CHAPTER V

DEVELOPMENT STATUS IN NORTH-EAST INDIA

5.1 Introduction

Three objectives are suggested regarding development status of any society: "1) to increase the availability and widen the distribution of basic life sustaining goods such as food, shelter, health and protection, 2) to raise levels of living including, in addition to higher incomes, the provision for more jobs, better education and greater attention to cultural and humanistic values, all of which will serve not only to enhance material well being but also to generate great individual and national self esteem and 3) to expand the range of economic and social choices available to individuals and nations by freeing them from servitude and dependence not only in relation to other people and nation-states but also to the forces of ignorance and human misery" (Todaro, 1987).

To a great extent first and second criterion of development can be calculated with the help of quantitative parameters. The second criterion is abstract by nature and therefore needs psychological measurement, not any economic measurement. One thing we can say confidently. There are a number of factors that determine the quality of life of any individual. All these factors directly or indirectly are dependent on income status of that individual in this materialistic world.

5.2 Per capita GSDP

The main objection against per capita income as an index of development is that it does not reveal the true picture of income distribution within any economy. Though, in different studies many social or socio-economic parameters have

shown significant relationships with the trend of per capita income and therefore PCI is widely used to measure economic development.

Different Finance Commission reports have presented comparable three yearly average of per capita GSDP subject to different time references as show in (Table 5.1). In the Table we have also given the name of the states of which per capita GSDP is maximum or minimum. In all three cases per capita GSDP is maximum for Goa. On the other hand, Bihar had minimum per capita GSDP subject to the average 1982-84 and average 1999-01 figures.

Table 5.1: Per capita GSDP and its Index for North Eastern States

	1	2	3	4	5	6
Arunachal Pradesh	2746	10705	16579	0.46	0.18	0.2
Assam	1863	7968	12288	0.17	0.01	0.11
Manipur	2205	8799	17264	0.28	0.06	0.21
Meghalaya	1960	9823	16035	0.2	0.12	0.19
Mizoram	1778	12378	21245	0.15	0.27	0.29
Nagaland	2268	13932	20469	0.3	0.36	0.28
Sikkim	2570	11109	20929	0.4	0.19	0.28
Tripura	1784	7983	18974	0.15	0.02	0.24

Source: Calculated from10th and 11th Finance Commission Reports

[Note: 1, 2, 3 are per capita GSDP corresponding to averages of 1982-84, 1994-96 and 1999-01 respectively. 4, 5, 6 are index values of per capita GSDP corresponding to the averages of 1982-84, 1994-96 and 1999-01 respectively.]

We have calculated index values of per capita GSDP of each state subject to three reference periods at all India level using the formula (actual value - minimum value)/ (maximum value - minimum value). This index value, we observed, for all states except Mizoram and Tripura are falling over the period 1982/84 - 1999/01.

5.3 Inequality in Monthly Per Capita Expenditure (MPCE)

NSSO reports 1993-94 and 2004-05 have provided per thousand distributions of households on the basis of monthly per capita expenditure(MPCE) for rural and urban areas. We were interested to calculate degree of inequality in MPCE for rural and urban people using the conception of coefficient of variation (CV) given by the formula :

$$CV = [(\text{Standard deviation}) / (\text{Mean})] \times 100$$

Table 5.2: MPCE Distribution in Rural Area (1993-94)

	0-120	120-140	140-165	165-190	190-210	210-235	235-265	265-300	300-355	355-455	455-560
A. Pradesh	27	33	58	89	68	103	126	81	131	82	45
Assam	9	21	49	107	100	145	142	134	145	98	28
Manipur	0	0	11	22	60	98	182	176	202	183	33
Meghalaya	7	0	12	36	62	94	106	133	164	225	83
Mizoram	0	0	3	17	9	29	59	102	167	327	160
Nagaland	5	0	0	0	7	10	12	52	142	314	241
Sikkim	0	8	33	55	68	79	143	164	141	122	71
Tripura	10	14	34	55	40	64	87	97	191	181	127

