

## **Inter District Disparities in Meghalaya: A Human Development Approach**

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*‘.....something can not be improved if it is not measured.’* Edwin J. Feulner  
Preface: 2007 Index of Economic Freedom

### *Abstract*

*The present paper is an attempt to highlight the magnitude and the problems of unbalanced human development in the state of Meghalaya using data collected for a Major Research Project of UGC. The study reveals widespread variations in human development across all the seven districts and disparities between rural and urban areas and between male and female groups of population within the state. There exists a significant level of disparity both in income consumption and in non-income attainments over the districts. The inequality in economic attainment happens to be very high. However, both measures of variation and inequality index suggest that few non-income indicators such as intensity of formal education and infant mortality rate have disparities over economic indicators which are indeed a cause of considerable concern. In addition, economic inequality is much higher than the overall HDI inequality. With an evidence of a huge shortfall in HDI the existing level of variation and disabilities calls for a need to redesign the public policies that directly affect the welfare of the people.*

### **Introduction**

Meghalaya is one of the seven north-eastern states that have shown an unimpressive performance during the 1980s and 1990s in terms of both economic and human development. In addition, the regional dimensions of development in the state are also disturbing. A significant level of disparities exists in levels of income and features of human development amongst the districts/regions. However, to attain a decent level of human development in the state as a whole the backward districts need special attention. For that one should have a complete picture of inter district disparities in the levels of different components of human development. This study, based on a UGC Major Research Project (Nayak and Thomas, 2007), attempts to identify the nature and level of disparities amongst the districts/regions and to trace the causes of the relatively poor performances of some districts. By identifying the deficiencies and disparities we can provide a useful basis for reorienting priorities and public actions towards the goal of evolving a people-centered development planning for Meghalaya.

The remainder of this paper proceeds as follows. After this brief introduction we present the features of the state from secondary sources. Then we work out the Human Development Index (HDI) for the state as a whole with district/regional level indices followed by some statistical measures of the level of disparities that exists in Meghalaya. And finally, the paper is concluded with key findings and policy recommendations.

### **State Profile from Secondary Sources**

**General Features:** Meghalaya is one of the smallest States in India. It is predominantly a tribal State in the North Eastern Region. The state is surrounded in the East and North by the State of Assam and in the West and South by Bangladesh. It is a hilly strip in the eastern part of the country and about 300 km long from East to West and 100 km wide. The state lies between 85°49' and 92°53' East Longitude and 20°1' and 20°5' North Latitude. It has a geographical area of 22,429 sq. kms. It covers 0.7 per cent of the total area of the country and 8.6 per cent area of the N.E. Region. However, area-wise it is the third biggest state in the region after Arunachal Pradesh and Assam. It has a rising and falling topography. About 37 per cent of the total area of the state is forest. The state is subject to vagaries of the monsoon. The climate of the state though varies with altitude it is moderate and humid. With average annual rainfall as high as 1200 cm in some areas, Meghalaya is the wettest state of India. The state gets adequate rainfall throughout the year and the annual rainfall ranges between 2000 to 5000 mm. It is a storehouse of economic minerals. The major minerals that are presently exploited are Coal, Limestone, Clay and Sillimanite.

Meghalaya is mainly the homeland of the three major ethnic groups, namely, the Khasi, the Jaintia and the Garo. About 45 per cent of the total population in the State belong to Khasi, 32.5 per cent Garo and the rest 22.5 per cent are from various communities such as Bengali, Assamese, Nepali/Gurkha, Hindi speaking, Koch, Rabha, Mikir, etc.

Originally the state had two districts and three subdivisions. As per 2001 Census, the state now has 7 districts, 8 sub-divisions, 39 community development blocks, 16 towns and 5780 villages. Most of these administrative units starting from villages to districts are very small. The seven districts in the state are quite different from each other

in various respects. South Garo Hills is the smallest district having an area of 1887 sq. km. as against the biggest district West Khasi Hills that has an area of 5247 sq. km. The biggest district covers about 24 per cent of the total area of the state whereas the smallest district covers only 8 per cent.

