ATTAINMENT OF HUMAN DEVELOPMENT
A STUDY OF NORTH-EAST INDIA

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*I*NTRODUCTION

THE concept of "human development" lies in the very notion that wealth of a nation is its people. It aims to shift the focus of development back to the well being of people more specifically to the average ordinary individuals. Such an approach deviates from the earlier notion which perceived development in terms of economic performance vis-à-vis growth of GDP per capita. In times, it has been realised that economic growth does not imply development in true sense. Often it is found that there is no direct correspondence between economic attainment of a society and the quality of life. Regions and nations with high levels of income and economic growth need not necessarily have similar social attainment that are desirable, not only in themselves but also because of their role in supporting better opportunities for people. Development thus has to be seen in terms of the benefits and opportunities that are generated in various fields for its people and how these are eventually distributed among various strata of society. This qualitatively different development paradigm thus expands the development objective beyond that of economic growth by incorporating other aspects of well being such as longevity, education, freedom, participation and so on.

Human Development and UNDP

The UNDP, through its global Human Development Report (HDR), has been in the forefront of an effort to generate a policy focus on the broader attributes of human well-being in the contemporary development discourse. In fact, defining and measuring people's well-being as the ends of development is the central message of the Report published annually since 1990. According to the report, human development is all about people and about how development enlarges people's choices. It is more than GNP growth, more than income and wealth and more than producing commodities and accumulating capital.

Defining Human Development

According to HDR 1990, human development is a process of enlarging people's choices - the most critical of these wide- ranging choices are to live a long and healthy life, to be educated and to have access to resources needed for a decent standard of living. Additional choices include political freedom, guaranteed human rights, and self respect. It views that income is a good proxy for all alternative choices though it is partially true. Income is not the sum total of human life. A person's access to income, thus, may be one of the choices. Besides, people's choices are also influenced by the formation of human capabilities such as education or knowledge. Human development is not about capabilities formation only, it also concerns the use of these capabilities, be it for work, leisure or political and cultural activities. Human development thus defines as denoting both the process of widening people's choices and the *level* of their achieved wellbeing.

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Measuring Human Development

The 1990 HDR views that human development can be measured not by the yardstick of income alone but by incorporating as many as other relevant indicators. However, till now, the various HDRs have considered three basic dimensions of human life in measuring human development. These are

● Command over resources- the ability to enjoy a decent standard of living and have a socially meaningful life (measured by the log of gross domestic product per capita at purchasing power parity in USD) : economic indicator

● The ability to acquire knowledge and be educated (measured by adult literacy at 15 years and above, and enrolment at the primary, secondary and tertiary level of schooling): education indicator

● The ability to lead a long and healthy life (measured by life expectancy at birth) : health indicator

Based on the above mentioned variables, UNDP prepares a composite index called Human Development Index (HDI) in its HDRs which measures level of human development of a country. Each year, UN member states are listed and ranked according to this measure. Countries fall into three broad categories based on their HDI: high, medium, and low human development.

About the Study

HDI provides a normalized measure the extent of human development and deprivation as well, in respect of three basic dimensions of human life namely longevity, education and standard of living which are highly valued in themselves. However, such indicators are intrinsically limited in capturing the wider aspects of human life. There are many socio-economic determinants which influence the level of human well being and quality of life, and their absence only multiplies the miseries. Such multifarious dimensions are not incorporated in HDI. As such, the various deprivation/shortfalls that the average or marginalised sections faces specially in poor countries or regions are not well-depicted with such a measure. It is thus important to recognise those indicators and develop an index which captures the wider aspects of human development.

The present study makes an effort towards understanding the attainment of human development and shortfalls as well among the states of North-East India (NEI) by widening the scope of HDI. The research paper also calculates HDI for India in terms of the selected indicators under study and makes a comparative study between all India attainment in human development with that of the respective states of NEI.

A Glimpse of North-East India

NEI which comprises of seven states of Indian Union namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura is a region with special features like landlessness, poor expansion of economic opportunities, immigration, ethnic turmoil, insurgency, etc. The region has a population of 38.5 million (as per 2001 census) comprising of 3.8 percent of India's population and geographically covers 8.05 percent of the country's total geographical area.