Source: Household Consumption Expenditure; NSSO Reports 1993-94

Table 5.3: MPCE Distribution in Urban Area (1993-94)

	0-160	160-190	190-230	230-265	265-310	310-355	355-410	410-490	490-605	605-825	825-1055
A. Pradesh	22	22	17	49	69	80	131	117	148	191	86
Assam	15	9	65	76	109	93	107	111	116	164	89
Manipur	1	4	81	208	175	154	173	124	43	28	3
Meghalaya	3	1	15	15	65	87	116	161	157	187	113
Mizoram	5	0	0	4	20	46	113	229	259	218	60
Nagaland	15	0	5	13	45	67	118	182	194	240	84
Sikkim	27	0	12	44	68	67	102	145	115	251	107
Tripura	18	20	26	53	87	116	142	106	114	167	59

Source: Household Consumption Expenditure; NSSO Reports 1993-94

Table 5.4: MPCE Distribution in Rural Area (2004-05)

	235-270	270-320	320-365	365-410	410-455	455-510	510-580	580-690	690-890	890-1155
A. Pradesh	13	34	38	57	67	76	114	158	177	122
Assam	10	37	65	89	92	123	141	193	175	46
Manipur	0	1	18	36	61	102	208	274	211	66
Meghalaya	0	0	6	10	30	60	157	255	315	111
Mizoram	0	2	10	26	22	39	81	132	313	236
Nagaland	0	1	0	1	0	1	8	50	318	326
Sikkim	0	14	24	30	44	89	140	170	180	119
Tripura	23	63	95	147	138	139	126	129	71	40

Source: Household Consumption Expenditure; NSSO Reports 2004-05

Table 5.5: MPCE Distribution in Urban Area (2004-05)

	335-395	395-485	485-580	580-675	675-790	790-930	930-1100	1100-1380	1380-1880	1800-2540
A. Pradesh	16	71	88	100	99	156	123	167	69	35
Assam	9	75	88	76	129	86	123	148	118	86
Manipur	0	34	203	183	192	148	135	66	26	13
Meghalaya	0	2	21	45	159	104	113	100	280	110
Mizoram	0	1	18	46	128	120	140	206	209	91
Nagaland	0	3	4	22	56	105	163	194	230	135
Sikkim	18	24	17	47	106	78	128	143	264	103
Tripura	31	81	134	115	96	100	81	122	133	69

Source: Household Consumption Expenditure; NSSO Reports 2004-05

Table 5.6: Coefficient of Variation (CV) on MPCE Class Distribution

States	1993-94 (Rural)	1993-94 (Urban)	2004-05 (Rural)	2004-05 (Urban)
Arunachal Pradesh	38	43	34	43
Assam	32	47	32	48
Manipur	26	32	25	37
Meghalaya	30	38	23	39
Mizoram	24	30	26	37
Nagaland	21	35	-	--
Sikkim	32	41	30	40
Tripura	34	44	34	51

Source: Calculated from the previous tables.

Development process should not take place at the cost of rising inequality on the basis of per capita consumption expenditure. In both the reference periods 1993-94 and 2004-05 we notice that CV values for urban area are greater than CV values for rural area. This means extent of inequality in rural area is less than that of urban area. Rural people migrate to urban area in search of a better life and thus urban area becomes gradually overcrowded. Now depending on the skill of any individual or the capacity of the economy all people may not get a good job. Consequently there is serious possibility of educated unemployment, underemployment or simply unemployment, which in turn fetches inequality in consumption pattern among the urban people.