**Demographic Features:** Table 1 presents the district wise demographic features of Meghalaya mostly from Census 2001. For an easy reference, the rankings of the districts in terms of indices are also reported in parenthesis. In terms of area, among seven districts in Meghalaya West Khasi Hills is the biggest district followed by Jaintia Hills with about 23 per cent and 17 per cent of total geographical area while Ri-Bhoi and South Garo Hills are the smallest in size with 11 and 8.5 per cent respectively. Population wise East Khasi Hills and West Garo Hills are the most populous districts with about 29 per cent and 22 per cent of state population while Ri-Bhoi and South Garo Hills again occupy the last two ranks with roughly 8 and 4 per cent. These two columns in the Table 1, being the sole determinants of the density of population, create a significant range of differences in density. The highest density is recorded in East Khasi Hills (241), followed by West Garo Hills (140); again West Khasi Hills (56) and South Garo Hills (53) are sparsely populated districts in Meghalaya. However, in terms of sex ratio the matrilineal state shows a wide range of variation. With the state average at 975 the highest sex ratio in favor of women is reported in West Garo Hills (988), followed by East Khasi Hills (984). Not surprisingly, the last two rankers in the state – South Garo Hills (943) and Ri-Bhoi (942) have sex ratios higher than national average. The state registers poorer urbanization rate (19.6) as compared to the national average (27.78). East Khasi Hills where state capital Shillong is located has the highest urbanization rate of little over 42 per cent while in the recent district of Ri-Bhoi less than even 7 per cent of total population live in urban settlement.

**Selected Human Development Indicators:** Table 2 summarizes secondary information regarding the indicators that are often taken as determinants of human development. They include per capita net district domestic product, literacy rate, number of primary and middle schools per lakh population, number of beds in government hospitals and that of doctors and nurses available for every lakh population.

We first consider the per capita income during 1993-94 and 1999-00 in Columns 2 and 3 of Table 2. In early 1990s East Khasi Hills had highest per capita income (Rs.8943), followed by Jaintia Hills (Rs.7748). West Khasi Hills (Rs.5166) and East Garo Hills (Rs.5148) were the poorest, occupying the last two ranks. In late 1990s the relative income scenario of the state changed marginally. The smallest district of the state – South Garo Hills emerged as the richest district pushing East Khasi Hills in the second position. Similarly, little improvement in per capita income by East Garo Hills changed their position in cooperative settings - West Khasi Hills demoted to the status of poorest district. However, in both the years the list of richest and poorest three districts remained unchanged and the ratio of the income levels between richest and poorest districts did not change significantly. The ratio, that in a sense denotes the level of income disparity, roughly deteriorated from 1.74 in 1993-93 to 1.83 in 1999-00. The state lagged behind the national average in literacy. The literacy rates in Meghalaya (Columns 4-8) varied from about 75 per cent in East Khasi Hills to 51 per cent in West Garo Hills. But the gap between male and female literacy rates in the state was impressively low at 6 per cent against the disturbing differences of about 22 per cent at the national level. The educational infrastructure, captured by the number of primary and secondary schools presented in Table 2 (Columns 9 and 10) revealed that as such there was no clear association between number of schools and literacy rate. In terms of health infrastructure (Columns 11-13) East Khasi Hills determined the state average as all other districts fell below the state average.

### **Status of Human Development in Meghalaya**

The new development paradigm intends to shift the attention away from the single indicator of per capita income to other attainments of decent human life such as education, health, participation in decision making etc that people have reasons to value for enhancing their overall well-being and more importantly, for enjoying freedoms in their economic, social and political life. Therefore, it was felt necessary to incorporate these attainments in the measurement of development. UNDP had formulated Human Development Index (HDI) to prepare HDR (1990) and modified in HDR (1994) which takes three most critical aspect of human life – income, education and health into

consideration. Their appearance in HDI with equal weights has in a sense revolutionized the measurement of development. Despite several limitations HDI gained unprecedented popularity over the years due to its simplicity and plural attention. Planning Commission of India, however, departed slightly from UNDP methodology in preparing National Human Development Report 2001 (G.O.I, 2002). The Planning Commission formulation of computing HDI seems to be more pragmatic – especially in the context of India. However, the departure is less in terms of conceptualization of human development and more in the selection of indicators.

