# Chapter 9

# Overall results, discussion and Conclusion

Here the districts are ranked on the basis of their corresponding composite index for overall nine sectors namely Banking, Fertility and Literacy, Agriculture, Health, Socio-economic, Education, Status of Women, BIS and industry sector.

## 9.1 Results and discussion

According to the method used by Narain et al., Principal Component Analysis, Deprivation method, and Equal Weighted method the districts are ranked in the following Table 9.1.

**Table 9.1** Ranking districts overall nine sectors

| Sl No | Districts | Ranking of the Districts | | | |
|---|---|---|---|---|---|
| | | Narain et al. | PCA | Deprivation | Equal weighted |
| [1] | Kokrajar | 18 | 18 | 17 | 18 |
| [2] | Dhubri | 19 | 21 | 20 | 22 |
| [3] | Goalpara | 15 | 15 | 15 | 15 |
| [4] | Bongaigaon | 16 | 16 | 16 | 16 |
| [5] | Borpeta | 11 | 13 | 13 | 14 |
| [6] | Kamrup | 1 | 1 | 1 | 1 |
| [7] | Nalbari | 7 | 9 | 10 | 9 |
| [8] | Darrang | 12 | 12 | 12 | 12 |
| [9] | Marigaon | 17 | 17 | 18 | 17 |
| [10] | Nagaon | 5 | 6 | 6 | 7 |
| [11] | Sonitpur | 6 | 5 | 5 | 5 |
| [12] | Lakhimpur | 13 | 11 | 11 | 11 |
| [13] | Dhemaji | 23 | 23 | 22 | 23 |
| [14] | Tinsukia | 10 | 10 | 9 | 10 |
| [15] | Dibrugarh | 2 | 2 | 2 | 2 |
| [16] | Sibsagarh | 4 | 3 | 3 | 3 |
| [17] | Jorhat | 3 | 4 | 4 | 4 |
| [18] | Golaghat | 8 | 7 | 7 | 8 |
| [19] | Karbi Anglong | 20 | 19 | 19 | 19 |
| [20] | N.C.Hills | 21 | 22 | 23 | 20 |
| [21] | Cachar | 9 | 8 | 8 | 5 |
| [22] | Karimganj | 14 | 14 | 14 | 13 |
| [23] | Hailakandi | 22 | 20 | 21 | 21 |

From the method used by Narain et al. Kamrup, Dibrugarh, Jorhat, Sibsagar and Nagaon are highly developed districts, Sonitpur, Nalbari, Golaghat, Cachar, Tinsukia and Borpeta are medium developed districts, Darrang, Lakhimpur, Karimganj, Goalpara, Bongaigaon, Marigaon and Kokrajar are developing districts and Dhubri, Karbi Anglong, N.C.Hills, Hailakandi and Dhemaji are found to be low developed districts for overall nine sectors. According to Principal Component Analysis Kamrup, Dibrugarh, Sibsagar and Jorhat are found to occupy the first four places and Karbi Anglong, Hailakandi, Dhubri, N.C.Hills and Dhemaji occupy the latter positions respectively. According to Deprivation method the district Kamrup is highly developed and Dibrugarh Sibsagar Jorhat, Golaghat, Cachar, Nagaon and Sonitpur are moderately developed districts and all others are backward districts. According to Equal Weightage method Kamrup, Dibrugarh, Sibsagar and Jorhat occupy the first four places of developed districts and Dhemaji, Dhubri and Hailakandi occupy the latter positions.
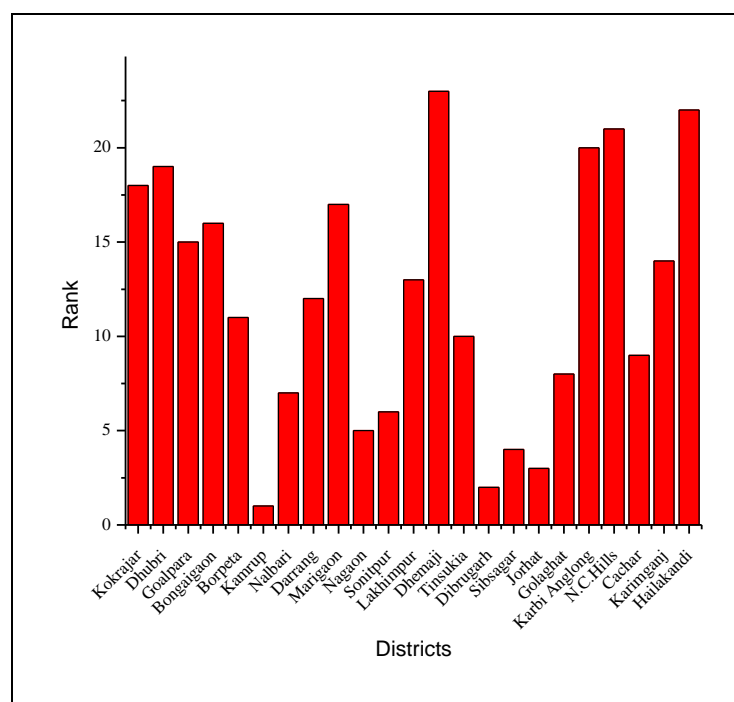


