in the state were having negative scores.

**Cooperative Sector:**
In this sector 6 components were retained. In the first component ratio of membership in all cooperative societies to total population and ratio of total membership in all primary societies to total population were having the dominant loadings. In the second and third components primary cooperative societies and ratio of loans per primary society members (with negative sign) were the prominent variables. These three components were explaining around 80 percent of the total variance. In this sector Krishna (Table 5.16) developed district followed by Ongole, Nellore, Vizianagaram, Guntur, East Godavari, Cuddapah, Chittoor, Srikakulam, Anantapur and West Godavari. Rest of the districts were having negative scores.

**Power Sector:**
In this sector 4 components were retained. In the first component per capita consumption of power (with a negative sign) was having the dominant loading. In the second component and third component consumption of electricity per 100 sq. kms and percentage of villages electrified were having the most dominant loadings. These three components were explaining around 97 percent of the total variance. Here East Godavari (Table 5.16) was the most developed district followed by Vizianagaram, Guntur, Krishna, Hyderabad, Ongole, West Godavari, Srikakulam, Kurnool, Anantapur, Mahbubnagar, Vishakhapatnam and Nizamabad. Rest of the districts were having negative scores.

**Education Sector:**
In this sector 6 components were retained. In the first component percentage of total literates to total population and percentage of total female literates to total female population were having
dominant loadings. In the second component ratio of teachers per 1000 students at secondary level was the most dominant variable. In the third component percentage of total literates to total male population (with a negative sign) and number of schools per 100 sq. kms were the dominant variables. These three components were explaining around 85 percent of the total variance. In this sector West Godavari (Table 5.16) was the most developed district followed by Krishna, East Godavari, Hyderabad, Chittoor, Guntur, Kurnool, Vishkapatnam, Nellore and Cuddapah. Rest of the districts were having negative scores.

**Health Sector:**
In this sector 4 components were retained. In the first component number of hospital beds per lakh population and doctors per lakh population were having the dominant loadings. In the second component population served per hospital was the prominent variable. These two components were explaining around 86 percent of the total variance. In this sector Hyderabad (Table 5.16) was the most developed district followed by Vishkapatnam, Chittoor, Warangal, Kurnool and Guntur. Rest of the districts were having negative scores.

**Transport and Communication:**
In this sector 3 components were retained. In the first component roads per 100 sq. kms (with negative sign) and total post and telegraph offices per 10,000 population were dominant loadings. In the second component total post and telegraph offices per sq. km was the most dominant variable. These two components were explaining around 84 percent of the total variance. In this sector Anantapur (Table 5.16) was the most developed district followed by Vizianagaram, Cuddapah, Kurnool, Nellore, Chittoor, Mahbubnagar, Warangal and Krishna. Rest of the districts were having negative scores.

**Urbanization:**
In this sector 3 components were retained. In the first component itself all the three variables were having dominant loadings. This component was explaining around 94 percent of the total variance. Hyderabad (Table 5.16) was the most urbanized district followed by Krishna, Vishkapatnam, East Godavari, Guntur Warangal. Rest of the districts were not well urbanized.

**Aggregate Composite Index:**
In this analysis 9 components were retained. In the first component banking, health and
Urbanization sectors were having the dominant loadings. In the second component cooperative sector was having the dominant loading. In the third and fourth components agriculture and industrial sectors with a negative loadings were prominent. These four components were explaining around 83 percent of the total variance. Here West Godavari (Table 5.16) was the most developed district in the state followed by Krishna, East Godavari, Hyderabad, Nellore, Karimnagar, Chittoor, Vishakapatnam, Nalgonda, Guntur, Cuddapah and Warangal. Rest of the districts were having negative scores.

<table>
<thead>
<tr>
<th>Table 5.16 : Aggregate and Sectoral Indices using PCA for Total Andhra Pradesh 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SRIK</strong></td>
</tr>
<tr>
<td><strong>VIZI</strong></td>
</tr>
<tr>
<td><strong>VISHKA</strong></td>
</tr>
<tr>
<td><strong>E GOD</strong></td>
</tr>
<tr>
<td><strong>W GOD</strong></td>
</tr>
<tr>
<td><strong>KRISH</strong></td>
</tr>
<tr>
<td><strong>GUNT</strong></td>
</tr>
<tr>
<td><strong>ONGOL</strong></td>
</tr>
<tr>
<td><strong>NELL</strong></td>
</tr>
<tr>
<td><strong>KURN</strong></td>
</tr>
<tr>
<td><strong>ANNAT</strong></td>
</tr>
<tr>
<td><strong>CUDD</strong></td>
</tr>
<tr>
<td><strong>CHITL</strong></td>
</tr>
<tr>
<td><strong>HYD</strong></td>
</tr>
<tr>
<td><strong>NZMD</strong></td>
</tr>
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<td><strong>MEDAK</strong></td>
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<td><strong>MABNG</strong></td>
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<td><strong>NALG</strong></td>
</tr>
<tr>
<td><strong>WARN</strong></td>
</tr>
<tr>
<td><strong>KHAMM</strong></td>
</tr>
<tr>
<td><strong>KARG</strong></td>
</tr>
<tr>
<td><strong>ADBLD</strong></td>
</tr>
</tbody>
</table>

5.2 **TAXONOMIC METHOD**

5.2.1 Taxonomic Analysis for 1961

5.2.1.1 **Coastal Andhra 1961**
Agricultural Sector:
In this sector West Godavari was the leading district followed by East Godavari, Krishna, Guntur, Nellore and Visakhapatnam. Srikakulam was the least developed district. This was quite evident from the raw data itself. Except for few variables like cropping intensity and irrigation extent West Godavari was the leading district for rest of the variables. As per the classification of the districts into highly developed, moderately developed and less developed was concerned the limits were as follows:
highly developed < 0.46746
0.46746 < moderately developed < 0.82249
0.82249 < less developed.
According to this classification all the districts in Coastal Andhra were highly or moderately developed. (Table 5.17)

Industrial Sector:
In this sector West Godavari was the leading district followed by Guntur, Krishna East Godavari, Vishakapatnam and Srikakulam. Nellore was the least developed district. This again was quite clear from the raw data itself. The limits for the classification were as follows:
highly developed < 0.51489
0.51489 < moderately developed < 0.8473
0.8473 < less developed.
According to this classification (Table 5.17) only West Godavari was the most developed. And Nellore was the least developed district. rest of the districts were moderately developed districts.

Banking Sector:
In this sector Krishna was the leading district followed by West Godavari, Guntur, East Godavari, Vishkapatnam and Srikakulam. Nellore was the least developed district. The limits for the classification were as follows:
highly developed < 0.59851
0.59851 < moderately developed < 0.86617
0.86617 < less developed.
According to this classification (Table 5.17) only Krishna was the highly developed district in this sector and Srikakulam and Nellore were the least developed districts. Rest of the districts were moderately developed.

Cooperative Sector:
In this sector again West Godavari was the leading district followed by Krishna, East Godavari,
Srikakulam and Vishkapatnam. Guntur and Nellore were less developed districts. The limits for classification were as follows:

highly developed < 0.52384

0.52384 < moderately developed < 0.84128

0.84128 < less developed.

According to this classification (Table 5.17) West Godavari and Krishna were having highly developed cooperative sector. Guntur and Nellore were less developed districts. And the remaining districts were having moderately developed Cooperative sector.

**Power Sector:**

Krishna was the leading district in this sector followed by East Godavari, Vishkapatnam, West Godavari, Guntur and Nellore. Srikakulam was the least developed district. The limits for the classification were as follows:

highly developed < 0.65382

0.65382 < moderately developed < 0.88461

0.88461 < less developed.

According to this classification (Table 5.17) Krishna was having developed power sector. Vishakapatnam, East Godavari, West Godavari and Guntur were moderately developed. Nellore and Srikakulam were the least developed districts.

**Education Sector:**

West Godavari, Krishna and Guntur were highly developed in this sector. East Godavari, Nellore and Srikakulam were moderately developed. Vishkapatnam was the least developed district (Table 5.17). The limits for the classification were as follows:

highly developed < 0.62563

0.62563 < moderately developed < 0.81282

0.81282 < less developed.

**Health Sector:**

Here Vishakapatnam, Guntur, East Godavari and West Godavari were highly developed. Krishna was moderately developed and Nellore was the least developed district (Table 5.17). The limits for the classification were as follows:

highly developed < 0.72601

0.72601 < moderately developed < 0.86301
0.86301 < less developed.