The NEI is, by and large, hilly in nature characterized by curves and terrains. Lack of developed transport (i.e. roads and bridges), communication facilities makes the region inaccessible and intensifies its geographical isolation. Provisions for economic and infrastructure overheads are poor. None of these states has been able to generate adequate funds to meet the budgetary requirement for their respective governments and, thus to a great extent, depends on the flow of financial

resources from the central government under the provisions of Special Category States in which out of total central assistance to the state 90 percent accounts for grants and remaining 10 percent are loans.

With lack of productive investment, basic infrastructure facilities and prevalence of unskilled labour force, these states remain economically backward and reflect the character of agrarian economies with two-third of its work force dependant on agriculture. Still the region is not self-sufficient in agricultural production. Industrially, the region is almost marked by non-existence of industries or manufacturing units. Only a few large and medium-scale industries have come mostly in Assam, Meghalaya and Arunachal Pradesh. The types of industries that prevail are tea, plywood, jute, petrochemical, paper mill, and fertilizer industries. Some agro-based and forest-based small scale units have come up and scattered in different states, about half in Assam followed Tripura and Manipur. The traditional industries in which production is carried out at substance level are handicrafts and weaving industries. The swelling tertiary sector is the result of an arbitrary arrangement in which a lion's shares of states' outlay are used in paying salaries and maintaining the huge army of unproductive government employees. Naturally financial resources of the states including central transfers are directly used to meet consumption needs of the employees that otherwise could have been used for productive investment, escalation of assets, infrastructure, etc., which are so essential for industrial as well as economic growth and overall economic development.

Given these situations, it would be interesting to examine how these states fare in the domain of human development which is the main purpose of this research paper.

Review of Literature

The concept of human development has evolved over time. It started with purpose of measuring how well the people of a region or country. In the pursuit of constructing a composite index which quantifies human welfare namely material and non-material, it discarded income as the sole measure of welfare. Because, income has its own limitation in reflecting human life in its true sense.

Sen (1989) argues that human beings should be viewed as ends in themselves although they happen to be directly or indirectly the primary means of productions.

Human development Report (1990) challenged the conventional wisdom of "trickle-down effect" meaning economic growth will automatically solve the problem of poverty, misery, inequality and other aspects of development. Rather it stress on the notion of human development. Further, it made a distinction between human development and various other concepts of development such as human resource development, human capital, basic needs approach, etc.

Anand and Sen et al. (1994) concentrated on the methodology and measurement of HDI. The authors have lent considerable statistical insight to the index.

Haq (1995) summarises the essence of human development, he made a distinction between economic growth and human development. According to him, the human development paradigm is a much better measure of development since it includes wider aspect of human life and wellbeing.

Haq (1995a) describes the momentum in search of new composite index and the method of constructing HDI. He also explains the rational for the choice of components and indicators of human development.

Ranis et al. (2000) attempted to examine the dual causation between human development and economic

growth. For the rationale, they defined a loop connecting two-way relationships EG and HD with two chains - Chain A showing how EG have an effect on HD and Chain B showing how HD influence EG. They also attempted to identify the main component links making up each chain and their relative strengths.

Objectives of the Study

The research paper attempts to widen the scope of HDI by keeping into the other dimensions of human life which are a reflection of their well beings too.

Specific objectives of the study are

- To trace various indicators of human development
- To quantify dimensional index of each indicator
- To develop a composite index which explain the wider aspect of human development

Methodology

The research paper is a descriptive one. It is a cross-sectional study covering all the seven states of NEI for the year 2001. The methodology is based on UNDP approach of human development in the construction of a composite index on the basis of chosen indicators of development.

Source of Information

The study is entirely based on secondary sources of information pertaining to the variables considered for measuring human development in NEI. Data have been obtained compiled and used pertaining to eight indicators human development reflecting economic, health, education and social status from following sources:

i. Statistical Abstract of India

ii. Basic Statistics of NER

iii. Economic Survey of India

iv. Registrar General of India

v. Central Statistical Organisation

Selection of Indicators
The following indicators have been selected for the purpose of highlighting each state's standing on human development.