5.4 Human Development Index

Human Development Index (HDI) is formed taking the simple average of life expectancy index, educational attainment index and per capita income index. Each index is obtained through applying the formula (actual value – minimum value) / (maximum value – minimum value). Educational attainment index considers both gross enrolment and adult literacy. HDI has some positive sides. First "income distribution is much more skewed than literacy and life expectancy. Secondly, since the non-poor have access to public services before the poor, reduction in infant mortality etc. are indications of improvements for the poor. Thirdly, any upward move in the HDI is an improvement, which can not be said of any increase in income. Fourthly, there is surely much more scope for relative deprivation in the social indicators than in income. We do not envy in the same way the educational and health achievements of those who do better as we do their wealth and income. Fifthly, reducing international gaps in human indicators is both more important and more feasible than reducing international income gaps. Sixthly, chief advantage of HDI is political; it focuses attention on important

social sectors, politics and achievements which are not caught by income measure" (Streeten, 1997).

The Table 5.7, given below, shows HDI values of rural and urban areas for the years 1981 and 1991. Rural HDI is always less than urban HDI. Higher participation in non-agricultural activities, higher access to education or health related facilities in urban area are some of the major reasons behind the gap between rural and urban HDI values. Tripura and Nagaland only have been able to raise their ranks in terms of rural HDI values at all India level over 1981-91. In Arunachal Pradesh, Assam, Meghalaya and Nagaland uraban HDI ranks are improved at all India level.

Table 5.7: State wise Human Development Index: 1981 & 1991

	1981 (Rural)	1981 (Urban)	1991 (Rural)	1991 (Urban)
Arunachal Pradesh	0.228 (28)	0.419 (24)	0.300 (28)	0.572 (15)
Assam	0.261 (26)	0.380 (28)	0.326 (26)	0.555 (19)
Manipur	0.440 (2)	0.553 (5)	0.503 (7)	0.618 (12)
Meghalaya	0.293 (20)	0.442 (21)	0.332 (24)	0.624 (10)
Mizoram	0.381 (9)	0.558 (4)	0.464 (10)	0.648 (5)
Nagaland	0.295 (19)	0.519 (8)	0.442(13)	0.633 (7)
Sikkim	0.302 (16)	0.515 (11)	0.398 (17)	0.618 (11)
Tripura	0.264 (23)	0.498 (12)	0.368 (20)	0.551 (20)

Source : India Development Report 2005-05. Note: Figures within the brackets indicate ranks at all India level

5.5 Previous works on Development Index

The pioneering works on development Index through the application of principal componebt analysis are Hagood (1943), Berry (1960) and Pal (1968). In all these works we received the analysis regional disparity on development status through formation of index based on certain selected indicators.

Choice of indicators to measure economic development is a crucial task. Since the idea of development is complicated and is dependent on several factors,

interrelated with each other, the measurement of development status subject to certain variables has become popular. The indicators selected by UNRISD (1970) to calculate development performances are - *expectation of life at birth, percentage of population in localities of 20,000 and over, consumption of animal protein per capita per day, primary and secondary enrolment, vocational enrolment ratio, average number of persons per room, newspaper circulation per 1000 population, percentage of economically active population with electricity gas, water etc., agricultural production per male agricultural worker, percentage of adult male labor in agriculture, per capita electricity consumption, per capita steel consumption, per capita energy consumption (coal), share of manufacturing sector in GDP, per capita foreign trade, percentage of salaried and wage earners to total economically active population.* The indicators selected by UNRISD give more explanation about the structural process rather than human welfare. Harvey and Bhardwaj (1973) provided fourteen socio-economic indices on modernisation, non-subsistence, traditional crafts, agricultural employment, commerce, literacy, female literacy, circulation, migration and share of schedule caste people. Rao (1977) had chosen six indicators on growth rate, birth rate, death rate, general fertility rate, rural-urban fertility rate and proportion of urban population. Most of these parameters are biased in favour of demographic scenario. Morris (1979) formed Physical Quality of Life Index (PQLI) based on life expectancy at age one, infant mortality and literacy. In reality PQLI did not maintain a strict positive correlation with per capita GNP across the countries. Similarly, the conception of quality of life is multidimensional and therefore can not be expressed by only three indicators mentioned before. On this matter Hicks and Streeten (1979) emphasised on six basic needs of human being, i.e, health, education, food availability, water supply, sanitation and housing. Goshal and Krishna (1984) considered fourteen factors out of which one is related with urbanization process, four are related with literacy status and nine are related with occupational structure. The work of Rao (1981) is much elaborated

compared to the studies mentioned before. It considered 24 variables representing agriculture sector, industrial sector, banking sector and education sector and lastly computed composite score on development status for 14 major states of India.