**Data, Methodology and Indicators:** The primary data used in this paper covered all the seven districts of the state. Data pertained to seventeen development blocks of the state selected at random out of 39 blocks taking five villages from each block. The sample constituted all together 1020 interviewed households to capture the level of wellbeing in different parts of the state (Nayak and Thomas, 2007). To compute the level of human development in Meghalaya, Nayak and Thomas (2007) adopted the guideline provided by the Planning Commission. In the present study, if not mentioned otherwise, we followed the same methodology i.e.,  $HDI = 1/3$  [Economic Index + Education Index + Health Index]. The indices for Health and Educational attainment were obtained

by  $\frac{X_{ij} - Min(F_i)}{Max(F_i) - Min(F_i)}$  where,

$X_{ij}$  = Actual Value of component 'i' for district 'j'  
 Minimum  $F_i$  = Minimum Value Fixed for  $i^{th}$  component  
 Maximum  $F_i$  = Maximum Value Fixed for  $i^{th}$  component

However, for economic attainment which captures the command over resources the index

was computed by  $\frac{Log(Y_j) - Log\{Min(F_y)\}}{Log\{Max(F_y)\} - Log\{Min(F_y)\}}$

where,  $Y_j$  = Actual value of economic attainment for district j  
 Minimum  $F_y$  = Minimum Value Fixed for economic component  
 Maximum  $F_y$  = Maximum Value Fixed for economic component

For an easy reference, the indicators and goal posts (Fixed Maximum and Minimum values of indicators), we set for this paper, are summarized in the Box 1.

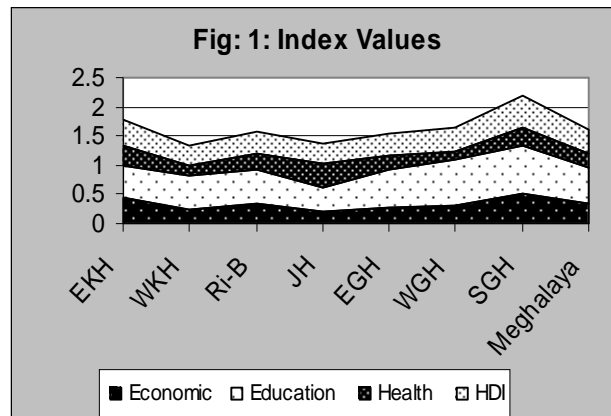
**Box 1**  
**Indicators of Human Development with Fixed Max-Min Values**

Attainment	Indicators	Goal Posts	
		Max	Min
Access to Decent Living	1. Inequality Adjusted Real Per Capita Consumption Expenditure (Rs./month)	325	65
Access to Knowledge	1. Adult Literacy Rate	100	0
	2. Intensity of Formal Education	7	0
Access to Long and Healthy Life	1. Life Expectancy at age 1**	80	50
	2. Infant Mortality Rate	120	0

\*\* As no estimation for this indicator could be made, life expectancy of Assam has been taken as representative figure for Meghalaya.

**Level of Human Development in Districts:** The state as a whole has scored HDI value in our study as low as 0.404 which in any standard falls in the category of low human development group (Table 3). Hence, the state has a shortfall of about 60 per cent. The value has marginally improved from the score of 0.365; assigned in NHDR (2001) to Meghalaya during 1991 and crosses national average of 0.381 of 1991. The smallest district of the state – South Garo Hills has obtained the highest HDI value 0.544 which happens to be the only district in entire Meghalaya that crosses the benchmark of medium level of human development. West Khasi Hills has scored the lowest value 0.336. The best performer registers a huge shortfall of over 45 per cent while the poorest district in terms of human development has a shortfall of over 66 per cent. For other five districts the shortfall in HDI ranges between 45-66 per cent which can simply be described as alarming not only in global context – it seems disturbing even in national perspective.

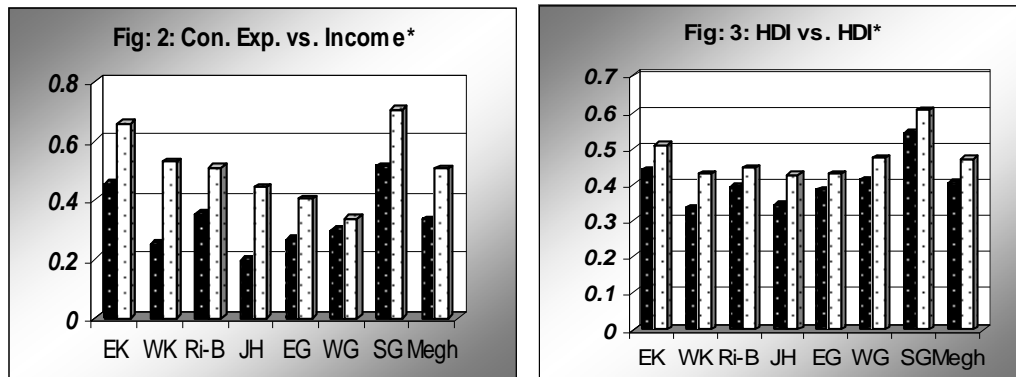
The contribution of three human development attainments to determine the value of the composite index is depicted in the Figure 1. In all the seven districts educational attainment is the highest contributor to determine the level of HDI. Except in Jaintia Hills, the economic index contributes next to education and health attainment in all districts show a huge shortfall which needs to be addressed immediately.