Fig 9.1: Ranks of districts on the basis of overall composite index.

**Table 9.2** Correlation table

| Bank | Fertility literacy | Agriculture | Health | Socio-Economic | Education | Women | BIS | Industry |
|---|---|---|---|---|---|---|---|---|
| 1 | .5789 * | .4216 | .8055** | .8055** | .6117** | .7889** | .7632** | .9090** |
|  | 1 | -.0221 | .5825** | .8283** | .7834 ** | .8041** | .5904** | .4974* |
|  |  | 1 | .3559 | -.1915 | .3009 | .0931 | .5061* | .2731 |
|  |  |  | 1 | .6897** | .6971** | .7041** | .7979** | .8088** |
|  |  |  |  | 1 | .7311** | .7812 ** | .4913* | .6644** |
|  |  |  |  |  | 1 | .8526** | .7285** | .7512** |
|  |  |  |  |  |  | 1 | .6725** | .8162** |
|  |  |  |  |  |  |  | 1 | .7141** |
|  |  |  |  |  |  |  |  | 1 |

*   Significance at 0.05 level
** Significance at 0.01 level

Here it is reflected from the Table 9.2 that there is no significant correlation between agriculture sector with any other sector except BIS. But Banking, Industry, Education, Health, BIS, Socio-Economic, Fertility and Literacy and Status of Women sectors are correlated among themselves. To identify the sectors for variation of overall economic development across the districts a regression equation by taking composite index of overall sectors in 23 Districts of Assam as dependent variable and composite index Fertility and Literacy, Agriculture, Health, Socio-Economic, Education, Status of Women , BIS and Industry sector as explanatory variable is obtained below. The computed t values are given in brackets.

$$Y = -.9522 + .0987*X_1 + .2329**X_2 + .3465**X_3 + .1350*X_4 + .2276**X_5 + .2828**X_6 + .2625**X_7 + .4415**X_8$$
(12.6731) (2.0809) (2.9671) (6.0019)    (1.8788)     (4.8574)    (3.2548)    (4.6702)    (4.4783)

$t_{0.05} = 1.761$ for 14 d.f.
$t_{0.01} = 2.624$ for 14 d.f.

Y= Overall development Composite Index   (based on 324 indicators)
$X_1$= Composite Index of Fertility and Literacy   (based on 14 indicators)
$X_2$= Composite Index of Agriculture   (based on 83 indicators)
$X_3$= Composite Index of Health   (based on 35 indicators)
$X_4$= Composite Index of Socio-Economic   (based on 54 indicators)
$X_5$= Composite Index of Education   (based on 19 indicators)
$X_6$= Composite Index of Status of Women   (based on 29 indicators)
$X_7$= Composite Index of Basic Infrastructure   (based on 40 indicators)
$X_8$= Composite Index of Industry   (based on 52 indicators)

The sectors Agriculture, Health, Education, BIS, Industry and Status of Women are exercising highly significant influence on overall development. But Fertility and Literacy and Socio-Economic sector are significant at 5 percent level only. $R^2$ value is computed to be .9969 indicating that about 99.7 percent of interdistrict variations in development are explained by the regression model. So to keep pace with the developmental path the above mentioned sectors must be improved.