Transport and Communication:
West Godavari, Krishna and Guntur were having highly developed transport sector. Srikakulam and East Godavari were moderately developed. Vishkapatnam and Nellore were least developed (Table 5.17). The limits for the classification were as follows:
highly developed < 0.66668
0.66668 < moderately developed < 0.83334
0.83334 < less developed.

Urbanization:
Krishna, East Godavari, Guntur, Vishkapatnam and West Godavari were highly urbanized. Srikakulam and Nellore were least urbanized (Table 5.17). The limits for the classification were as follows:
highly developed < 0.44516
0.44516 < moderately developed < 0.72258
0.72258 < less developed.

Aggregate Composite Index:
At an aggregate level West Godavari was the most developed district, followed by Krishna. East Godavari, Guntur and Vishkapatnam were the moderately developed districts. Srikakulam and Nellore were found to be the least developed districts (Table 5.17). The limits for the classification were as follows:
highly developed < 0.57402
0.57402 < moderately developed < 0.85801
0.85801 < less developed.

<table>
<thead>
<tr>
<th>Districts</th>
<th>AGRI</th>
<th>IND</th>
<th>BANK</th>
<th>COOP</th>
<th>POWER</th>
<th>EDUCA</th>
<th>HEALTH</th>
<th>TRANS</th>
<th>URBAN</th>
<th>AGGREGATE</th>
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<td>0.9193</td>
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</tbody>
</table>
5.2.1.2 Rayalaseema 1961:

**Agricultural Sector:**
In this sector Chittoor was the leading district. Followed by Cuddapah, Kurnool and Anantapur. Except Chittoor remaining three districts were moderately developed when compared within the Rayalaseema (Table 5.18). The limits for the classification were as follows:
highly developed < 0.3396
0.3396 < moderately developed < 0.7799
0.7799 < less developed.

**Industrial Sector:**
In this sector Kurnool was the leading district and it was highly developed. Both Chittoor and Anantapur were moderately developed. Cuddapah was industrially the most backward district in the region (Table 5.18). The limits for the classification were as follows:
highly developed < 0.28516
0.28516 < moderately developed < 0.76172
0.76172 < less developed.

**Banking Sector:**
In this sector Kurnool was the leading district followed by Anantapur and Chittoor. Cuddapah was the least developed district. (Table 5.18). The limits for the classification were as follows:
highly developed < 0.49094
0.49094 < moderately developed < 0.83031
0.83031 < less developed.

**Cooperative Sector:**
In this sector Chittoor was a highly developed district. Kurnool and Anantapur were moderately developed district. Cuddapah was the least developed district. The limits for the classification were as follows:
highly developed < 0.39612
0.39612 < moderately developed < 0.798871
0.798871 < less developed.

**Power Sector:**
In this sector no district can be identified as a highly developed district. Kurnool, Anantapur and Chittoor were moderately developed districts. And Cuddapah was the least developed district (Table 5.18). The limits for the classification were as follows:

highly developed < 0.59792
0.59792 < moderately developed < 0.86597
0.86597 < less developed.

**Education Sector:**

In this sector again no district can be identified as highly developed district. Kurnool, Cuddapah and Chittoor were moderately developed districts. Anantapur was the least developed district (Table 5.18). The limits for the classification were as follows:

highly developed < 0.24966
0.24966 < moderately developed < 0.74989
0.74989 < less developed.

**Health Sector:**

In this again no district can be identified as highly developed district. Chittoor, Kurnool and Anantapur were moderately developed districts. And Cuddapah was the least developed district (Table 5.18). The limits for the classification were as follows:

highly developed < 0.56199
0.56199 < moderately developed < 0.854
0.854 < less developed.

**Transport and Communication:**

In this sector Cuddapah was a highly developed district. Kurnool and Chittoor were moderately developed. And Anantapur was the least developed district (Table 5.18) The limits for the classification were as follows:

highly developed < 0.63051
0.63051 < moderately developed < 0.87684
0.87684 < less developed.

**Urbanization:**

Kurnool was a highly developed urbanized district. Anantapur and Cuddapah were moderately urbanized. And Chittoor was the least urbanized district (Table 5.18). The limits for the classification were as follows:
highly developed < 0.13331
0.13331 < moderately developed < 0.7111
0.7111 < less developed.

**Aggregate Composite Index:**
At an aggregate level Chittoor was a highly developed district. Kurnool and Anantapur were moderately developed districts. And Cuddapah was the least developed (Table 5.18) The limits for classification were as follows:
highly developed < 0.65011
0.65011 < moderately developed < 0.88337
0.88337 < less developed.

<table>
<thead>
<tr>
<th>Table 5.18 : Aggregate and Sectoral Indices using taxonomic Method for Rayalaseema 1961</th>
</tr>
</thead>
<tbody>
<tr>
<td>KURN</td>
</tr>
<tr>
<td>0.6824</td>
</tr>
<tr>
<td>0.84752</td>
</tr>
<tr>
<td>0.91129</td>
</tr>
<tr>
<td>0.65775</td>
</tr>
</tbody>
</table>

**5.2.1.3 Telengana 1961**

**Agricultural Sector:**
In this sector Hyderabad was the leading district followed by Nalgonda, Karimnagar, Warangal, Medak, Nizamabad, Mahbubnagar and Khammam. Only Hyderabad was the highly developed district and Adilabad was the least developed district. Rest of the districts were moderately developed (Table 5.19). The limits for the classification were as follows:
highly developed < 0.71047
0.71047 < moderately developed < 0.90349
0.90349 < less developed.

**Industrial Sector:**
In this Nizamabad and Hyderabad were the highly developed districts in the region. Medak was the least developed district. Rest of the districts were moderately developed (Table 5.19). The limits for the classification were as follows:
highly developed < 0.41138
0.41138 < moderately developed < 0.80379
0.80379 < less developed.
Banking Sector:
In this sector Hyderabad and Adilabad were the most developed districts. Rest of the seven districts were classified as moderately developed districts (Table 5.19). The limits for the classification were as follows:
- Highly developed < 0.67841
- 0.67841 < Moderately developed < 0.8928
- 0.8928 < Less developed.

Cooperative Sector:
In this sector Nizamabad and Karimnagar were highly developed districts. Khammam and Adilabad were the least developed districts. Remaining five districts were classified as moderately developed districts (Table 5.19). The limits for the classification were as follows:
- Highly developed < 0.56056
- 0.56056 < Moderately developed < 0.85352
- 0.85352 < Less developed.

Power Sector:
In this sector Hyderabad was the most developed district. And the remaining eight districts were moderately developed districts (Table 5.19). The limits for the classification were as follows:
- Highly developed < 0.63696
- 0.63696 < Moderately developed < 0.87899
- 0.87899 < Less developed.

Education Sector:
In this sector again Hyderabad was the only highly developed district. And the remaining eight districts were moderately developed districts (Table 5.19). The limits for the classification were as follows:
- Highly developed < 0.73032
- 0.73032 < Moderately developed < 0.91011
- 0.91011 < Less developed.

Health Sector:
In this sector again Hyderabad was the only highly developed district. Remaining eight districts were moderately developed. (Table 5.19). The limits for the classification were as follows:
- Highly developed < 0.66651
0.66651 < moderately developed < 0.88884
0.88884 < less developed.

**Transport Sector:**

In sector only Nizamabad was the highly developed district. Khammam and Adilabad were the least developed district. Remaining six districts were moderately developed districts (Table 5.19). The limits for the classification were as follows:

highly developed < 0.29073
0.29073 < moderately developed < 0.76358
0.76358 < less developed.

**Urbanization:**

Hyderabad was the only highly urbanized district, remaining eight districts were moderately urbanized (Table 5.19). The limits for the classification were as follows:

highly developed < 0.37041
0.37041 < moderately developed < 0.79014
0.79014 < less developed.