**Level of Human Development in Regions:** Meghalaya attained statehood in 1972, curving three matrilineal districts of Assam: Khasi, Garo and Jaintia Hills Districts. In post-statehood era both Khasi and Garo Districts were divided into three districts while Jaintia Hills remained untouched. In order to gain an idea of regional dimension of human development scenario in Meghalaya we computed the regional HDI which are population weighted average of the district level HDI values. It is evident that no region in Meghalaya could touch the benchmark value (0.5) of HDI (Table 4). Garo region topped the list with impressive educational and poorest health attainment. Khasi region topped in economic attainment and ranked second in other two attainments. Though Jaintia region topped in health attainment its poor performances in other two attainments placed the region in the last position in overall HDI value.

**Linkages between Income, Consumption and Non-Income Components:** The distinguishing feature of Planning Commission formulation of computing HDI is that inequality adjusted per capita real consumption expenditure (Rs./month) has been taken as economic attainment instead of per capita income, commonly used in UNDP formulation. This particular departure was governed partially by the conceptual requirement of having an indicator which is a direct and better measure of economic well-being for the population (Malhotra, 2007). There occurs a significant hike in the magnitude of economic attainment for every district resulting in a moderate increase in overall HDI values, however, nominal change of positions in comparative settings when income, instead of consumption expenditure, is used. To differentiate the same index obtained from different economic indicators we refer the composite index as HDI\* when

the same is constructed on the basis of income. This additional computation helped us to compare the level of human development of Meghalaya with other states in the preceding section.



It is evident from Figure 2 that the value of economic attainment for the state as a whole was increased by over 51 per cent with a maximum increase in Jaintia Hills District of about 128 per cent, followed by West Khasi Hill of over 110 per cent. On the other hand, least impact of the change in economic indicator was observed in West Garo Hills (12 per cent), followed by South Garo Hills (37 per cent). The result of these increases in economic indicator has been able to hike the overall composite index of the state by about 17 per cent. Figure 3 reveals that the biggest difference between HDI\* and HDI was carried out in West Khasi Hills (28 per cent), followed by Jaintia Hills (24 per cent).

Table 5 reports the Spearman's coefficient of rank correlation between different indices and examines their level of significance. It shows that Income\* is positively and significantly correlated with Consumption Expenditure, Health, HDI and HDI\* as well, however, Consumption Expenditure with Education, HDI and HDI\*. While Education has positive and significant correlations with both HDI and HDI\* - Health does not have significant association with other indicators except Income\*. The negative correlation between Education and Income\* and between Health and Education are not statistically significant.



## Level of Disparities in Human Development

**Dimensions of Inter-District Disparities:** The magnitude of disparities in indicators and in corresponding composite index (HDI) is reported in Table 6 where population-weighted sample means, standard deviations, coefficient of variations and Bourguignon Inequality Index (L) are computed. L is given by the natural logarithm of the ratio between the populations weighted Arithmetic Mean and Geometric Mean of the index. The advantage of L is that it is the only population weighted additively decomposable inequality measure that satisfies Pigou-Dalton condition and in fact same as Theil's population weighted inequality index. This measure is used in several studies such as Ram (1992 and 2006), Pillarisetti (1997), Chelliah and Shanmugam (2000).