T.C.A. Anant, K.L. Krishna and Uma Roy Chaudhury (10th & 11th Finance Commission report) have classified infrastructural facilities among three broad groups, viz., physical, social and institutional This group defined physical as – "they involve technological indivisibilities and considerable lumpiness. Secondly, the investment projects have long gestation lags; this often follows from the sheer size of these investments. Thirdly, "they are subject to substantial external economies and diseconomies through the interdependence of economic activities or even of infrastructure facilities themselves"(10th Finance Commission report).

Table 5.8: Index of Economic and Social Infrastructure

	As per 10th FC Report	As per 11th FC Report
Arunachal Pradesh	48.94	69.71
Assam	81.94	77.72
Manipur	70.38	75.39
Meghalaya	73.75	75.49
Mizoram	61.85	82.13
Nagaland	70.92	76.14
Sikkim	104.62	108.99
Tripura	83.55	74.87
All India average	100	100
Maximum	219.19 (Punjab)	200.57 (Goa)

Source: 10th and 11th Finance Commission Reports

As per them agriculture, banking, electricity, transport and communications come under economic infrastructure, where as education and health come under social infrastructure and lastly civil administration comes under administrative infrastructure. Taking into consideration these sectors the expert group

constructed index of economic and social infrastructure of northeastern states as well as all Indian states. To be noticed this index value for northeastern states in both the reference periods are much lower than the national average and the corresponding maximum figure. Only in Sikkim it is marginally higher than the national average though with a massive gap with respect to maximum figures. Here, as per 10th Finance Commission report maximum value of the index is achieved by Punjab (219.19) and as per 11th Finance Commission report the same is achieved by Goa (200.57).

Scaling and assigning weightages are two important things for the construction of composite index of development. Different approaches mentioned above have managed these two things in different ways. Kundu, Shariff and Ghosh (2007) have presented a fine analysis on this matter. In an innovative style they made the indicators scale free through "division by mean" method and weightages have been given in such a way so that, indicators with higher coefficient of variation will be given higher weights. Unlike conventional principal component analysis approach, in this case positive factor loadings are obtained. The work is highly significant as it considered different axioms regarding scale bias and assigning weightages.

5.6 Selected Indicators in Our Study

In the previous section we have reviewed a number of works on development index based on different parameters. In our view any such analysis should not choose variables arbitrarily without having any logical base. Sometimes consistent data are not available of any particular variable that is considered highly relevant in the analysis. This section deals with the formation of composite scores for the years 1991 and 2001 for all northeastern states except Assam with the help of Principal Component Analysis.

For our purpose we have taken thirteen variables given below.

Percentage of urban population (X1), Percentage of literacy (X2), Worker population ratio (X3), Share of non-agricultural employment (X4), Share of rural non-agricultural employment (X5), Percentage of enrolment in higher education (X6), Infant survival rate (X7), Percentage of people who live above poverty line (X8), Credit- deposit ratio (X9), Per capita NSDP (X10), Rural electricity (X11), GSDP/debt ratio (X12) and Income share of secondary sector (X13).

The magnitudes of the variables mentioned above corresponding to 1991 and 2001 are given below. In some cases the data exactly of 1991 or 2001 were unavailable and therefore we collected information of the period nearest to the 1991 or 2001.