**Aggregate Composite Index:**

At the aggregate level Hyderabad was the only highly developed district. Rest of the eight districts turned out to be moderately developed (Table 5.19). The limits for the classification were as follows:

highly developed < 0.71983
0.71983 < moderately developed < 0.90646
0.90646 < less developed.

| Table 5.19: Aggregate and Sectoral Indices using Taxonomic Method for Telangana 1961 |
|--------------------------------------|-------------|-----------|-------------|-------------|---------------|-------------|---------------|---------------|---------------|
|                                    | AGGRI       | AGRI      | IND         | BANKS       | COOP         | POWER        | EDUC         | HEALTH       | TRANS         | URBAN        |
| HYD                                 | 0.58195     | 0.65366   | 0.34428     | 0.52502     | 0.73838      | 0.45889      | 0.57855      | 0.4681       | 0.6857        | 0             |
| NZMD                                | 0.74202     | 0.8139    | 0.24305     | 0.79529     | 0.47165      | 0.72421      | 0.84876      | 0.81144      | 0.16211       | 0.62288       |
| MEDAK                               | 0.85196     | 0.81274   | 0.81599     | 0.82108     | 0.56444      | 0.83336      | 0.80983      | 0.83859      | 0.30227       | 0.70625       |
| MABNG                               | 0.87768     | 0.84753   | 0.78182     | 0.86011     | 0.74078      | 0.8533       | 0.83395      | 0.43867      | 0.68397       |               |
| NALG                                | 0.83703     | 0.72412   | 0.7392      | 0.86415     | 0.70585      | 0.7994       | 0.86518      | 0.8114       | 0.3995        | 0.67988       |
| WARGL                               | 0.79658     | 0.75643   | 0.49199     | 0.83713     | 0.80726      | 0.67624      | 0.87363      | 0.79194      | 0.45573       | 0.6202        |
| KHAM                                 | 0.90539     | 0.90082   | 0.70154     | 0.86363     | 0.88055      | 0.8704       | 0.83334      | 0.84293      | 0.8209        | 0.64595       |
| KARNG                               | 0.84647     | 0.75307   | 0.77965     | 0.82768     | 0.51534      | 0.82896      | 0.90985      | 0.82          | 0.52976       | 0.70279       |
| ADBLD                                | 0.8772      | 1.00054   | 0.57075     | 0.67638     | 0.91712      | 0.77697      | 0.82548      | 0.78107      | 0.94974        | 0.56053       |
5.2.1.4 Total Andhra Pradesh 1961

Agricultural Sector:
In this sector Chittoor was most developed district in the Andhra Pradesh. Along with it East Godavari, West Godavari and Krishna were the highly developed districts in the state. Khammam and Adilabad were the less developed districts. Rest of the districts were moderately developed (Table 5.20). The limits for the classification were as follows:
highly developed < 0.62005
0.62005 < moderately developed < 0.87335
0.87335 < less developed.

Industrial Sector:
In the sector Nizamabad was the most developed district. West Godavari, Guntur and Hyderabad were also the highly developed districts. Nalgonda, Cuddapah, Mahbubnagar, Karimnagar and Medak were the less developed districts. Rest of the districts were moderately developed (Table 5.20). The limits for the classification were as follows:
highly developed < 0.63329
0.63329 < moderately developed < 0.87776
0.87776 < less developed.

Banking Sector:
In this sector Hyderabad was the most developed district. Followed by Krishna. Both these districts were highly developed. Only Khammam was the less developed district in the state. Rest of the districts were moderately developed (Table 5.20). The limits for the classification were as follows:
highly developed < 0.69346
0.669346 < moderately developed < 0.89782
0.89782 < less developed.

Cooperative Sector:
In this sector top five districts were in Coastal Andhra. Krishna was the leading district followed by West Godavari, East Godavari and Srikakulam. All these districts were highly developed. Kurnool, Khammam and Adilabad were the least developed districts in the state. Rest of the districts were moderately developed (Table 5.20). The limits for the classification were as follows:
highly developed < 0.55501
In this sector again Krishna (Table 5.20) was found to be the most developed district. Followed by Hyderabad, East Godavari and West Godavari. All these were highly developed districts. Medak and Karimnagar were found to be the least developed districts. Rest of the districts were found to be moderately developed. The limits for the classification were as follows:

highly developed $< 0.71959$

$0.71959 < $ moderately developed $< 0.90653$

$0.90653 < less developed.$

In this sector West Godavari, Krishna, Guntur and Hyderabad were found to be the highly developed districts. Nizamabad, Adilabad and Karimnagar were the least developed districts (Table 5.20). Rest of the districts were found to be moderately developed. The limits for the classification were as follows:

highly developed $< 0.60504$

$0.60504 < $ moderately developed $< 0.86835$

$0.86835 < less developed.$

In this sector Hyderabad and Vishakapatnam were the highly developed districts. Rest of the districts were moderately developed (Table 5.20). The limits for classification were as follows:

highly developed $< 0.63799$

$0.63799 < $ moderately developed $< 0.87933$

$0.87933 < less developed.$

In this sector West Godavari was the leading district. Followed by Krishna and Guntur. All the three districts were highly developed. Hyderabad, Khammam and Adilabad were the least developed districts. rest of the districts were moderately developed (Table 5.20). The limits for the classification were as follows:

highly developed $< 0.46416$

$0.46416 < $ moderately developed $< 0.82139$
0.82139 < less developed.

Urbanization:
Hyderabad was found to be the most urbanized district. And rest of the districts were classified as moderately urbanized districts (Table 5.20). The limits for the classification were as follows:
highly developed < 0.49397
0.49397 < moderately developed < 0.83132
0.83132 < less developed.

Aggregate Composite Index:
At the aggregate level West Godavari was the most developed district followed by Krishna, Hyderabad and East Godavari. All these districts were highly developed. Karimnagar, Mahbubnagar, Adilabad and Khammam were the least developed districts (Table 5.20). The limits for the classification were as follows:
highly developed < 0.70587
0.70587 < moderately developed < 0.90196
0.90196 < less developed.

Table 5.20: Aggregate and Sectoral Indices using Taxonomic Method for Total Andhra Pradesh 1961

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<th>District</th>
<th>AGGRE</th>
<th>AGRI</th>
<th>IND</th>
<th>BANK</th>
<th>COOP</th>
<th>POWER</th>
<th>EDUC</th>
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</tbody>
</table>
5.2.2 Taxonomic Analysis for 1971

5.2.2.1 Coastal Andhra 1971

Agricultural Sector:
In this sector West Godavari was the most developed district. And it was the only highly developed district in the region. Ongole, Vishkapatnam and Srikakulam were the least developed districts. Remaining four districts were moderately developed (Table 5.21). The limits for classification were:
highly developed < 0.40377
0.40377 < moderately developed < 0.80126
0.80126 < less developed.

Industrial Sector:
In this sector Vishkapatnam was the leading district. And it was the only highly developed district in the region. Ongole and Nellore were the least developed districts. Remaining districts were moderately developed (Table 5.21). The limits for the classification were:
highly developed < 0.57305
0.57305 < moderately developed < 0.85768
0.85768 < less developed.

Banking Sector:
Here Krishna was the highly developed district in this sector. And Srikakulam was the least developed district. Remaining districts were moderately developed (Table 5.21). The limits for the classification were as follows:
highly developed < 0.5425
0.5425 < moderately developed < 0.8475
0.8475 < less developed.

Cooperative Sector:
Here East Godavari and Krishna were having highly developed cooperative sector. Ongole and Nellore were the least developed districts. Remaining ones were having moderately developed cooperative sector (Table 5.21). The limits for the classification were as follows:
highly developed < 0.54391
0.54391 < moderately developed < 0.84797
0.84797 < less developed.

**Power Sector:**
Krishna and West Godavari were highly developed in this sector. And Ongole was the only district which was least developed. Remaining districts were moderately developed (Table 5.21). The limits for classification were as follows:
highly developed < 0.63143
0.63143 < moderately developed < 0.87714
0.87714 < less developed.

**Education Sector:**
In this sector Krishna was the leading and the only highly developed district. Srikakulam and Vishkapatnam were the least developed districts. Remaining districts were moderately developed (Table 5.21). The limits for classification were as follows:
highly developed < 0.4232
0.4232 < moderately developed < 0.80773
0.80773 < less developed.

**Health Sector:**
Guntur and Vishkapatnam were having highly developed health sector. Ongole was the least developed. Remaining were moderately developed (Table 5.21). The limits for classification were as follows:
highly developed < 0.51713
0.51713 < moderately developed < 0.83904
0.83904 < less developed.

**Transport Sector:**
West Godavari was the only district having a highly developed transport sector. Vishkapatnam and Ongole were the least developed districts. Remaining were moderately developed (Table 5.21). The limits for classification were as follows:
highly developed < 0.51809
0.51809 < moderately developed < 0.83936
0.83936 < less developed.

**Urbanization:**

Krishna and Guntur were highly urbanized. Nellore and Srikakulam were least urbanized. Remaining districts were moderately urbanized (Table 5.21). The limits for classification were as follows:

- highly developed < 0.17098
- 0.17098 < moderately developed < 0.72366
- 0.72366 < less developed.