The weighted mean; standard deviation; coefficient of variation have the following well-known expressions:

$$\text{Mean}(X_i) = \sum_{j=1}^7 p_j X_{ij} \quad \text{Where,}$$

$$p_j = \text{Population share of } j^{\text{th}} \text{ district such that } \sum p_j = 1$$

$$X_{ij} = \text{Actual value of } i^{\text{th}} \text{ component for } j^{\text{th}} \text{ district}$$

$$\text{Standard Deviation is given by: } SD_i = \left\{ \sum_{j=1}^7 p_j (X_{ij} - X_i)^2 \right\}^5$$

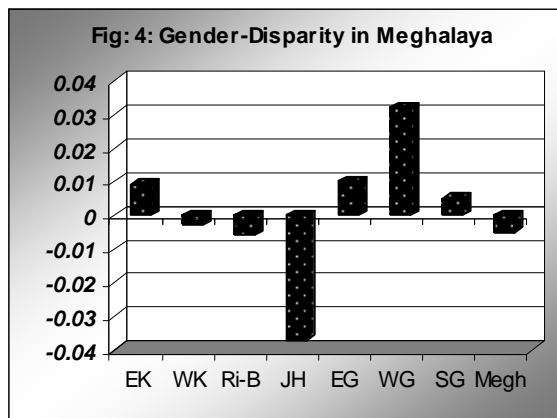
$$\text{Coefficient of Variation is: } CV = \frac{SD}{X_i} 100$$

$$\text{And finally, Bourguignon Inequality Index is: } L = \ln \left( \frac{\sum p_j X_{ij}}{\prod X_{ij}^{p_j}} \right)$$

Table 6 reveals that income inequality index (0.0217) is much higher than consumption expenditure index (0.0125). Since following Planning Commission formulation we used the latter indicator for constructing our composite index; HDI inequality index (0.0075) remains moderate. Two indicators for educational attainment show a very different level of disparities: inequality index for literacy rate (0.0076) is significantly less than that of intensity of formal education (0.0496). Inequality index of infant mortality rate has been the highest among all indicators. The measure of variation suggests altogether a similar picture. The variation in income is as high as about 21 per cent against 16 per cent in consumption expenditure. Again, variations in intensity of

formal education (32.61 per cent) and infant mortality rate (38.64) are concernedly higher as compared to other social indicators.

***Inter-District Gender Disparities:*** Human Development is a new paradigm that is motivated by a concern for human dignity. Such a perspective of development underscores the role of freedoms to shape the life of people – both women and men. India is counted among those countries of the world that are struggling to achieve certain degree of equality between women and men. To obtain an idea of sex disparities in the unique matrilineal state in the country we have made an exercise to capture the level of disparities that exists between male and female respondents of our study. As economic attainment (income\*/consumption expenditure) could not be separated for men and women this discussion is limited within the non-income component of HDI, commonly referred in the literature as HDI<sub>non-income</sub>. The Table 7 indicates that in the state as a whole the sex disparity is negative implying a disparity in favor of women. However, the picture varies significantly over districts. All three Garo Hills Districts and East Khasi Hills Districts show an opposite scenario of the state average. Women in these districts are lagging behind their male counterpart.



The magnitude of gender-disparity in Meghalaya in both directions is depicted in Figure 4 which reveals that in Jaintia Hills, women are enjoying highest opportunities in terms of education and health attainment over men, followed by Ri-Bhoi. On the other

hand, in West Garo Hills women lag most, followed by East Garo, East Khasi and South Garo Hills.

### **Conclusion**

In this paper we measured the inter district disparities in Meghalaya in terms of human development indicators. There exists a significant level of disparity both in income consumption and in non-income attainments over the districts. The inequality in economic attainment (income as well as consumption expenditure) happens to be very high. However, both measures of variation and inequality index suggest that few non-income indicators viz. intensity of formal education and infant mortality rate have disparities over economic indicators which are indeed a cause of considerable concern. In addition, economic inequality is much higher than overall HDI inequality. With a huge shortfall in HDI the existing level of variation and disabilities imply clearly that there is a need to redesign the public policies that directly affect the welfare of the people.

