District-Wise Disparities in Human Development in Maharashtra State

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Abstract

Human Development Index is related to the Human Development. Last few decades, there has been a shift in development paradigm from economic growth approach to human development approach. As per as HDI is concern, that the Human Development Report (HDR) was first launched in 1990 with the single goal. Then, HDI calculated by the UNDP Being 135 among 175 countries in 1996. India ranks 115th out of 162 countries. Human Development Index is calculated by three indices are Education, Health and Per Capita Income. In this paper attempts to analysis district-wise disparities in human development in Maharashtra and also analysis the different indicators of human development in various selected district in Maharashtra and estimate HDI for selected districts in Maharashtra. The present study was based on the secondary data relating literacy, gross enrolment ratio, infant mortality rate, per capita net district domestic product at current prices and related to 20 major districts in Maharashtra. In this study Borda Score was used and given rank order to the classification of district on the basis of Borda Score and bifurcation into Low, medium and high human development. After calculating we found that, Pune district rank first and Nanded district rank last. The study was tried to relationship between the Borda Rank and the other indices through Spearman's Rank Correlation Matrix.

KEYWORD – Human Development Report, Human Development Index, UNDP, NHDR, GER, IMR, PCNDDP, Borda Score, Spearman's Rank Correlation Matrix

INTRODUCTION-

Human progress is conditioned by the conception of development. Until the end of 1980's, development is often viewed as growth in income. The rapid growth of the economy has resulted in massive industrialization. In most nations this was unplanned and unsystematic. Consequently migration to towns and cities, unplanned urbanization with unhygienic and slum conditions of living, pollution, over population, poverty and unemployment were the common features characterizing the lives of the masses, resulting in a deterioration in the quality of life.

As such in the last few decades, there has been a shift in development paradigm from economic growth approach to human development approach. Now it is realized that the purpose of development is to create an atmosphere to develop people's capabilities and opportunities for both present and future generation in all part of the country as well as down trodden of every people. Sen(1997) argues that, "Economic growth cannot be sensibly treated as an end in itself. Development has to be more concerned with enhancing the life we need and the freedoms we enjoy. In this sense, economic growth is considered as a means to achieve human development. The purpose

of development is human development and enhancing the freedoms of the people." Paul Streeten (1996), says that human development is a means to higher productivity. A well nourished, healthy, educated, skilled, alert labour force is the most important productive asset. It helps in lowering the family size by slowing human re-production. It is the experience of all developed countries that improvement in education levels (particularly of girls), better health facilities and reduction in infant mortality rates leads to a lowering of the birth rates.

The Human Development Report (HDR) was first launched in 1990 with the single goal of putting people back at the center of the development process in terms of economic debate, policy and advocacy. It states, "Human Development is a process of enlarging people's choices. In principle, these choices can be infinite and change overtime. But at all levels of development, the essential ones are for people to lead a long and healthy life, to acquire knowledge and to have access to resources needed for decent standard of living. If these choices are not available many more opportunities remain inaccessible."

The Human Development Index (HDI) is a tool used to measure the non-income dimensions of the quality of life. It is a composite index of three basic components of development.

*Mortality – Mortality was always measured in terms of Infant Mortality Rate and it is taken to reflect total health conditions of people.

* Education attainment - Knowledge was measured by adult literacy rate and mean years of schooling with $2/3^{rd}$ and $1/3^{rd}$ weights. Still later, means years of schooling was replaced by Gross Enrolment Ratio.

* Adecent standard of living – Level of living was represented by a transformation of per capita income. As the exercise was international in nature and exchange rate was found to be a poor indicator of comparative purchasing power, the UNDP measured per capita income in purchasing power parity dollars, which was transformed.

India has been characterized as a country with a low level of human development with the country's rank in the human development index calculated by the UNDP being 135 among 175 countries in 1996. India ranks 115^{th} rank out of 162 countries in terms of the UNDP's Human Development Index(HDI) and classified in the group-medium with a human development index of 0.571 in 2001. The 2014 Human Development Report present a disappointing picture of India's position in the global arena, that India ranks 135^{th} among 187 countries in the world with a human development index of 0.586. The low human development index of India is due to low per capita income, low life expectancy and low literacy achievement.

In India, there has been improvement in human development index from 1980 to 2013 as depicted in Table -1.

At the state level, there have been variations in human development index. Kerala remains at the top of the National Human Development Report (NHDR) with a

human development index of 0.677 and 0.790 in 1999-00 and 2011, respectively. While Orrisa (Odisha) is almost at the bottom of the list, with an index of 0.275 in 1999-00 and 0.362 in 2011. State which have done well in terms of human development index in 1999-00 and 2011 are Punjab (0.543, 0.605), Haryana (0.501, 0.552), Maharashtra (0.501, 0.572) and Tamilnadu (0.480, 0.570).