**Aggregate Composite Index:**

At the aggregate level West Godavari, Krishna and East Godavari were highly developed districts. Srikakulam and Ongole were the least developed districts. Remaining ones were moderately developed (Table 5.21). The limits for the classification were as follows:

- highly developed < 0.59544
- 0.59544 < moderately developed < 0.86515
- 0.86515 < less developed.

<p>| Table 5.21 : Aggregate and Sectoral Indices using Taxonomic Method for Coastal Andhra Pradesh 1971 |
| ------------------------------------------------- | ----------- | ----------- | ----------- | ----------- | ----------- | ----------- | ----------- | ----------- | ----------- | ----------- |</p>
<table>
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<th>EDUC</th>
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5.2.2.2 Rayalaseema1971

**Agricultural Sector:**

Kurnool was the most developed district. Anantapur was the least developed. Remaining two were moderately developed (Table 5.22). The limits for classification were as follows:

- highly developed < 0.50723
- 0.50723 < moderately developed < 0.83574
0.83574 < less developed.

**Industrial Sector:**
Chittoor was the only highly developed district and Cuddapah was the least developed. Remaining two were moderately developed (Table 5.22). The limits for classification were as follows:
highly developed < 0.65092
0.65092 < moderately developed < 0.88364
0.88364 < less developed.

**Banking Sector:**
In this sector Kurnool was the most developed district. And Cuddapah was the least developed district. remaining two districts were moderately developed (Table 5.22). The limits for classification were as follows:
highly developed < 0.64902
0.64902 < moderately developed < 0.88301
0.88301 < less developed.

**Cooperative Sector:**
Chittoor was having a highly developed cooperative sector. And Cuddapah was least developed. Remaining two districts were moderately developed (Table 5.22). The limits for classification were as follows:
highly developed < 0.57838
0.57838 < moderately developed < 0.85946
0.85946 < less developed.

**Power Sector:**
Here again only Chittoor was the highly developed district. And Cuddapah was the least developed district. Remaining two districts were moderately developed (Table 5.22). the limits for classification were as follows:
highly developed < 0.55563
0.55563 < moderately developed < 0.85188
0.85188 < less developed.

**Education Sector:**
Here Cuddapah was the highly developed district. And Anantapur was the least developed district. Remaining two districts were moderately developed (Table 5.22). The limits for classification were as follows:

highly developed < 0.34775
0.34775 < moderately developed < 0.78258
0.78258 < less developed.

Health Sector:
Kurnool was the only highly developed district. And Anantapur was the least developed district. Remaining ones were moderately developed (Table 5.22). The limits for classification were as follows:

highly developed < 0.5473
0.5473 < moderately developed < 0.8491
0.8491 < less developed.

Transport and Communication:
Cuddapah was highly developed in this sector. And remaining three districts were moderately developed (Table 5.22). The limits for classification were as follows:

highly developed < 0.44274
0.44274 < moderately developed < 0.81425
0.81425 < less developed.

Urbanization:
Anantapur was found to be the highly urbanized district. remaining three districts were moderately urbanized (Table 5.22). The limits for classification were as follows

highly developed < 0.25165
0.25165 < moderately developed < 0.75055
0.75055 < less developed.

Aggregate composite Index:
No district was found to highly developed. Kurnool, Chittoor and Cuddapah were moderately developed. And Anantapur was the least developed district (Table 5.22). The limits for classification were as follows:

highly developed < 0.73541
0.74541 < moderately developed < 0.9118
0.9118 < less developed.
Table 5.22 : Aggregate and Sectoral Indices using Taxonomic Method for Rayalaseema 1971

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5.2.2.3 Telangana 1971

Agricultural Sector:
Nizamabad and Khammam were the only highly developed districts in this region. Nalgonda and Mahbubnagar were the least developed districts. Remaining ones were moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.68605
0.68605 < moderately developed < 0.89535
0.89535 < less developed

Industrial Sector:
Mahbubnagar was the only developed district and the remaining eight districts were moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.5765
0.5765 < moderately developed < 0.85883
0.85883 < less developed

Banking Sector:
Hyderabad was the only developed district and the remaining ones were identified as moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.68192
0.68192 < moderately developed < 0.89397
0.89397 < less developed

Cooperative Sector:
Nizamabad and Karimnagar were having highly developed cooperative sector and the remaining seven ones moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.64865
0.64865 < moderately developed < 0.88288
Power Sector:
Hyderabad was the only highly developed district. And the remaining eight districts were moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.39999
0.39999 < moderately developed < 0.79999
0.79999 < less developed

Education Sector:
Hyderabad was the most developed district and Adilabad was the least developed one. Remaining seven were moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.67709
0.67709 < moderately developed < 0.89236
0.89236 < less developed

Health Sector:
Hyderabad was the only developed district and the remaining eight were moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.49455
0.49455 < moderately developed < 0.83152
0.83152 < less developed

Transport and communication:
Nizamabad was the only highly developed district in this sector. And Adilabad was the least developed district. Remaining seven were moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.40843
0.40843 < moderately developed < 0.80281
0.80281 < less developed

Urbanization:
Hyderabad was the only highly developed urban district. Remaining eight were moderately developed (Table 5.23). The limits for classification were as follows:
highly developed < 0.37171
0.37171 < moderately developed < 0.79057
0.79057 < less developed

**Aggregate composite Index:**

At the aggregate level Hyderabad was the only highly developed district. And Adilabad was the least developed district. Remaining seven districts were moderately developed (Table 5.23). The limits for classification were as follows:

highly developed < 0.76634
0.76634 < moderately developed < 0.92211
0.92211 < less developed

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**5.2.2.4 Total Andhra Pradesh 1971**

**Agricultural Sector:**

Kurnool, West Godavari, Nellore and East Godavari were the highly developed districts in the state. Srikakulam and Visakhapatnam were the least developed districts in the state. Remaining ones were moderately developed (Table 5.24). The limits for classification were as follows:

highly developed < 0.69028
0.69028 < moderately developed < 0.89676
0.89676 < less developed

**Industrial Sector:**

Mahbubnagar and East Godavari were highly developed districts in the state. Warangal, Karimnagar, Nizamabad and Khammam were the least developed districts. Remaining ones were
moderately developed (Table 5.24). The limits for classification were as follows:
highly developed < 0.70600
0.70600 < moderately developed < 0.90200
0.90200 < less developed.

**Banking Sector:**
Hyderabad and Krishna were the only highly developed districts in the state. Khammam and Mahbubnagar were the least developed districts. Remaining ones were moderately developed (Table 5.24). The limits for classification were as follows:
highly developed < 0.69015
0.69015 < moderately developed < 0.89672
0.89672 < less developed

**Cooperative Sector:**
Krishna, East Godavari, West Godavari and Nizamabad were the highly developed districts. Nellore, Cuddapah and Ongole were the least developed districts. Remaining ones were moderately developed (Table 5.24). The limits for classification were as follows:
highly developed < 0.65943
0.65943 < moderately developed < 0.88648
0.88648 < less developed

**Power Sector:**
In this sector Hyderabad, Krishna, West Godavari, east Godavari and Guntur were the highly developed districts. Nalgonda, Mahbubnagar and Medak were the least developed districts. Remaining were moderately developed districts (Table 5.24). The limits for the classification were as follows:
highly developed < 0.56345
0.56345 < moderately developed < 0.85448
0.85448 < less developed

**Education Sector:**
In this sector Hyderabad, West Godavari, Krishna, East Godavari and Guntur were the highly
developed districts. And Adilabad was the least developed district. remaining ones were moderately developed (Table 5.24). The limits for classification were as follows:
highly developed < 0.5963
0.5963 < moderately developed < 0.86543
0.86543 < less developed

Health Sector:
Here Hyderabad was the only highly developed district. And the remaining ones were moderately developed (Table 5.24). The limits for classification were as follows:
highly developed < 0.5971
0.5971 < moderately developed < 0.8657
0.8657 < less developed

Transport And Communication:
West Godavari, Krishna, Srikakulam and Guntur were the highly developed districts. Khammam and Adilabad were the least developed districts. remaining ones were moderately developed (Table 5.24). The limits for classification were as follows:
highly developed < 0.53924
0.53924 < moderately developed < 0.84641
0.84641 < less developed

Urbanization:
Hyderabad was the only highly urbanized district. Remaining ones were moderately urbanized (Table 5.24). The limits for classification were as follows:
highly developed < 0.5042
0.5042 < moderately developed < 0.83473
0.83473 < less developed

Aggregate Composite Index:
At the aggregate level Hyderabad, West Godavari, Krishna, East Godavari and Guntur were the highly developed districts. Nalgonda and Adilabad were the least developed districts in the state. Remaining ones were moderately developed (Table 5.24). The limits for classification were as
follows:

highly developed < 0.76008

0.76008 < moderately developed < 0.92003

0.92003 < less developed

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</tr>
</tbody>
</table>
5.2.3 *Taxonomic Analysis for 1981*

5.2.3.1 *Coastal Andhra 1981*

**Agricultural Sector:**
Nellore and West Godavari were the only highly developed in the region. And the newly created district Vizianagaram was the least developed district. Remaining ones moderately developed (Table 5.25). The limits for the classification were as follows:

- Highly developed < 0.51328
- 0.51328 < Moderately developed < 0.83776
- 0.83776 < Less developed.