## References

- Bourgignon, F. (1979): “Decomposable Income Inequality Measures”, *Econometrica*, Vol.47, No.4, pp.901-920.
- Chelliah, R.J. and K.R. Shanmugam (2000): “Some Aspects of Inter District Disparities in Tamil Nadu”, in Pandit, V. et al. (eds.) *Data Modeling and Policies*, proceeding of 38<sup>th</sup> Annual Conference of the Indian Econometric Society, Chennai.
- G.O.I (2002): *National Human Development Report 2001*, Planning Commission, New Delhi.
- Malhotra, R. (2007): “Human Development Measures: From Advocacy to Policy Monitoring at Country Level”, *Indian Journal of Human Development*, Vol. 1, No.1, pp.103-127.
- Nayak, P. (2005): “Human Development in North East India”, *Journal of NEICSSR*, April.
- Nayak, P. and E.D. Thomas (2007): *Human Development and Deprivation in Meghalaya*, Akansha Publishers, New Delhi.
- Nayak, P. and E.D. Thomas (2007): *Human Development in Meghalaya*, UGC Major Research Project Report, North-Eastern Hill University, Shillong, *Mimeo*.
- Pillarisetti, J.R. (1997): “An Empirical Note on Inequality in the World Development Indicators”, *Applied Economic Letters*, Vol.4, No.3, pp.145-147.
- Ram, R. (1982): “International Inequality in the Basic Needs Indicators”, *Journal of Development Economics*, Vol.10, No.1, pp.113-117.
- Ram, R. (1992): “International Inequalities in Human Development and Real Income”, *Economic Letters*, Vol.38, No.3, pp. 351-354.
- Ram, R. (2006): “State of Life Span Revolution between 1980 and 2000”, *Journal of Development Economics*, Vol.80, No.2, pp.518-526.
- UNDP: Human Development Report (various issues from 1990 to 2006).

**Table 1**  
**Selected Demographic Features for Districts of Meghalaya**

<b>Districts</b>	<b>Area</b> (Sq. Km.)	<b>Population</b> (in lakhs)	<b>Density</b>	<b>Sex Ratio</b>	<b>Urbanization</b> <b>Rate</b>
(1)	(2)	(3)	(4)	(5)	(6)
East Khasi Hills	2748 (4)	6.61 (1)	241 (1)	984 (2)	42.1 (1)
West Khasi Hills	5247 (1)	2.94 (4)	56 (6)	971 (4)	11.4 (3)
Ri-Bhoi	2448 (6)	1.93 (6)	79 (4)	942 (7)	6.8 (7)
Jaintia Hills	3819 (2)	2.96 (3)	77 (5)	979 (3)	8.4 (6)
East Garo Hills	2603 (5)	2.47 (5)	95 (3)	960 (5)	14.5 (2)
West Garo Hills	3677 (3)	5.16 (2)	140 (2)	988 (1)	11.3 (4)
South Garo Hills	1887 (7)	.99 (7)	53 (7)	943 (6)	8.7 (5)
<b>Meghalaya</b>	<b>22429</b>	<b>23.06</b>	<b>103</b>	<b>975</b>	<b>19.6</b>

Source: Census 2001

Note: Numbers in parenthesis indicate ranks of the districts in the relevant indicators

**Table 2**  
**Selected Human Development Indicators for Districts of Meghalaya**

Districts/ State	NDDP Per Capita (Rs.) (at 1993-94 Prices)		Literacy Rate (%) (2001)					No. of Schools (Per Lakh Popn.) (1997-98)		Health Infrastructure (Per Lakh Popn.) (1998-99)		
	1993- 94	1999- 2000	Total	Male	Female	Rural	Urban	Primary	Middle	Beds in Govt. Hospitals	Doctor	Nurse
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
East Khasi Hills	8943 (1)	11477 (2)	74.7 (1)	74.9 (1)	74.6 (1)	63.7 (1)	88.6 (2)	119 (7)	30 (7)	181 (1)	27 (1)	33 (1)
West Khasi Hills	5166 (6)	6546 (7)	65.5 (2)	66.7 (3)	64.2 (2)	63.1 (2)	83.8 (5)	245 (3)	58 (2)	68 (4)	12 (4.5)	7 (6.5)
Ri-Bhoi	6003 (4)	7260 (4)	63.7 (3)	65.8 (4)	61.4 (3)	62.7 (3)	77.1 (7)	152 (6)	40 (4.5)	67 (5)	15 (3)	10 (4)
Jaintia Hills	7748 (2)	10938 (3)	52.8 (6)	50.1 (7)	55.5 (5)	48.9 (6)	91.1 (1)	174 (5)	34 (6)	93 (2)	16 (2)	14 (2)
East Garo Hills	5148 (7)	6774 (6)	61.6 (4)	67.2 (2)	55.7 (4)	57.9 (4)	82.2 (6)	246 (2)	40 (4.5)	73 (3)	11 (6)	9 (5)
West Garo Hills	5628 (5)	7232 (5)	50.8 (7)	57.1 (6)	44.4 (7)	46.1 (7)	85.2 (3)	208 (4)	43 (3)	65 (6)	12 (4.5)	11 (3)
South Garo Hills	7728 (3)	12005 (1)	55.2 (5)	61.6 (5)	48.6 (6)	52.3 (5)	83.9 (4)	345 (1)	63 (1)	61 (7)	8 (7)	7 (6.5)
<b>Meghalaya</b>	<b>6894</b>	<b>9003</b>	<b>63.3</b>	<b>66.1</b>	<b>60.4</b>	<b>57.0</b>	<b>87.1</b>	<b>188</b>	<b>41</b>	<b>101</b>	<b>17</b>	<b>15</b>