It is also observed that the variation within a particular sector among different districts is different from other sectors. The highest variation (CV=32.54%) is observed in Fertility and Literacy sector among the districts and lowest variation (CV=7.78%) is seen in Agriculture sector. The Variation among the sectors within a district is range from high developed district Kamrup (CV=34.52%) to low developed district Dhemaji (CV=8.13%). It is observed in the study that the districts which are coming as high developed, their coefficient of variation among the sectors is larger than the districts which are come out as low developed. The coefficient of variation among different sectors of developed districts Kamrup, Dibrugarh, Sibsagar and Jorhat are 34.52%, 32.63%, 27.50% and 26.73% respectively. For low developed districts Dhemaji Dhubri Hailakandi and N.C.Hills the coefficient of variation among different sectors are 8.13%, 6.78%, 8.22% and 14.28% respectively. It is clear that developed districts are not equally developed in all the sectors. To test if there is correlation between rankings obtained by four methods, Spearman rank correlation coefficient is used. Here the ranking of the banking sector of districts of Assam is considered

Table 9.3  Spearman rank Correlation Coefficient

| Pair of Methods | Rank Correlation Coefficient |
|---|---|
| Narain et al & Aggregate method | 0.948** |
| Narain et al& Deprivation method | 0.980** |
| Narain et al& Principal component Analysis | 0.991** |
| Aggregate method& Deprivation method | 0.895** |
| Aggregate method& Principal component Analysis | 0.912** |
| Deprivation method & Principal component Analysis | 0.993** |

 *   Significance at 0.05 level
** Significance at 0.01 level

From the Table 9.3 it is seen that Correlation Coefficient between the methods are highly significant.

Disparities can be eliminated if the policy maker gives special emphasis on the fundamental weakness in the crucial sector of region's economy. The first and foremost requirement is a firm political commitment not enormous financial wealth.  It is really required dynamic foresighted leadership both at the local and state level. They should try to use the wide ranging resources of the state, to overall benefit for Assam and not only for the privileged handful of unscrupulous people. For economic development in the state the exploration of the natural resources in general and minerals in particular must receive top priority. There are just a few promising sign in other states, for example in Bihar, the state government has been much better than its predecessor. But how much improvement it can bring to an abjectly poor state of 90 million people where only a income is not a decisive factor. People say that all mines went to Jarkhand but the minds are still with Bihar and the Goverment have appointed more than two lakhs teachers in Govt. schools. The Govt. had provided 27 lakh bicycles in past five years to students to ensure that none of the miss out on basic education. They take all steps to decline MMR in the state. Bihar's economic growth rate is 11 percent, Buddhist tourists are the one key factor of it, and more than 4 lakhs foreign tourists have visited various Buddhist sites last year. For Assam also tourism sector could play an important role in economic growth of the state. Regional Director, Union ministry of tourism, Deepa Laskar, said NER registered growth of 6.9 percent of foreign tourists during 2010 over 2009 where as all India growth is just more than one percent.Similarly, it registered a growth of 8.09 percent of domestic tourist visits to the region during 2010 over 2009 where as all India growth is about 7 percent. The number of foreign tourists who visited Assam 14,942 in 2009 and 15,157 in 2010. While Manipur got 337 foreign tourists in 2009 and 389 in 2010, Mizoram played host to 513 foreign tourists in 2009 and731 in 2010. In the domestic tourist front, Assam received 38,50,521in 2009, which increase to 40,50,924 in 2010.Similarly Meghalaya got 5,91,398 tourists in 2009 and 6,52,756 in 2010. Several of world's poor nations have been able to raise female literacy with limited resources but strong political commitment. China, Sri Lanka, Zimbabwe raised their adult women literacy rate to 70

percent or more.To eliminate rural urban disparities it is essential to generate awareness among rural masses on various aspects of education, health and hygiene, mother and childcare etc. motivate rural people for achieving economic self-sufficiency using traditional skill and local resources. Empower rural women so that they can take part in decision-making process. Rural people should be trained on various development issues. Although the Government has made much more effort to reduce the regional disparities the positive result is not found. It is recognized that lack of proper planning to development. It is need to study the problems, which create hindrance in the path of development in micro level.

Misuse and wastage of resources and plan money have also retarded the growth of the economy. The LOC scandal of Veterinary, N.C. Hills scandal is few examples of how the plan money is being put to misuse. Widespread corruption plaguing the entire administration from the top to the bottom, so the state cannot achieve required result. Insurgency is the major problem inflicting the region. It is a stumbling block in course of development. The sectionist movement either for sovereignty or for separate homeland, began to lock horn leading to a vertical division among various ethnic group.