Table 5.9: State wise Values of Selected Indicators (1991)

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13
12.79	41.6	0.45	32.56	27.81	0.13	909	60.65	22.3	5251	33.88	3.14	18.89
27.71	59.9	0.38	30	23.87	1.59	972	66.22	67.4	3912	41.73	2.93	11.15
18.53	49.1	0.4	25.19	21.73	0.88	920	62.08	21.2	4954	16.34	5.17	20.31
46.37	82.3	0.42	34.03	16.85	0.77	947	74.34	25.3	4951	35.47	2.19	20.23
17.35	61.6	0.42	26.99	16.28	0.54	949	62.08	43.4	5893	47.16	2.55	12.16
9.75	56.9	0.4	31.6	28.3	0.14	940	58.57	23.9	5213	57.12	1.92	13.14
15.21	60.4	0.29	35.92	29.35	0.34	918	60.99	65.5	4386	28.5	2.7	7.27

Note:1st row for Arunachal Pradesh, 2nd for Manipur, 3rd for Meghalaya, 4th for Mizoram, 5th for Nagaland, 6th for Sikkim and 7th for Tripura

Table 5.10: State wise Values of Selected Indicators (2001)

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13
20.81	54.7	0.37	37.7	27.45	0.42	956	66.53	15.8	14699	44.52	1.8	18.24
23.84	68.9	0.31	42.62	34.75	1.51	975	71.46	26.4	11066	52.5	2.32	19.1
19.56	63.3	0.32	34.12	25.37	1.15	948	66.13	18.3	14632	30.26	3.11	11.56
49.43	88.5	0.4	40.24	18.25	0.79	977	80.53	26.4	18491	44.13	1.23	13.46
17.58	67.1	0.35	31.97	22.6	0.54	982	67.33	12.8	17629	56.9	1.92	11.85
11.11	69.7	0.39	43.66	37.95	0.62	948	63.45	16	16503	75.01	1.65	20.37
16.92	73.7	0.28	49.09	40.62	0.56	941	65.56	21.5	15253	31.75	2.64	12.21

Note:1st row for Arunachal Pradesh, 2nd for Manipur, 3rd for Meghalaya, 4th for Mizoram, 5th for Nagaland, 6th for Sikkim and 7th for Tripura

5.7 Principal Component Analysis – Basic Methodology

The method of principal component analysis is widely applied if number of explanatory variables is larger than number of observations. It also solves the problem of multicollinearity arising through the interrelationships among the explanatory variables. This technique has become popular to construct weighted composite index of development. Various works, which we have mentioned before on the development index, followed this method.

Principal component analysis has come from a more generalised method called Factor Analysis. Suppose a set of variables X_j-s are given (J= 1, 2, 3.....k). Principal components (C_i –s) as a set of new variables will be constructed from X_j such that

$C_1 = a_{11}x_1 + a_{12}x_2 + \ldots\ldots\ldots + a_{1k}x_k$

$C_2 = a_{21}x_1 + a_{22}x_2 + \ldots\ldots\ldots + a_{2k}x_k$

.

.

.

$C_k = a_{k1}x_1 + a_{k2}x_2 + \ldots\ldots\ldots + a_{kk}x_k$

Here, to be noticed, the principal components are the linear combination of X-s.

a-s are the coefficients of X-s and are called as loadings. Loadings will be chosen in such a way so that the principal components are uncorrelated to each other. It also has to be ensured that first principal component will absorb maximum possible proportion of total variation of X-s and out of the remaining variation, maximum proportion will be absorbed by the second principal component and the process will be continued

Explanatory variables are correlated with each other and therefore together form correlation table. In general loading a_{ij} is obtained by the equation

$$(\sum_{j}^{k} r_{xixj}) / \sqrt{\sum_{i}^{k}\sum_{j}^{k} r_{xixj}}$$

If we add the squares of the loadings of each principal component then we shall get latent root or eigen values or characteristic root. For instance corresponding to 1st principal component eigen value is given by-

$$(a_{11})^2 + (a_{12})^2 + \ldots\ldots\ldots\ldots + (a_{1k})^2$$

In general $\lambda_m = \sum_{i}^{k} (l_{mi})^2$

After getting the loadings of all retained principal components the score of particular observation corresponding to a particular component can be derived by the summation of the products between standardised values of the variables and their corresponding loadings (Johnston, 1978) and (Hassan, Daspattanayak & Misra, 2007)

Question may arise as to how many principal components will be retained in our analysis. In many works mentioned before only first principal component has been considered, as, through this approach "an indicator having stronger interrelations with the other indicators should have a higher weight" (Kundu, Shariff and Ghosh, 2007). Conventionally those components are retained in the analysis for which eigen values are greater than one; or

$$\lambda_m > 1$$

5.8 Analysis of the Results

Depending on the eigen value four components are retained suggesting four factor solutions for both 1991 and 2001. Four components altogether consider above 90% of total variance in both the time references (Table 5.11).