**Table 3**  
**Human Development Index for Meghalaya**

Districts	Economic Index (Consumption Expenditure)	Educational Index	Health Index	HDI
(1)	(2)	(3)	(4)	(5)
East Khasi Hills	0.453 (2)	0.552 (6)	0.319 (2)	0.441 (2)
West Khasi Hills	0.252 (6)	0.560 (5)	0.196 (6)	0.336 (7)
Ri-Bhoi	0.353 (3)	0.570 (4)	0.263 (4)	0.395 (4)
Jaintia Hills	0.194 (7)	0.427 (7)	0.412 (1)	0.344 (6)
East Garo Hills	0.269 (5)	0.657 (3)	0.228 (5)	0.385 (5)
West Garo Hills	0.299 (4)	0.790 (2)	0.150 (7)	0.413 (3)
South Garo Hills	0.513 (1)	0.834 (1)	0.284 (3)	0.544 (1)
<b>Meghalaya</b>	<b>0.334</b>	<b>0.615</b>	<b>0.262</b>	<b>0.404</b>

Source: Nayak and Thomas (2007)

**Table 4**  
**Regional Indices of Human Development**

Regions	Economic Index (Consumption Expenditure)	Educational Index	Health Index	HDI
Khasi Hills	0.385	0.557	0.278	0.406
Garo Hills	0.315	0.757	0.188	0.420
Jaintia Hills	0.194	0.427	0.412	0.344
<b>Meghalaya</b>	<b>0.334</b>	<b>0.615</b>	<b>0.262</b>	<b>0.404</b>

Source: Computed from data of Nayak and Thomas (2007)

**Table 5**  
**Correlation Coefficients between Indices**

Index	Income*	Con. Exp.	Education	Health	HDI	HDI*
<b>Income*</b>	+1.0	+0.571 <sup>S</sup>	-0.036	+0.464 <sup>S</sup>	+0.393 <sup>S</sup>	+0.464 <sup>S</sup>
<b>Cons. Exp.</b>		+1.0	+0.750 <sup>S</sup>	+0.123	+0.929 <sup>S</sup>	+0.964 <sup>S</sup>
<b>Education</b>			+1.0	-0.321	+0.750 <sup>S</sup>	+0.607 <sup>S</sup>
<b>Health</b>				+1.0	+0.179	+0.001
<b>HDI</b>					+1.0	+0.964 <sup>S</sup>
<b>HDI*</b>						+1.0

Source: Computed from data of Nayak and Thomas (2007)

Note: S indicates that correlation is significant at the 0.05 level.

**Table 6**  
**Some Statistics and Inequality Measures for Indices**

Inequality Measures → Indicator ↓	Mean	Standard Deviation	Coefficient of Variation (%)	Bourguignon Inequality Index (L)
Per Capita Income (Rs./month)	691.07	144.13	20.86	0.0217
Inequality Adjusted Per Capita Consumption Expenditure (Rs./month)	521.92	83.49	15.99	0.0125
Literacy Rate	71.57	8.50	11.88	0.0076
Intensity of Formal Education	3.925	1.28	32.61	0.0496
Infant Mortality Rate	76.00	29.37	38.64	0.0966
HDI	0.404	0.049	12.00	0.0075

Source: Computed from data of Nayak and Thomas (2007)

**Table 7**  
**Gender-Disparities in Meghalaya**

District/State	HDI non-income		
	Male	Female	Person
East Khasi Hills	0.449	0.440	0.436
West Khasi Hills	0.377	0.380	0.378
Ri-Bhoi	0.413	0.419	0.417
Jaintia Hills	0.401	0.438	0.420
East Garo Hills	0.442	0.432	0.443
West Garo Hills	0.486	0.454	0.470
South Garo Hills	0.567	0.562	0.559
<b>Meghalaya</b>	0.437	0.442	0.439



Source: Computed from data of Nayak and Thomas (2007)