**Industrial Sector:**
In this sector again Vishkapatnam was the only highly developed district. Srikakulam and Nellore were the least developed districts. Remaining ones were moderately developed (Table No.). The limits for the classification was as follows:

- Highly developed < 0.58143
- 0.58143 < Moderately developed < 0.86048
- 0.86048 < Less developed.

**Banking Sector:**
In this sector Guntur and West Godavari were the only highly developed districts. And Ongole was the least developed district. The remaining districts were moderately developed (Table 5.25). The limits for classification was as follows:

- Highly developed < 0.61102
- 0.61102 < Moderately developed < 0.87034
- 0.87034 < Less developed.

**Cooperative Sector:**
Srikakulam was the only district having a highly developed cooperative sector. Vishkapatnam and Ongole were the least developed district in this regard. The remaining districts were moderately developed (Table 5.25). The limits for the classification were as follows:

- Highly developed < 0.61102
- 0.61102 < Moderately developed < 0.87034
- 0.87034 < Less developed.
**Power Sector:**
Krishna and West Godavari were having developed power sector. Srikakulam and Ongole were the least developed in this sector. The remaining were moderately developed (Table 5.25). The limits for classification were as follows:
- highly developed < 0.65914
- \(0.65914 < \text{moderately developed} < 0.88638\)
- \(0.88638 < \text{less developed}\).

**Education Sector:**
Krishna and West Godavari were the only highly developed districts. Vizianagaram and Vishkapatnam were the most backward districts and the were least developed. Remaining districts were moderately developed (Table 5.25). The limits for classification were as follows:
- highly developed < 0.32861
- \(0.32861 < \text{moderately developed} < 0.7762\)
- \(0.7762 < \text{less developed}\).

**Health Sector:**
Here Vishkapatnam and West Godavari were the only highly developed districts. And the Ongole was the least developed district. Remaining ones were moderately developed (Table 5.25). The limits for the classification were as follows:
- highly developed < 0.50505
- \(0.50505 < \text{moderately developed} < 0.83502\)
- \(0.83502 < \text{less developed}\).

**Transport Sector:**
Only Srikakulam was the highly developed district. Ongole and Vizianagaram were the least developed in this sector. Remaining districts were moderately developed (Table 5.25). The limits for classification were as follows:
- highly developed < 0.28863
- \(0.28863 < \text{moderately developed} < 0.76288\)
- \(0.76288 < \text{less developed}\).

**Urbanization:**
Krishna and Vishkapatnam (Table 5.25) were the only highly urbanized districts in the region. Srikakulam and Ongole were the least urbanized districts. The remaining districts were moderately
developed. The limits for the classification were as follows:
highly developed < 0.27197
0.27197 < moderately developed < 0.75732
0.75732 < less developed.

Aggregate Composite Index:
At the aggregate level West Godavari, Krishna and East Godavari were classified as the highly developed districts in the region. Vizianagaram and Ongole were the least developed districts. Remaining districts were moderately developed (Table 5.25). The limits for the classification were as follows:
highly developed < 0.65865
0.65865 < moderately developed < 0.88622
0.88622 < less developed.

Table 5.25: Aggregate and Sectoral Indices using Taxonomic Method for Coastal Andhra Pradesh 1981

<table>
<thead>
<tr>
<th></th>
<th>AGGRE</th>
<th>AGRI</th>
<th>IND</th>
<th>BANK</th>
<th>COOP</th>
<th>POWER</th>
<th>EDUC</th>
<th>HEALTH</th>
<th>TRANS</th>
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<td>0.79729</td>
<td>0.71442</td>
<td>0.49891</td>
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</tbody>
</table>

5.2.3.2 Ravalaseema1981:

Agricultural Sector:
Chittoor was the highly developed district. And Anantapur was the least developed district. Remaining two districts were moderately developed (Table 5.26). The limits for the classification were as follows:
highly developed < 0.36925
0.36925 < moderately developed < 0.78975
0.78975 < less developed.

Industrial Sector:
In this sector Kurnool was the highly developed district. And the remaining three districts were moderately developed (Table 5.26). The limits for classification were as follows:

- Highly developed < 0.18226
- 0.18226 < Moderately developed < 0.72742
- 0.72742 < Less developed.

**Banking Sector:**

Kurnool was having a highly developed banking facilities and Cuddapah was the least developed in this aspect. Remaining two districts were moderately developed (Table 5.26). The limits for classification were as follows:

- Highly developed < 0.7078
- 0.7078 < Moderately developed < 0.9026
- 0.9026 < Less developed.

**Cooperative Sector:**

Cuddapah was again a highly developed district in this benchmark year. And Kurnool was the least developed district. Remaining two districts were moderately developed districts (Table 5.26). The limits for the classification were as follows:

- Highly developed < 0.79967
- 0.79967 < Moderately developed < 0.93322
- 0.93322 < Less developed.

**Power Sector:**

Chittoor was again the only highly developed district and Cuddapah was the least developed district. Remaining two districts were moderately developed (Table 5.26). The limits for classification were as follows:

- Highly developed < 0.62989
- 0.62989 < Moderately developed < 0.87663
- 0.87663 < Less developed.

**Education Sector:**

Cuddapah was the only highly developed district and Anantapur was the least developed district. Remaining two districts were moderately developed ones (Table 5.26). The limits for classification were as follows:

- Highly developed < 0.50718
Health Sector:
Kurnool was the only highly developed district. And Anantapur was the least developed district. Remaining two districts were moderately developed (Table 5.26). The limits for the classification were as follows:
highly developed < 0.50905
0.50905 < moderately developed < 0.83635
0.83635 < less developed.

Transport and Communication:
Cuddapah was the only highly developed region in this aspect. And Anantapur was the least developed district. Remaining two districts were moderately developed (Table 5.26). The limits for classification were as follows:
highly developed < 0.56577
0.56577 < moderately developed < 0.85526
0.85526 < less developed

Urbanization:
Kurnool was the only highly urbanized district. And Cuddapah was the least urbanized. Remaining two districts were moderately urbanized (Table 5.26). The limits for classification were as follows:
highly developed < 0.15007
0.15007 < moderately developed < 0.71669
0.71669 < less developed

Aggregate Composite Index:
In 1981 Chittoor was the only highly developed district at the aggregate level. And the remaining three districts were moderately developed (Table 5.26). The limits for classification were as follows:
highly developed < 0.76586
0.76586 < moderately developed < 0.92195
0.92195 < less developed
Table 5.26: Aggregate and Sectoral Indices using Taxonomic Method for Rayalaseema 1981

<table>
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<th>AGRI</th>
<th>IND</th>
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<th>COOP</th>
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5.2.3.3 Telengana 1981

**Agricultural Sector:**
In this sector Nizamabad and Karimnagar were the only highly developed districts. And Mahbubnagar and Adilabad were least developed districts. The remaining ones were moderately developed (Table 5.27). The limits for classification were as follows:

- highly developed < 0.46085
- 0.46085 < moderately developed < 0.82028
- 0.82028 < less developed

**Industrial Sector:**
In this sector only Hyderabad was the highly developed district. And the remaining eight districts were moderately developed (Table 5.27). The limits for classification were as follows:

- highly developed < 0.54426
- 0.54426 < moderately developed < 0.84809
- 0.84809 < less developed

**Banking Sector:**
In this sector again Hyderabad was the only highly developed district. And the remaining eight districts were moderately developed (Table 5.27). The limits for classification were as follows:

- highly developed < 0.75236
- 0.75236 < moderately developed < 0.91745
- 0.91745 < less developed

**Cooperative Sector:**
Medak and Hyderabad were having highly developed cooperative sector. Mahbubnagar and Adilabad were the least developed in this regard. remaining ones moderately developed (Table 123
The limits for classification were as follows:

- **Power Sector:**
  - Hyderabad was the only highly developed district. Remaining eight were moderately developed (Table 5.27).
  - The limits for classification were as follows:
    - Highly developed < 0.47664
    - 0.47664 < Moderately developed < 0.82555
    - 0.82555 < Less developed

- **Education Sector:**
  - Here also only Hyderabad was the only highly developed district and Adilabad was the least developed district (Table 5.27).
  - The limits for classification were as follows:
    - Highly developed < 0.64241
    - 0.64241 < Moderately developed < 0.8808
    - 0.8808 < Less developed

- **Health Sector:**
  - Hyderabad was the only district with highly developed health sector. Remaining eight districts were moderately developed (Table 5.27).
  - The limits for classification were as follows:
    - Highly developed < 0.61868
    - 0.61868 < Moderately developed < 0.87289
    - 0.87289 < Less developed

- **Transport and Communication:**
  - Medak and Nizamabad were highly developed districts in this sector. Khammam and Adilabad were the least developed districts. Remaining districts were moderately developed (Table 5.27).
  - The limits for classification were as follows:
    - Highly developed < 0.3379
    - 0.3379 < Moderately developed < 0.7793
    - 0.7793 < Less developed

- **Urbanization:**
  - Hyderabad was the only highly urbanized district. Remaining eight districts were moderately
urbanized (Table 5.27). The limits for classification were as follows:

- highly developed < 0.37053
- 0.37053 < moderately developed < 0.79018
- 0.79018 < less developed

**Aggregate Composite Index:**

At the aggregate level only Hyderabad was the only highly developed district. And Adilabad was the least developed district (Table 5.27). Remaining ones were moderately developed. The limits for classification were as follows:

- highly developed < 0.70053
- 0.70053 < moderately developed < 0.90018
- 0.90018 < less developed

### Table 5.27: Aggregate and Sectoral Indices using Taxonomic Method for Telangana 1981

<table>
<thead>
<tr>
<th>District</th>
<th>AGGRE</th>
<th>AGRI</th>
<th>IND</th>
<th>BANK</th>
<th>COOP</th>
<th>POWER</th>
<th>EDUC</th>
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<th>TRANS</th>
<th>URBAN</th>
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#### 5.2.3.4 Total Andhra Pradesh 1981:

**Agricultural Sector:**

In this sector Nellore, West Godavari, Chittoor and East Godavari were the highly developed districts. Vishakapatnam, Vizianagaram and Adilabad were the least developed districts. Remaining ones were moderately developed (Table 5.28). The limits for classification were as follows:

- highly developed < 0.61452
- 0.61452 < moderately developed < 0.87151
- 0.87151 < less developed

**Industrial Sector:**

In the sector Hyderabad and Vishakapatnam were the highly developed districts. And the remaining ones were moderately developed (Table 5.28). The limits for classification were as follows:
highly developed < 0.67471
0.67471 < moderately developed < 0.89157
0.89157 < less developed

**Banking Sector:**
In this sector Hyderabad and Guntur were highly developed districts. Adilabad and Khammam were the least developed ones. Remaining ones were moderately developed (Table 5.28). The limits for classification were as follows:
highly developed < 0.79525
0.79525 < moderately developed < 0.93175
0.93175 < less developed

**Cooperative Sector:**
Nellore, Krishna, Srikakulam and West Godavari were highly developed in this sector. Kurnool, Khammam, Mahbubnagar and Adilabad were the least developed districts. The remaining ones were moderately developed (Table 5.28). The limits for classification were as follows:
highly developed < 0.77519
0.77519 < moderately developed < 0.92506
0.92506 < less developed

**Power Sector:**
Hyderabad, West Godavari and Krishna were the highly developed districts. And Srikakulam was the only least developed district. Remaining ones were moderately developed (Table 5.28). The limits for the classification were as follows:
highly developed < 0.63269
0.63269 < moderately developed < 0.87756
0.87756 < less developed

**Education Sector:**
Krishna, Hyderabad, West Godavari and Guntur were the highly developed districts. Adilabad, Vishkapatnam and Anantapur were the least developed districts. Remaining ones were moderately
developed (Table 5.28). The limits for classification were as follows:

- highly developed < 0.6037
- 0.6037 < moderately developed < 0.8679
- 0.8679 < less developed

**Health Sector:**

In this sector Hyderabad and Vishkapatnam were the highly developed districts. And the remaining twenty districts were moderately developed (Table 5.28). The limits for classification were as follows:

- highly developed < 0.61637
- 0.61637 < moderately developed < 0.87212
- 0.87212 < less developed

**Transport and Communication:**

Srikakulam, East Godavari, Krishna and West Godavari were the highly developed districts. And Adilabad was the least developed one. Remaining ones were moderately developed (Table 5.28). The limits for classification were as follows:

- highly developed < 0.45449
- 0.45449 < moderately developed < 0.81816
- 0.81816 < less developed

**Urbanization:**

Hyderabad was the only highly urbanized district. And the remaining ones were moderately urbanized (Table 5.28). The limits for classification were as follows:

- highly developed < 0.50109
- 0.50109 < moderately developed < 0.8337
- 0.8337 < less developed

**Aggregate Index:**

Hyderabad, Krishna, West Godavari and East Godavari were the highly developed districts. Vizianagaram, Mahbubnagar and Adilabad were the least developed districts. The remaining ones were moderately developed (Table 5.28). The limits for classification were as follows:
highly developed < 0.76994
0.76994 < moderately developed < 0.92331
0.92331 < less developed

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<th>AGRICULTURE</th>
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<th>BANK</th>
<th>COOP</th>
<th>POWER</th>
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5.2.4 Taxonomic Analysis for 1991

5.2.4.1 Coastal Andhra 1991:

**Agricultural Sector:**

Here again Nellore and West Godavari were the leading districts and only these two were having highly developed agricultural sector. Vishkapatnam and Vizianagaram were the least developed districts. Remaining were moderately developed (Table 5.28), the limits for the classification were as follows:

highly developed < 0.449908
0.449908 < moderately developed < 0.816636
0.816636 < less developed.

**Industrial Sector:**
In this sector Visakhapatnam was the only highly developed district. And Srikakulam was the least
developed district. Remaining ones were moderately developed (**Table 5.29**). The limits for
classification were as follows:
highly developed < 0.58729
0.58729 < moderately developed < 0.86243
0.86243 < less developed.

**Banking Sector:**
Vishkapatnam was having a highly developed banking sector. And Srikakulam was least
developed. Remaining districts were moderately developed (**Table 5.29**). The limits for
classification were as follows:
highly developed < 0.542862
0.542862 < moderately developed < 0.847621
0.847621 < less developed.

**Cooperative Sector:**
West Godavari and Krishna were having highly developed cooperative sector and Vishkapatnam
was the least developed. Remaining were moderately developed (**Table 5.29**). The limits for
classification were as follows:
highly developed < 0.631738
0.631738 < moderately developed < 0.877246
0.877246 < less developed.

**Power Sector:**
Krishna only was the highly developed. And Ongole was Vizianagaram were the least developed
districts. Remaining ones were moderately developed (**Table 5.29**). The limits for the classification
were as follows:
highly developed < 0.424145
0.424145 < moderately developed < 0.808048
0.808048 < less developed.
**Education Sector:**
Here also Krishna was the only highly developed district. And Ongole and Srikakulam were the least developed districts. remaining ones were moderately developed (Table 5.29). The limits for the classification were as follows:
highly developed < 0.476608
0.476608 < moderately developed < 0.825536
0.825536 < less developed.

**Health Sector:**
Vishkapatnam was the only highly developed district in the region and Ongole and Vizianagaram were the least developed districts. Remaining were moderately developed (Table 5.29). The limits for classification were as follows:
highly developed < 0.569298
0.569298 < moderately developed < 0.856433
0.856433 < less developed.

**Transport And Communication:**
Krishna was the only highly developed district in the region. East Godavari, Vishkapatnam and Ongole were the least developed districts. Remaining ones were moderately developed (Table 5.29). The limits for classification were as follows:
highly developed < 0.43852
0.43852 < moderately developed < 0.81284
0.81284 < less developed.