Table 5.11: Eigen Values and Explained Percentage Variance

Total (1991)	% of variance (1991)	Cumulative % (1991)	Total (2001)	% of variance (2001)	Cumulative % 2001
4.189	32.227	32.227	4.672	35.936	35.936
3.602	27.708	59.934	3.192	24.554	60.491
2.491	19.158	79.093	2.428	18.681	79.171
1.731	13.316	92.409	1.706	13.125	92.297

Source: Estimated from Table 5.9 and 5.10

An idea about the number of components to be retained may also be obtained by "Scree Plot". "Scree plots" against 1991 and 2001 are given below. In each case eigen value is measured along the vertical axis and number of component is measured along the horizontal axis. Visibly, in both the plots 5th component gives eigen value less than one which may not be accepted. Thus, in both the scree plots four components solutions are supported.

Figure 5.1: "Scree plot" for 1991

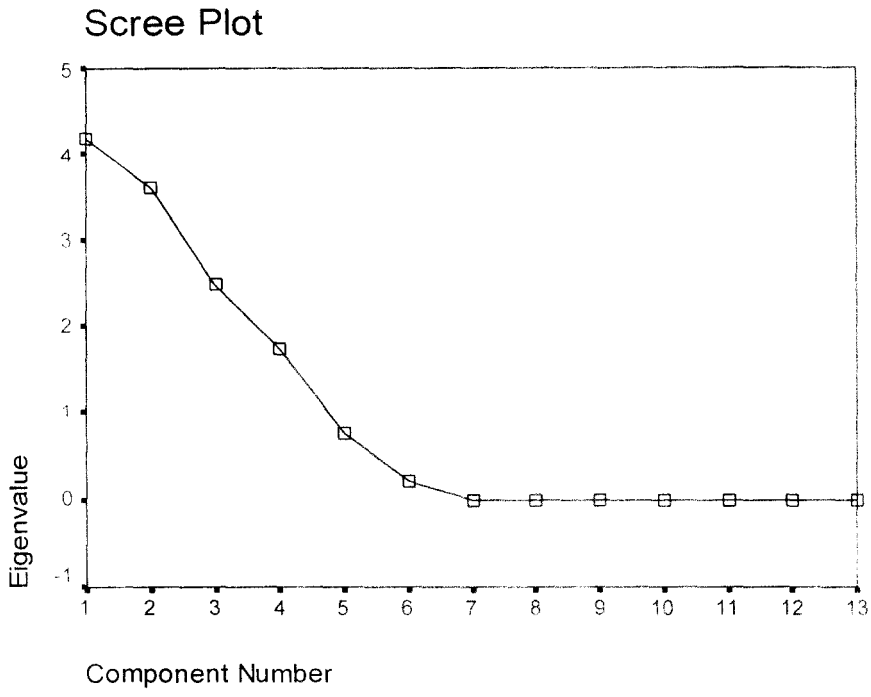
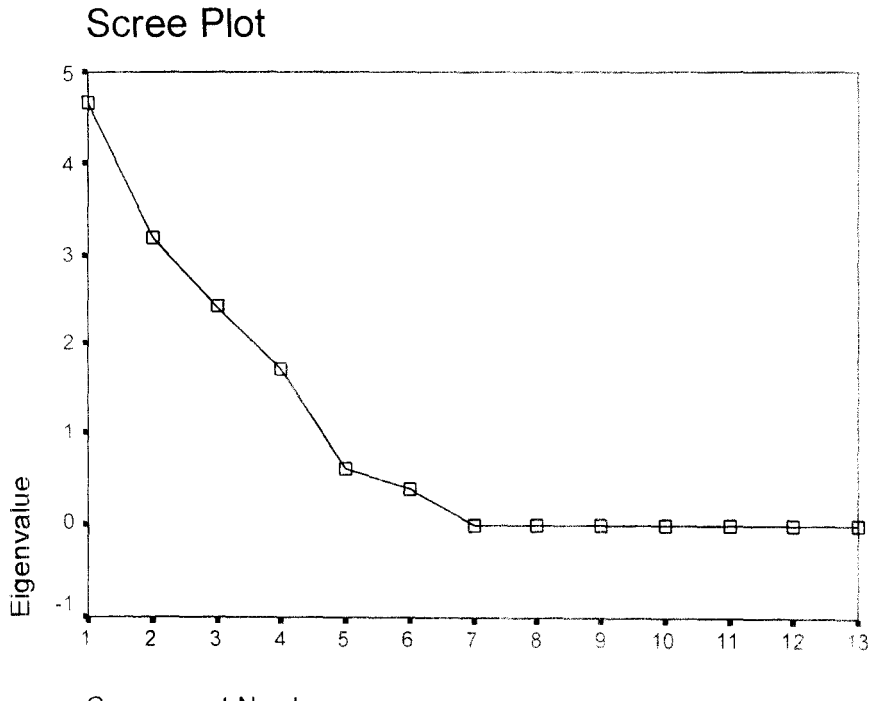