- Per Capita State Income (PSI)
- Households in Pucca and Semi-Pucca Houses (HPSH)
- Access to Electricity (AE)
- Population above Poverty (PAP)
- Literacy rate (LR)
- Infant Mortality Rate (IMR)
- Population Served per Hospital Beds (PSPHB)
- Access to Safe-Drinking Water (ASDF)

Per Capita State Income ((PSI) is the ratio of per capita state income of the year to total population of a state based on at 1999-2000 prices. Residences in Pucca and Semi-Pucca Houses (RPSH) are measured by the percentage of total households in pucca and semi-Pucca houses. Access to Electricity reflects the percentage of total households having access to electricity. Population above Poverty (PAP) indicates the proportion of total population above poverty line. Literacy Rate (LR) is defined by proportion of total population in the age group of 7 and above in the state as per Census of India. Infant Mortality Rate (IMR) is the number of infants bellow one year age dying per 1000 live births. Population Served per Hospital Bed (PSPHB) is the ratio of total number of hospital bed available to total size of its population. Access to Safe-Drinking Water (ASDF) is measured by percentage of household having access to safe-drinking water.

Except infant mortality rate and population served per hospital bed, higher value of each of the indicators indicates a higher level of development and vice versa. In case of infant mortality rate and population served per hospital bed respectively, a lower value indicates a higher achievement and a higher value reflect lower achievement. To maintain uniformity in the quantification of HDI, reciprocal of both these indicators have been assessed and quantified in the calculation of composite HDI.

Construction of Human Development Index
HDI can be formulated either in terms of region's deprivation / shortfall or in terms of region's attainment in each of the various dimensions/indicators. The study will use the technique in which HDI is expressed directly in terms of attainment.

$$HDI = \frac{1}{n} \sum \text{Dimension Indices}$$

Before constructing the HDI, dimension index is formulated which reflects the contribution of any particular variable/indicator to the HDI of any country/state /region. Dimension Index is a unit free measure for any indicator under the study. Performance in each indicator is expressed as a value ranging between 0 and 1 by using the following formula:

$$\text{Dimension Index} = \frac{\text{Actual value } - \text{ Minimum value}}{\text{Maximum value } - \text{ Minimum value}}$$

The HDI is calculated as a simple average of the dimension indices.

Where n = Number of Dimensional Indices. In this study, eight indicators have been taken into account and thus there will be eight dimensional indices.

The HDI which is also a unit free value ranges between 0 and 1. An HDI of less than 0.5 implies a low level of human development while 0.5 < HDI < 0.8 implies medium level of development. HDI > 0.8 implies a high level of development.

Yardsticks for Indicators of Human Development
Construction of the HDI starts with an attainment measure. For literary rate, access to electricity, access to safe drinking water, and percentage of population above the poverty line, etc., the target is 100 percent which is the maximum value for these indicators. In case of per capita net state domestic product; percentage of households in pucca and semi-puca houses; infant mortality rate; population served per hospital bed; the best and least achievers among the States and Union

Territories of the country have been considered. Details for maximum and minimum value of any indicator for calculating Dimensional Index is shown in the Table 1.

Table 1: Maximum and Minimum Value of Respective Indicators

Indicators	Maximum Value	Minimum Value	Yardsticks
Per Capita State Income (PSI)	Rs. 40301	Rs. 5972	Best achievement (maximum value) scored by Delhi, and least achievement (minimum value) scored by Bihar.
Households in Pucca and Semi -Pucca Houses(HPSH)	98.34%	26.21%	Best achievement (maximum value) scored by Daman and Diu, and least achievement (minimum value) scored by Tripura.
Access To Electricity(AE)	100%	0	The target is 100 percent
Population above poverty (PAP)	100%	0	The target is 100 percent. Data relates to 1999-2000
Literacy Rate(LR)	100	0	The target is 100 percent
Infant Mortality Rate (IMR)	91 per 1000	1 8 per 1000	Best achievement (minimum value) scored by A&N Islands, and least achievement (maximum value) scored by Orissa.
Population Served per Hospital Bed	2165 numbers	162 numbers	Best achievement (minimum value) scored by Pondichery, and least achievement (maximum value) scored by Orissa
Access to Safe-Drinking Water (ASDW)	100%	0	The target is 100 per cent

Attainments of Human Development And North-east India

The data pertaining to the eight selected variables for the respective states of NEI are displayed in Table 2. The table also depicts the highest and lowest value of a variable among the States and Union Territories of India along with all India Average.