Table-1 – Trend in Human Development Index in India & Annual Average Growth in HDI(%)

Year	HDI	Annual Average Growth in HDI (%)
1980	0.369	1.58 % (1980-1990)
1990	0.431	
2000	0.483	1.15 % (1990-2000)
2005	0.527	
2008	0.554	
2010	0.570	1.49 %(2000-2013)
2011	0.581	
2012	0.583	
2013	0.586	

Source – Human Development Report -2014,UNDP.

Table -2 State-wise Human Development Index in 1999-00 and 2011

State	HDI (1999-00)	HDI (2011)	Change
Andhra Pradesh	0.368	0.473	0.105
Assam	0.336	0.444	0.108
Bihar	0.292	0.367	0.075
Gujrat	0.466	0.527	0.061
Haryana	0.501	0.552	0.051
Karnataka	0.432	0.519	0.087
Kerala	0.677	0.790	0.113
Madhya Pradesh	0.285	0.375	0.090
Maharashtra	0.501	0.572	0.071
Orissa	0.275	0.362	0.087
Panjab	0.543	0.605	0.062
Rajasthan	0.387	0.434	0.047
Tamil Nadu	0.480	0.570	0.090
Uttar Pradesh	0.316	0.380	0.064
West Bengal	0.422	0.492	0.070

Source –Maharashtra Human Development Report-2012.

The present study attempts to analysis District-wise disparities in human development in Maharashtra State keeping in view the following objectives.

1. To analysis the different indicators of human development in various selected District in Maharashtra.

2. To estimate human development index for selected District in Maharashtra.

MATERIAL AND METHOD

The present study was based on the secondary data relating Literacy, Gross Enrolment Ratio, Infant Mortality Rate, Per Capita Net District Domestic Product at Current Prices, HDI of states and country. The study was related to 20 major Districts excluding Mumbai & Mumbai Suburban in Maharashtra each having a population of 20 lakhs or more. The study was related to the period 2011 and required information was compiled from various issues of Economic Survey, Human Development Reports and Districts profiles of Maharashtra.

Table -3 District-wise Literacy Rate, Gross Enrolment Ratio, Infant Mortality Rate and Per Capita Net District Domestic Product in 2011

District	Literacy Rate (%)	Gross Enrolment Ratio	Infant Mortality Rate(per 1000)	Per Capita Net District Domestic Product(in Rs.)
Thane	84.5	78.5	25	1,57,373
Raighad	83.1	89.9	14	1,32,607
Nashik	82.3	82.2	26	97,896
Dhule	72.8	83.7	31	72,230
Jalgaon	78.2	88.2	28	74,394
Ahmednagar	79.1	87.9	24	76,573
Pune	86.2	88.2	19	1,50,969
Satara	82.9	85.7	26	81,488
Sangli	81.5	87.9	20	87,615
Solapur	77	89.5	23	75,769
Kolhapur	81.5	88.4	22	1,01,622
Aurangabad	79	82.2	32	94,702
Beed	77	90.4	33	55,009
Nanded	75.5	80.3	31	59,403
Latur	77.3	91.1	32	69,047
Buldhana	83.4	87.6	33	57,383
Amravati	87.4	86	28	71,732
Yeotmal	82.8	84.9	34	63,900
Nagpur	88.4	92.6	34	1,11,860
Chandrapur	80	88.9	30	85,363

Source – Economic Survey of Maharashtra 2013-14.

Following the definition and formulation of human development index by the UNDP, the study tried to estimate human development index for the selected Districts of Maharashtra. Human Development Index is composite index of four basic indicators of

human development. Educational attainment is measured by Literacy Rate and Gross Enrolment Ratio (Rate) related to primary schooling, secondary schooling and trientary schooling. Health is measured by infant mortality rate and standard of living is measured by per capita net district domestic product. Human Development Index is a simple average of health index, educational attainment index and standard of living index.

The study used a modified human development index based on the well know Borda Rule for inter-district comparisons. The Borda Rule was a rank order method of ordinal aggregation. The study awarded each district a point equal to its rank in each of the four indices and then added up these points for each district to obtain its aggregate Borda Score. Finally, the study ranked each district on the basic of their Borda Score. Ranking goes up from the best (1) to the worst (15).

RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been presented under following heads :

(I) Details about the indicators of Human Development

Table -3 presents District-wise Literacy rate, Gross enrolment rate, Infant mortality rate and Per capita net district domestic product during 2011. Literacy rate was the highest in Nagpur district (88.4%) and lowest in Dhule district (72.8%). Similarly Gross Enrolment Rate was the highest in Nagpur district (92.6) and lowest in Thane district (78.5). Infant Mortality Rate was the lowest in Raighad district (14) and highest in Nagpur and Yeotmal district. On the basis of Per Capita Net District Domestic Product, the various districts of Maharashtra excluding Mumbai and Mumbai Suburban district. Per Capita Net District Domestic Product was the highest in Thane district (1,57,373Rs.) and lowest in Beed district (55,009 Rs.).

(II)Estimation of Human Development Index through Borda Score

The study estimated human development index through Borda Score. Following the methodology adopted by Debabrata Mandal (2002). For each of the component of human development rank and points were assigned for each district. Borda Score is obtained through the aggregation of total scores. Table-4 presents the estimated Borda Score for various districts of Maharashtra for 2011.

Table -4 Estimated Borda Score for various District in Maharashtra

District	Overall					Rank
	Literacy	GER	IMR	PCNDDP	Borda Score	
Thane	17	1	14	20	52	5
Raighad	15	15	20	18	68	2
Nashik	12	3	12	15	42	12
Dhule	1	5	7	7	20	19
Jalgaon	6	12	10	8	36	13
Ahemadnagar	8	10	15	10	43	10

Pune	18	13	19	19	69	1
Satara	14	7	12	11	44	9
Sangali	10	10	18	13	51	6
Solapur	3	17	16	9	45	7
Kolhapur	10	14	17	16	57	4
Aurangabad	7	3	5	14	29	16
Beed	3	18	3	1	25	17
Nanded	2	2	7	3	14	20
Latur	5	19	5	5	34	14
Buldhana	16	9	3	2	30	15
Amravati	19	8	10	6	43	10
Yeotmal	13	6	1	4	24	18
Nagpur	20	20	1	17	58	3
Chandrapur	9	15	9	12	45	7

Source: Calculated on secondary data.

The Borda Score rank brings out the remarkable difference in Human Development among the northern, marathwada and hilly & tribal vidharbha. Marathwada is the worst region in Maharashtra in terms of human development through the marathwada accounted for 17 % of total population of Maharashtra (2011 census). In these district of marathwada, the literacy rate ranged from 72% to 79%, while in western Maharashtra and konkan region the literacy rate was more than 80%. Similarly, the Gross Enrolment Ration in these districts ranged from 80.3 to 84.9.

Table -5 Classification of District on the basis of Borda Score

Level of Human Development	Districts
1. Low Human Development (Borda Score below 30)	Dhule, Beed, Nanded, Yeotmal, Aurangabad
2. Medium Human Development (Borda Score between 30-50)	Nashik, Jalgaon, Ahemadnagar, Satara, Solapur, Latur, Buldhana, Amravati, Chandrapur
3. High Human Development (Borda Score above 50)	Thane, Raighad, Pune, Sangali, Kolhapur, Nagpur

The top ranking districts in human development were Thane, Raighad, Pune, Sangali, Kolhapur, and Nagpur. Pune District human development outstrips all other districts in Maharashtra. Pune district perform in all four indicators improved its standards and contributes a great deal for the satisfactory performance of Pune district.

Table -6 Spearman's Rank Correlation Matrix

Particulars	Borda Score	Literacy	GER	IMR	PCNDDP
Literacy	0.819	1.000			
GER	0.421	0.004	1.000		
IMR	0.683	0.143	0.023	1.000	
PCNDDP	0.820	0.498	0.007	0.600	1.000

The present study tried to classify the districts on the basis of Borda Score. The districts having the Borda Score of below 30 were called as low human development districts, the districts having Borda Score in the range of 30 to 50 were known as medium human development districts and the districts with the Borda Score of above 50 were known as high human development districts. Table – 5 represents the classification of districts on the basis of Borda Score. The study tried to quantitatively assess the relationship between the Borda Rank and other indices. Table -6 represents the Spearman's rank correlation matrix for 2011.

It is evident that the correlation of Borda Score with per capita net district domestic product was substantially high(0.820). The degree of association of Borda Score with Literacy was 0.819 and that of infant mortality was 0.683. All the estimated correlation coefficient was statistically significant either at 1 percent level or 5 percent level. Hence, it can be inferred that the human development in Maharashtra is determined by education attainment, health attainment and economic attainment.

Measures recommended

The study recommended the same measures to improve human development. First of all development models have to be people centered. Further there is need for rapid flow of information and equal access of education to all irrespective of income and wealth endowment. The entire resource structure must be assessed so that human capital is strengthened by the role of education, health and nutrition.

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