Figure 5.2: "Scree Plot" for 2001



A perusal of the component matrix of 1991 (Table 5.12) reveals that in 1st component percentage of urban population, percentage of literacy and percentage of people who exist above poverty line have very high positive loadings and therefore co-vary towards the same direction with the 1st component. In this component x_5 (share of rural non-agricultural employment) has high but negative loading. For 2001 component matrix the three variables mentioned above have still high and positive in 1st component where as the strength of x_5 is reduced.

For the second component in 1991, x_3 (worker population ratio), x_{10} (per capita NSDP) and x_{13} (income share of secondary sector) have very high positive loadings. But all three have lost their strength in 2001. In 2001, subject to second component we observe growing importance of x_4 (share of non-agricultural employment). Loading of x_9 in 2nd component of 1991 is very high but negative, where as, it has taken low but positive loading in the second component of 2001 matrix.

In third component of 1991 matrix only x_{11} (rural electricity) has positive and high loading. In 2001 too x_{11} has maintained its high and positive loading. Apart from that rising role of x_3 and x_{13} is noticed.

X_6 (percentage of enrolment in higher education) and x_7 (infant survival rate) have shown positive and high loadings in fourth component of 1991 matrix. The indicator x_6 has maintained the same profile in 4th component of 2001 matrix.

Table 5.12: Component Matrix (Rotated) 1991 and 2001

	1st (1991)	2nd (1991)	3rd (1991)	4th (1991)	1st (2001)	2nd (2001)	3rd (2001)	4th (2001)
X1	0.995	0.018	-0.078	0.055	0.911	-0.331	-0.038	-0.075
X2	0.865	-0.1	0.343	-0.097	0.887	0.145	-0.015	-0.244
X3	0.105	0.856	0.076	0.274	0.22	-0.374	0.664	-0.497
X4	0.241	-0.329	0.197	-0.871	0.297	0.942	0.086	0.068
X5	-0.624	-0.4	-0.074	-0.516	-0.33	0.889	0.109	0.255
X6	0.493	-0.437	-0.199	0.696	0.26	-0.108	-0.082	0.889
X7	0.493	-0.279	0.542	0.588	0.432	-0.695	0.294	0.13
X8	0.993	0.034	-0.069	0.032	0.932	-0.343	0.043	0.045
X9	0.032	-0.917	0.198	0.144	0.839	0.244	-0.084	0.472