In terms of various indicators of human development (Table 2), the region presents us with a mixed picture. Per capita state income of Mizoram (Rs. 17245), Arunachal Pradesh (Rs 17018) and Tripura (Rs. 16947) respectively is above the all India average (Rs. 16762) and the remaining states are below it. However, Nagaland is close to national average in respect of per capita state income. Assam has the lowest per capita (Rs 12529) income in NEI.

As far households in pucca and semi-pucca houses are concerned, all the concerned states lag behind all India average. 78.53 (highest among NE states) percent households in Mizoram reside either in pucca or semi-pucca houses followed by Nagaland with 66.69 percent. 61.16 percents of total households in Arunachal Pradesh dwell kuchcha or unclassified houses.

Table2: Data relating to Human Development Indicators

States	PSI	HPSH	AE	PAP	LR	IMR	PHB	ASDW
Arunachal Pradesh	17018	38.84	54.69	66.53	54.74	39	495	77.5
Assam	12529	50.6	24.90	63.91	64.28	74	2059	58.8
Manipur	12641	63.52	60.04	71.46	68.87	20	905	37
Meghalaya	15932	59.63	42.74	66.13	63.31	56	975	39
Mizoram	17245	78.53	69.63	80.53	88.49	19	536	36
Nagaland	16540	66.69	63.60	67.33	67.11	20	912	46.5
Tripura	16947	55.8	41.84	65.56	73.66	39	1165	52.5
All India Average	16762	81.75	55.85	73.90	65.38	66	1138	77.9
Highest among States and UTs in India	40301 Delhi	98.34 (Daman and Diu)	94.81 (Himachal Pradesh)	93.84 (Punjab)	91 (Kerela)	91 (Orissa)	2165 (Orissa)	99.8 (Chandigarh)
Lowest among States and UTs in India	5972 (Bihar)	38.84 (Arunachal Pradesh)	10.25 (Bihar)	52.85	47.53 (Bihar)	18 (A&N Islands)	162 (Pondichery)	4.6 (Lakshadweep)

Source for RPSH, AE, LR, ASDW for the year 2001: Statistical Abstract of India 2003

Source for PSI the year 2001-02I: Ministry of Statistics and Programme Implementation, Central Statistical Organisation (2004)

Source for IMR for the year 2001 (for the year 2002): Registrar General of India*

Source for PAP for the year 1999-2000: Ministry of Finance, Economic Survey of India (2001) (Calculated from data on State-wise Population below Poverty Line)

Sources for PHB: Statistical Abstract of India 2003, Basic statistic of NER 2006 (Reference period ranges between years 1999 to 2003 and based on the basis of 2001 census population)

Access to electricity recorded among the states shows a mixed picture in relation to national average (55.85). Access to electricity is the highest in Mizoram (69.63), Nagaland (63.60) and Manipur (60. 04) respectively. In Assam, only one-quarter of households have access to electricity which is the lowest in NE region. Meghalaya and Tripura records much lower than all India average.

Mizoram records 80.53 percent of population living above poverty line. Rest of the states in NEI could not do better over national average (73.90 percent). In Manipur, 71.46 (2nd best in NE region) percent of the population live above minimum level of living. Incidence of poverty in Assam is the highest in Assam which is mirrored with 63.91 percent of population living above poverty line in the state.

States like Mizoram, Nagaland, Tripura, and Manipur have literacy rates which are higher than national average. Mizoram (88.49 percent) has the second best literate state in the country. Arunachal Pradesh (54.74 percent) has the least achievement in terms of literacy rate among states of NEI.

In regard to infant mortality rate (IMR), all the states of NEI baring Assam show better results as compared to the all India average (66 per 1000). IMR is the lowest in Mizoram (19) followed by Manipur (20). Assam (74) is the least achieved state in respect of IMR.

In Assam (least achiever), a hospital bed is available for 2059 persons followed by Tripura (1165 persons). The best achiever in NE Sate is Arunachal Pradesh where population served per hospital bed is 495 followed by Mizoram (536).