**Urbanization:**
Krishna was the most urbanized district in the region. Srikakulam and Ongole were the least urbanized. Remaining were moderately urbanized (Table 5.29). The limits for the classification were as follows:
highly developed < 0.261216
0.261216 < moderately developed < 0.753739
0.753739 < less developed.

**Aggregate Composite Index:**
At the aggregate level Krishna and West Godavari were the only highly developed districts. Vizianagaram and Ongole were the least developed districts (Table 5.29). Remaining were
moderately developed. The limits for classification were as follows:

- Highly developed < 0.61883
- 0.61883 < moderately developed < 0.872943
- 0.872943 < less developed.

### Table 5.29: Aggregate and Sectoral Indices using Taxonomic Method for Coastal Andhra Pradesh 1991

<table>
<thead>
<tr>
<th>District</th>
<th>Aggregate</th>
<th>Agriculture</th>
<th>Industry</th>
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<th>Coop</th>
<th>Power</th>
<th>Education</th>
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### 5.2.4.2 Ravalaseema 1991:

**Agricultural sector:**

In this sector Chittoor was the only highly developed district. And Cuddapah was the least developed one. Remaining two districts were moderately developed (Table 5.30). The limits for the classification were as follows:

- Highly developed < 0.334266
- 0.334266 < moderately developed < 0.778089
- 0.778089 < less developed

**Industrial Sector:**

Anantapur was the only highly developed district. And the remaining three districts were moderately developed (Table 5.30). The limits for the classification were as follows:

- Highly developed < 0.735635
- 0.735635 < moderately developed < 0.911878
- 0.911878 < less developed

**Banking Sector:**

In this sector Kurnool was only highly developed district and Anantapur was the least developed one. Remaining two were moderately developed (Table 5.30). The limits for the classification were...
as follows:
highly developed < 0.645955
0.645955 < moderately developed < 0.881985
0.881985 < less developed

**Cooperative Sector:**
In this sector Chittoor was the only highly developed district and Cuddapah was the least
developed district. Remaining two were moderately developed (Table 5.30). The limits for
classification were as follows:
highly developed < 0.62829
0.62829 < moderately developed < 0.876097
0.876097 < less developed

**Power Sector:**
Here once again Chittoor was the only highly developed district. And Kurnool was the least
developed district. remaining two districts were moderately developed (Table 5.30). The limits for
the classification were as follows:
highly developed < 0.512007
0.512007 < moderately developed < 0.837336
0.837336 < less developed

**Education Sector:**
Chittoor was the only highly developed district and Kurnool was the least developed district.
remaining two districts were moderately developed (Table 5.30). The limits for classification were
as follows:
highly developed < 0.219354
0.219354 < moderately developed < 0.739785
0.739785 < less developed

**Health Sector:**
Here Kurnool was only highly developed district and Anantapur was the least developed one. The
remaining two were moderately developed (Table 5.30). The limits for classification were as
follows:
highly developed < 0.509888
0.509888 < moderately developed < 0.836629
Transport And Communication:
Anantapur was the only highly developed district and the remaining three were moderately developed (Table 5.30). The limits for classification were as follows:
highly developed < 0.595934
0.595934 < moderately developed < 0.865311
0.865311 < less developed

Urbanization:
Kurnool was the only highly urbanized district and Cuddapah was the least one. Remaining two were moderately urbanized (Table 5.30). The limits for classification were as follows:
highly developed < 0.139895
0.139895 < moderately developed < 0.713298
0.713298 < less developed

Aggregate Composite Index:
Chittoor was the only highly developed district at the aggregate level and Anantapur was the least developed one. Remaining two were moderately developed (Table 5.30). The limits for classification were as follows:
highly developed < 0.705239
0.705239 < moderately developed < 0.901746
0.901746 < less developed

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<th>AGGREG</th>
<th>AGRIC</th>
<th>IND</th>
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5.2.4.3 Telangana 1991:

Agricultural Sector:
In this sector Karimnagar and Nalgonda were only highly developed districts. And the remaining seven were moderately developed (Table 5.31). The limits for classification were as follows:
highly developed < 0.46026
0.46026 < moderately developed < 0.820087
0.820087 < less developed

**Industrial Sector:**

In this sector Medak and Hyderabad were the only highly developed districts. Mahbubnagar, Karimnagar and Warangal were the least developed districts. Remaining ones were moderately developed (Table 5.31). The limits for classification were as follows:

highly developed < 0.68567
0.68567 < moderately developed < 0.89522
0.89522 < less developed

**Banking Sector:**

In this sector Hyderabad was the only highly developed district. And Adilabad was the least developed district. Remaining ones were moderately developed (Table 5.31). The limits for classification were as follows:

highly developed < 0.70355
0.70355 < moderately developed < 0.90118
0.90118 < less developed

**Cooperative Sector:**

Karimnagar was the only highly developed district. Mahbubnagar and Adilabad were the least developed districts. The remaining ones were moderately developed (Table 5.31). The limits for classification were as follows:

highly developed < 0.632058
0.632058 < moderately developed < 0.877353
0.877353 < less developed

**Power Sector:**

Hyderabad was the only highly developed district and Mahbubnagar was the least developed district. Remaining ones were moderately developed (Table 5.31). The limits for classification were as follows:

highly developed < 0.475484
0.475485 < moderately developed < 0.825161
0.825161 < less developed
Education Sector:
Here again Hyderabad was the only highly developed district. Medak and Mahbubnagar were the least developed districts. Remaining ones were moderately developed (Table 5.31). The limits for classification were as follows:
highly developed < 0.510428
0.510428 < moderately developed < 0.836809
0.836809 < less developed

Health Sector:
Hyderabad was the only district with highly developed health sector. Remaining eight districts were moderately developed (Table 5.31). The limits for classification were as follows:
highly developed < 0.467039
0.467039 < moderately developed < 0.822346
0.822346 < less developed

Transport and Communication:
Medak Karimnagar and Warangal were highly developed in this sector. Hyderabad and Adilabad were least developed in this sector. remaining ones were moderately developed (Table 5.31). The limits for classification were as follows:
highly developed < 0.376526
0.376526 < moderately developed < 0.792175
0.792175 < less developed

Urbanization:
Hyderabad was the only highly urbanized district and remaining ones moderately urbanized (Table No.). The limits for classification were as follows:
highly developed < 0.373408
0.373408 < moderately developed < 0.791136
0.791136 < less developed

Aggregate Composite Index:
At the aggregate level only Hyderabad was the highly developed district. Mahbubnagar and Adilabad were the least developed districts. Remaining ones were moderately developed (Table 5.31). The limits for classification were as follows:
highly developed < 0.715618
0.715618 < moderately developed < 0.905206
0.905206 < less developed

5.2.4.4 **Total Andhra Pradesh 1991:**

**Agricultural Sector:**
Nellore, West Godavari, East Godavari, Karimnagar and Krishna were the highly developed districts. Hyderabad, Vishkapatnam, Vizianagaram and Adilabad were the least developed districts. Remaining ones were moderately developed (Table 5.32). The limits for classification were as follows:

- highly developed < 0.5528
- 0.5528 < moderately developed < 0.85093
- 0.85093 < less developed

**Industrial Sector:**
Vishkapatnam, Nizamabad, Hyderabad and Medak were the highly developed districts in this sector and Srikakulam was only least developed district in the state. Remaining ones were moderately developed (Table 5.32). The limits for classification were as follows:

- highly developed < 0.78148
- 0.78148 < moderately developed < 0.92716
- 0.92716 < less developed

**Banking Sector:**
In this sector Hyderabad and Medak were the only highly developed districts and Adilabad was
the least developed district. Remaining ones were moderately developed (Table 5.32). The limits for classification were as follows:

- highly developed < 0.736005
- 0.736005 < moderately developed < 0.912002
- 0.912002 < less developed

**Cooperative Sector:**

West Godavari, Krishna, East Godavari and Guntur were the highly developed districts. Warangal, Mahbubnagar and Adilabad were the least developed districts. Remaining were ones moderately developed (Table 5.32). The limits for classification were as follows:

- highly developed < 0.67888
- 0.67888 < moderately developed < 0.89296
- 0.89296 < less developed

**Power Sector:**

In this sector Hyderabad and Karimnagar (Table 5.32) were the most developed districts. Ongole and Vizianagaram were the least developed districts. Remaining ones were moderately developed. The limits for classification were as follows:

- highly developed < 0.555616
- 0.555616 < moderately developed < 0.851872
- 0.851872 < less developed