Through public policies interstate regional disparities have been reduced first in 1956. Kerela was formed at the time of state reorganization then there were substantial disparities in the social development of Malabar region vis-à-vis the Travancore- Cochin region. Over the last four decades there have been remarkable improvement social indicators of Malabar to catch up with the rest of the Kerela as a result of appropriate public policies. The development of drought prone districts of Haryana through irrigation is another remarkable example in reduction in economic disparities across the region within a state. Tamilnadu could be considered as one state, which is most successful in reducing regional disparities in economic and social development even when there was substantial variation in the natural endowments in different part of the state. This was achieved by a combination of public policies and private initiatives. In other states, especially in Maharastra, Gujrat and Rajasthan there are a number of successful cases of NGOs which succeeded in transforming pockets of destitution in to areas enjoying very high level of socio-economic development.

Without any involvement of local people the various programmes are planned and implemented by bureaucrats. More often discontent and agitation on the basis of perceived neglect of the backward region by the rulers at the state level and at the center are led by the local leaders who demand some form of autonomy to determine their own destiny. Even those who demand separate state for their region are often willing to settle for autonomous regions within the existing state with considerable financial and administrative power. The problem, however, is that the state level rulers are generally unwilling to part with their own power of patronage. There have been times when central policies of indifference had created popular resentment and fostered regional sentiments in North Eastern states. A turning point in the development strategy came in 1973 with the establishment of North Eastern Council Having the following objectives

1) To make all around effort for bring about socio-economic development in the entire North Eastern region through coordinating regional planning.

2) Remove regional disparities and inequalities through balanced regional development.

3) To increase cooperation, coordination and integration among the North Eastern states.

Since 1996-97 consecutive three P.M. – Deve Gowda (June 1996 to April 1997) A.B. Bajpaee (1998-2004) Monmohan Singh (since 2004) took some bold decisions to bring about structural change in economy in the North Eastern states. Except a few all the central ministers are requires to expend 10 percent of their respective budget allocation for this region. The North Eastern Development Financial Corporation (NEDFI) launched in 1997. In 2001 Development of North Eastern Region (DONER) was established for formulating and implementing and co-ordinating the programmes of development for this region. It is a sad story that though the functioning of the council for more than three decades the development in N.E. India remain by and large unaddressed. The Shukla Commission's recommendation relating to infrastructure development in the region can not give importance it deserves.

MR. Samir Gosh the general secretary of all India Reserve bank employees association had told to the press meet in Guwahati (7th May, 2011, Dainik Asom) that the RBI and other schedule commercial banks had been cheating the North Eastern Region.

As because the corporate houses and other businessmen collected the money from the bank of these region and invest those money in other states. As per rule 73 percent of the deposited money in banks of a particular state must be spent in the respective state. But in North Eastern States it is not happened. He said it is one of the reasons of backwardness of the region. According to him the C.M. and M.L.A.s are responsible for that. They should take the matter seriously. He also told that other developed states Tamilnadu, Maharastra and Andhra Pradesh for example spend their bank deposit 90 percent to 95 percent in their own states. Moreover except Assam not a single branch of RBI is in the other North Eastern States. But when the new states Jarkhand, Chattishgarh and Uttaranchal came in to being new branch of RBI were opened immediately. The existing rule of banking sector of India that one bank must be situated among fourteen thousands people but the rule is not followed in this region. People will not be benefited if they could not get access bank service within 5-10 km.

Social goal and development strategies will have to be examined fully before going for a reorganization of states. It is seen that most of the state demand movement in NER started with a demand for socio-economic upliftment but long years of indifference to their grievances led them to demand for a separate state.

According to P.T.I., on Monday, 20 December 2010 the former president, scientist A.P.J. Abdul Kalam asked the other states to emulate the path of Gujrat whose growth rate of agriculture over 9 percent per annum, more than three times the national average. He said the Center for Management in Agriculture experts attributed Gujrat success story to rural electrification reforms, as exemplified by the establishment of a dedicated grid for agricultural applications, which has also helped reducing losses due to pilferage of power. In addition, the state has embarked on an integrated water management scheme for irrigation purposes, which involves the creation of more than 2.4 lakh farm ponds and ensuring their sustainability through desilting and recharging. Furthermore the Gujarat government has started an Annual Krishi Rath Yatra, which aims at educating farmers on seeds, irrigation, crop patterns and technology. In 2010, the month long yatra traveled through 26 districts of the state. "Of course, at all stages with an increase in agricultural produce, stability of the price was been managed by opening export of agricultural produce." Kalam said.