77.5 percent of the households in Arunachal Pradesh have access to safe-drinking water which is close to all India average (77.9 percent). More than 60 percent of households in the states Manipur, Meghalaya and Mizoram don't have access to safe-drinking water. In Nagaland, only 46.5 percent of households have access to safe-drinking water. In Assam and Tripura it is 58.8 percent and 52.5 respectively.

Estimation of HDI for States of North East India:
Data collected for the eight indicators have been used in determining value of human development indicators with the help of Dimension Index. Indicators measure and HDI value for the respective states so estimated is depicted in Table 3.

Table 3: Human Development Indicators and Human Development Index for the states in NEI

States/Country (Reciprocal)	Human Development Indicators								Human Development	
	PSI	RPSH	AE	PAP	LR	IMR (Reciprocal)	PSPHB (Reciprocal)	PHB	HDI	Status
Arunachal Pradesh	0.323	0.000	0.547	0.665	0.547	0.329	0.289	0.775	0.434	**LD**
Assam	0.192	0.198	0.249	0.639	0.642	0.057	0.019	0.588	**0.323**	**LD**
Manipur	0.195	0.415	0.600	0.715	0.688	0.875	0.127	0.370	**0.498**	**LD**
Meghalaya	0.291	0.350	0.427	0.661	0.633	0.154	0.114	0.390	**0.378**	**LD**
Mizoram	0.329	0.667	0.715	0.805	0.885	0.934	0.261	0.360	**0.620**	**MD**
Nagaland	0.309	0.468	0.636	0.673	0.671	0.314	0.126	0.465	**0.458**	**LD**
Tripura	0.321	0.285	0.418	0.656	0.737	0.329	0.084	**0.525**	**0.419**	**LD**
All India Average	0.315	0.721	0.559	0.739	0.650	0.093	0,088	0.779	**0.492**	**LD**

Note: LD ? Least Developed; MD ? Moderately Developed

In Table 3, the HDI column shows that except Mizoram, all the states in NEI can be termed as least developed in human development attainment. None of the states of NEI could score HDI value equal to or above 0.5. Even all India HDI falls bellow 0.5 score. Mizoram has achieved moderate/medium level of human development and has topped the list among states in NEI. The HDI value for the states of Arunachal Pradesh, Manipur, Nagaland and Tripura are 0.434, 0.498, 0.458, and 0.419 respectively. Manipur, however, fare better than national average (0.492). Assam is the lowest ranked state with a HDI value of 0.323. Scoring a value 0.378 of Meghalaya is slightly better than Assam in human development.

Limitations of the Study
Average life expectancy, which is a good health indicator for the population has not been included in the selected list of indicators. This is because of non-availability of data relating to life expectancy for the states of NEI region except Assam for the year 2001 and or any surrounding year. The study faced

constraints with availability of data with respect to some other variables also. Information regarding incidence of poverty in states of India for the year 2001 is not available. Hence population above poverty has been restricted to the period of 1999-2000. IMR of Nagaland for 2001 is not available and hence it considers data for the year 2000. Data on number of hospital beds available in respective states for the year 2001 is not available. Such data centres on reference period of 1999 to 2003 and the concerned indicator value is based on 2001 Population Census.

Conclusion

Low level of human development in north-eastern states of India only reflects the high human deprivation among its populace. Mizoram, of course is an exception with moderate development in human development. Two crucial factors responsible for a dismal performance are low per state capita income and paucity of medical facilities revealed through number of population served per hospital bed as well as high IMR. The low level of economic activity and dependence on central dole is responsible for low level of human development in the region. There is tardiness in economic growth. Health care facilities are in a gloomy state. Along with these features, there remains the alarming problem of scarcity of water in the region. This is mostly due to the physical and climatic features of the region - being hilly and tropical in nature and at the same time, failure of government to make provisions for safe drinking water to the average citizens. Baring Arunachal Pradesh and Assam which has its many river tributaries and streams, availability of safe drinking water is in a meagre position with more than half of the population being deprived of this organic need of life. There is also the trace of high incidence of poverty which only speaks about the high volume of shortfalls in human development. However, the single area which shows considerable progress in the region is literacy rate. Can it really catalyse the process of development in the region? Time will say.

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