**Education Sector:**

Hyderabad, East Godavari, Krishna, Chittoor and West Godavari were the highly developed districts. Srikakulam, Medak, Mahbubnagar and Nalgonda were the least developed districts. Remaining ones were moderately developed (Table 5.32). The limits for classification were as follows:

- highly developed < 0.528342
- 0.528342 < moderately developed < 0.842781
- 0.842781 < less developed
Health Sector:
Here Hyderabad and Vishkapatnam were the highly developed districts. And Ongole was the least developed district. Remaining ones were moderately developed (Table 5.32). The limits for classification were as follows:

- Highly developed < 0.57279
- 0.57279 < Moderately developed < 0.857597
- 0.857597 < Less developed

Transport and Communication:
Anantapur and Krishna were the only highly developed districts in the state. Khammam and Adilabad were the least developed districts. Remaining ones were moderately developed (Table 5.32). The limits for classification were as follows:

- Highly developed < 0.663386
- 0.663386 < Moderately developed < 0.887795
- 0.887795 < Less developed

Urbanization:
Hyderabad was the only highly urbanized district in the state. And all the remaining districts were moderately urbanized (Table 5.32). The limits for classification were as follows:

- Highly developed < 0.524109
- 0.524109 < Moderately developed < 0.84137
- 0.84137 < Less developed

Aggregate Composite Index:
At the aggregate level Hyderabad, Krishna, West Godavari and East Godavari (Table 5.32) were the highly developed districts. Ongole, Mahbubnagar and Adilabad were the least developed districts. The remaining were found to be moderately developed. The limits for classification were as follows:

- Highly developed < 0.790426
- 0.790426 < Moderately developed < 0.930142
- 0.930142 < Less developed
5.3 SIMPLE AVERAGING METHOD

5.3.1 Coastal Andhra Pradesh

This analysis was done at the aggregate level. In 1961 West Godavari was most developed district followed by Krishna, East Godavari, Guntur, Vishakhapatnam. All these districts were having scores more than 50. Srikakulam and Nellore were the least developed district as their respective scores were less than the regional average i.e. 50 (Table 5.33).

In 1971 West Godavari was again the most developed district followed by Krishna, East Godavari, Nellore, Guntur, Vishakhapatnam. Srikakulam and Ongole were the least developed districts as their respective scores were less than 50 (Table 5.33).

In 1981 Nellore was the most developed district followed by Krishna, West Godavari, Vishakhapatnam, East Godavari, Guntur. Srikakulam, Ongole and Vizianagaram were the least

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<th>Table 5.32 : Aggregate and Sectoral Indices using Taxonomic Method for Total Andhra Pradesh 1991</th>
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developed districts as their scores were less than the regional average score i.e. 50. (Table 5.33).

In 1991 West Godavari was the leading district followed by Krishna, Nellore, Vishakhapatnam, East Godavari, Guntur, Srikakulam. Vizianagram and Ongole were the least developed districts (Table 5.33).

| Table 5.33 : Aggregate Indices using Simple Averaging Method for Coastal Andhra Pradesh |
|-------------|-------------|-------------|-------------|-------------|
| SRK        | 39.6600     | 40.9648     | 41.4610     | 51.3930     |
| VIZI       |             | 37.4560     |             | 47.6492     |
| VISK       | 50.8400     | 53.2486     | 57.7677     | 68.6898     |
| E GOD       | 58.9000     | 59.4359     | 55.4635     | 63.9048     |
| W GOD       | 71.6000     | 65.0024     | 60.8473     | 74.5034     |
| KRISH      | 68.3400     | 62.6221     | 62.3307     | 74.1204     |
| GUNT       | 53.7100     | 53.5993     | 54.7707     | 66.2510     |
| ONGOL      | 39.5400     | 39.0729     | 39.0526     | 45.9398     |
| NELL       | 54.9772     | 72.2185     |             |             |

5.3.2 Rayalaseema:

In 1961 Chittoor was the most developed district followed by Kurnool. Anantapur and Cuddapah were the least developed districts as their scores were less than regional average (Table 5.34).

In 1971 Kurnool was found to be the most developed district followed by Cuddapah and Chittoor. Anantapur was the least developed district. (Table 5.34).

In 1981 Chittoor was the most developed district. Remaining three districts were less developed as their scores were less than 50 (Table 5.34).

In 1991 Anantapur was the most developed district followed by Chittoor and Cuddapah. Kurnool was the least developed district (Table 5.34).

| Table 5.34 : Aggregate Indices using Simple Averaging Method for Rayalaseema |
|-------------|-------------|-------------|-------------|-------------|
| KURN       | 51.3400     | 61.3615     | 49.9054     | 51.4012     |
| ANAT       | 45.1400     | 45.0849     | 45.5960     | 78.3685     |
| CUDD       | 41.8100     | 50.8204     | 48.9777     | 59.1384     |
| CHIT       | 67.6500     | 50.5060     | 58.7109     | 66.1844     |
5.3.3 Telangana:

In 1961 Hyderabad was the most developed followed by Nizamabad. Remaining seven districts were less developed as their respective scores were less than 50 (Table 5.35).

In 1971 Hyderabad was the most developed district followed by Medak and Nizamabad. Remaining ones were less developed as their respective scores were less than the regional average i.e. 50 (Table 5.35).

In 1981 again Hyderabad was the most developed district followed by Nizamabad and Karimnagar. Remaining ones were less developed as their respective scores were less than 50 (Table 5.35).

In 1991 Hyderabad was the most developed district followed by Medak, Nizamabad, Karimnagar, Nalgonda, Khammam and Warangal. Remaining two districts Mahbubnagar and Adilabad were less developed as their scores were less than 50 (Table 5.35).

| Table 5.35: Aggregate Indices using Simple Averaging Method for Telangana |
|-------------|----------------|----------------|----------------|----------------|
| HYDERA      | 108.9300   | 112.4733   | 92.4197     | 90.3676      |
| NZMD        | 59.7300    | 51.2218    | 62.6707     | 63.2289      |
| MEDAK       | 38.2100    | 64.2599    | 48.2264     | 68.8542      |
| MABNG       | 35.7700    | 48.5248    | 35.7853     | 40.6326      |
| NALG        | 44.8200    | 35.2315    | 42.4524     | 40.4884      |
| WARN        | 52.3300    | 41.7079    | 46.3193     | 57.7830      |
| KHAM        | 38.1300    | 47.4024    | 41.3599     | 59.3003      |
| KARNG       | 38.4700    | 44.0007    | 57.3675     | 61.8132      |
| ADBLAD      | 40.6300    | 44.7959    | 33.0046     | 38.9601      |

5.3.4 Total Andhra Pradesh:

In 1961 Hyderabad was the most developed district in state followed by West Godavari, Krishna, East Godavari, Guntur, Chittoor, Visakhapatnam, Nizamabad and Warangal. Remaining ones were less developed as their respective scores were less than the average score of 50. At the regional level Coastal Andhra was the most developed and both Rayalaseema and Telengana were less developed as at regional aggregate their respective scores were less than 50 (Table 5.36).
In 1971 again Hyderabad was the most developed district followed by Krishna, West Godavari, East Godavari, Guntur, Medak, Visakhapatnam, Nellore, Ongole, Kurnool and Srikakulam. Remaining ones less developed. No district in Coastal Andhra was less developed. At the regional aggregate level also Coastal Andhra was the most developed region. Telengana and Rayalaseema were less developed as their respective scores were less than 50 (Table 5.36).

In 1981 again Hyderabad was the most developed district followed by Krishna, Nellore, West Godavari, Guntur, Visakhapatnam, East Godavari, Nizamabad, Karimnagar, Chittoor, Srikakulam, Vizianagaram and Ongole. Remaining ones less developed. Here also no district in coastal Andhra was below state average score. Coastal Andhra was the most developed region in the state followed by Telengana. Rayalaseema was the least developed region in the state (Table 5.36).

In 1991 Visakhapatnam was the most developed district followed by Krishna, Hyderabad, West Godavari, East Godavari, Nellore, Guntur, Nizamabad, Karimnagar, Chittoor, Medak, Ongole, Vizianagaram and Srikakulam. Remaining ones less developed. Again in Coastal Andhra not a single district was below the state average score. And hence at regional level too Coastal Andhra was the most developed region. Telengana was marginally below the state average and Rayalaseema was the least developed region in the state (Table 5.36)
Table 5.36: Aggregate Indices using Simple Averaging Method for Total Andhra Pradesh

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