On 27th February 2011 Assam Governor released Unicef data on adolescents. The facts which had been highlighted there were

i) More than 35 percent of girls in Assam marry before they are 18.

ii) 25 percent adolescents in the age group of 13-14 years and about 33 percent in the age group of 15-28 years have been subject to physical abuse.

iii) Only 19.6 percent of adolescents (15-19 years) have comprehensive knowledge about transmission and prevention of HIV/AIDS. Adolescents in urban areas are more informed (34.9 percent) than in rural areas (17.4 percent).

iv) Significantly higher proportion of girls (67.8 percent) is anemic as compared to boys.

v) An estimated 6.5 million adolescents (10-19 years) reside in the state, comprising 21.3 percent of its population. While 3.3 million are boys 3.2 millions are girls. So state government should focused on human development, opened up local economies and improved social services faster in the state

Some positive results have been seen in the provisional census report of 2011. The population growth rate decreased from 18.82 percent (1991-2001) to 16.93 percent in the decade (2001-11). With regard to sex ratio Assam surpass average sex ratio of India. India's average gender ratio increased to 940 from the past figure 933. As of 2011, Assam's sex ratio stands out at 954, which were 932 in 2001 census. Decadal growth rate of female population has been recorded as 18.14 percent against male percentage 15.81. Total literacy rate 73.18 percent where as it was 63.25 percent in 2001. Male literacy rate is 78.81 percent and female literacy rate 67.27 percent. The gap between Male literacy rate and female literacy rate decreases, it becomes 11.54. But it is observed that the literacy rate of Assam lower than all India (74.04 percent) level.

According to Economic Survey, Assam, in the year 2007-08 District Development Plan has been implemented first time in Assam. Through the scheme Rs. 100 crores are allotted and 96.50 crores was spent in construction of various infrastructure development scheme. In 11 districts of Assam viz. Kokrajar, Bongaigaon, Goalpara, Lakhimpur, Dhemaji,,Cachar, Hailakandi, Morigaon, Borpeta, Karbi Anglong and N.C.Hills are selected by Government of India for implementation of Backward

Region Grant Fund. Social Welfare minister of Assam (The Telegraph 9 July 2011) announced several welfare schemes for women and children. The India's Planning commission deputy chairman Montek Singh Ahluwalia said, after the regional- level consultation meeting of the states of the region on the approach paper to the twelfth five year plan (2012-2017), that "the eleventh five year plan had laid special emphasis on development of infrastructure and connectivity in the North East . What started in the eleventh plan will be continued at the twelfth plan for future development of infrastructure and connectivity of the region." In a presentation the Planning commission said given the limited connectivity of the region with other parts of the country (through Siliguri corridor) access through Bangladesh needs to be explored. Ahluwalia said since the aim of the look east policy with greater integration of India with countries lying in the East, the Northeast, because of its geographical proximity with the South East Asian nations, should benefit from it. He said apart from infrastructure and connectivity the twelfth plan also focuses on agriculture, education and health. Assam chief Minister Tarun Gogoi asked the plan panel to lay special emphasis on removing regional disparities, improving connectivity and education in the state. He stressed on the proper utilization of water resources. One of the important factors which accelerate the pace of industrial development is electricity. The biggest hurdle in the way of industrialization is stagnation in power generation in Assam. The energy requirement in the state has worked out at 5280.000 million units. But the availability of energy during the periods was 4015.000 million units.

## 9.2 Conclusion

The following conclusions can be drawn from the study

1. The low developed districts Hailakandi and N.C. Hills shows bright prospect in production of rice, Dhubri is high developed in agriculture sector, Dhemaji is found to be high developed in sericulture industry, Karbi Anglong has come out as high developed in production of pulse, cereal crop and oil seeds. If emphasis is given on these particular sectors then development would be taken place for these districts.

2. The variation of different sectors among the districts are not same The highest variation is observed in Fertility and Literacy sector and lowest variation is observed in Agriculture sector.

3. The variation among the sectors in a district is larger for high developed districts than for low developed districts.

4. Except Agriculture sector all other sectors have significant correlation with other sectors. Agriculture sector has significant correlation with Basic infrastructure Service sector only.

5. From the computed regression equation it is observed that all the sectors have significant effect on overall economic development but Agriculture, Health, Education, BIS, Industry and Status of Women are exercising highly significant influence on it.

6.  Computing Spearman rank Correlation coefficient among the ranks are obtained from the four methods i.e. the method is used by Narain et al., Principal Component Analysis, Deprivation method and Equal Weighted Index method it is found that there are highly significant correlation among them.