X10	-0.243	0.833	0.29	0.018	0.23	-0.231	0.024	-0.921
X11	-0.08	0.086	0.961	0.052	-0.165	0.004	0.904	-0.118
X12	-0.239	0.073	-0.876	0.401	-0.428	0.178	-0.726	0.471
X13	0.307	0.773	-0.493	0.039	-0.138	0.278	0.857	0.322

Table 5.13 gives the composite scores on development status of seven states subject to 1991 and 2001. The score under individual component for each reference period is obtained by the way suggested by Johnston (1978) mentioned before. The overall score is obtained aggregating the scores of individual component. Since we have not brought into analysis other Indian states, looking at the overall scores given in the Table 5.13, we simply can not examine the status of northeast Indian states at all India level. That may be considered as the limitation of our study. Nevertheless construction of such index may be justified on three grounds. Firstly, index values of 1991 and 2001 can give us idea whether development status subject to the selected indicators of any individual state is improved or not. Secondly, we can get an impression about the inter-state disparity in development status in both the reference periods. Thirdly, for any particular reference period we can examine the strength of relationship between composite scores of the states and any particular indicator. This is possible through obtaining across state correlation coefficient between composite scores and magnitudes of any indicator. The approach may help us in making policy prescriptions for future.

Table 5.13: Composite Scores 1991 and 2001

States	Composite Scores
Arunachal Pradesh	-3.942 (1991), -2.784 (2001)
Manipur	1.712 (1991), 8.237 (2001)
Meghalaya	-1.964 (1991), -4.834 (2001)
Mizoram	10.068 (1991), 3.469 (2001)
Nagaland	5.83 (1991), -6.955 (2001)
Sikkim	-0.985 (1991), 2.083 (2001)
Tripura	-10.672 (1991), .792 (2001)

A positive and higher value of composite score of any individual state proves that state to be more developed in comparison with other states. In that sense for 1991 Mizoram is to be considered as the most developed state and for 2001 the credit goes to Manipur. Keeping in mind everything only the performance of Manipur is worth mentioning. Inter-state disparity in terms of development status is measured by the standard deviation of composite scores achieved by the states. This has slightly fallen from 6.739 (1991) to 5.240 (2001).

We conducted across state correlation analysis between the composite score and each indicator for both the reference periods 1991 and 2001. The indicators, which gave positive correlation coefficients in both the periods are x_1, x_2, x_6, x_7, x_8, x_{11} and x_{13}. This is true that among these seven indicators for some, the magnitudes of this correlation coefficient are rising where as for others it is falling. But for all indicators we received a moderate positive value of this coefficient. The results at least can help us to have an idea about the direction of development process in northeast India.

5.9 Summary

Per capita GSDP index for all northeastern states except Mizoram and Tripura has fallen over 1982-2001. The index is formed subject to maximum and minimum per capita GSDP among all the Indian states.

Inequality in monthly per capita consumption expenditure (MPCE) is higher in urban area compared to rural area. For most of the states the urban inequality in MPCE has increased during 1993/94 – 2004/05. On the other hand rural inequality in MPCE has increased only in Mizoram.

In terms of HDI values Manipur, Mizoram and Nagaland have achieved respectable ranks at the all India level subject to the reference periods 1981 and 1991. To examine the overall development status a group of experts have

constructed economic and infrastructural index of all Indian states. As per this index value northeastern states may be considered undoubtedly as underdeveloped in comparison with other general category states of India.

We have formed composite score on the development status for the northeastern states subject to the reference periods 1991 and 2001 with the help of thirteen indicators. The indicators are:percentage of urban population, percentage of literacy, worker population ratio, percentage of non-agricultural employment, percentage of rural non-agricultural employment, % of enrolment in higher education, Infant survival rate, percentage of people who live above poverty line, credit- deposit ratio, per capita NSDP, rural electricity, GSDP/debt ratio and income share of secondary sector. As per the calculated composite scores the development status of Manipur only is improved during 1991-2001. For other states either the scores are negative or positive but low or falling over the period.