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HUMAN DEVELOPMENT OF MAHARASHTRA (2001 - 2011): A GEOGRAPHICAL ANYALISIS

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Abstract:
Maharashtra is a well- diversifies State with a strong-growing economy. As a State, we have always reached for the well-being of our people, training our focus on sustained gains in their quality of life. The primary aim of development is the well being of the people which means development in economic, social and cultural spheres. According to UNDP in his first human development report which published in 1990 "The process of enlarging people's choices." In this paper to study how geographical factors are affecting to human development and distract wise distribution of human development. Present research paper based on secondary data which collected from Census of India, Human Development Report 2002 and 2012. To facilitate the comparison of HDI at two points of time (2001 and 2011) the PCDDP at constant prices (1999–2000) of 2001 and 2008–09 are taken. Similarly, estimates of life expectancy at the district level for the relevant years were not available and thus estimates of the IMR were utilized to estimate its complement, namely, infant survival rate (ISR). As far as the education component is concerned, data for the total literacy rate was available, while Gross Enrolment Ratios (GERs) for primary, upper primary and secondary levels of schooling were calculated. By using data available for the period from 2001 to 2011, the HDIs for the state as well as the districts were computed for two points of time, namely, 2001 and 2011, and have been presented here. As per 2001 and 2011 Human Development Index Konkan, Western Maharashtra is well developed region and Marathwada, Vidharba, Khandesh except Nagpur district are moderate and low developed.

Key Word: Total Literacy Rate, GER, IMR, HDI

Introduction

The United Nations Development Programme (UNDP) published its first Human Development Report in 1990 in which human development was defined as the process of enlarging people's choices. The most important element of human development are long and healthy life, proper education, and decent standard of living. Political freedom, guaranteed human rights and various ingredients of self – reliance and self – esteem are the additional choices. Thus human development is a process of widening people's choices as well as raising the level of well being. Development must be human oriented. In other words, development must be woven around people, not people around development. There is a basic difference between economic growth and human development. While economic growth is primarily concerned with the increase in income, human development embraces the widening of all aspects of human life – economic, social, cultural or political. Although economic growth is essential for human development, it is the use of income and not income itself which is decisive in expanding human choices. The real wealth of a country is its people and the main aim of human development should be the enrichment of human life and not simply economic growth.

Maharashtra is a well- diversifies State with a strong-growing economy. As a State, we have always reached for the well-being of our people, training our focus on sustained gains in their quality of life. In this paper to study how geographical factors are affecting to human development and distract wise distribution of human development.

Study Area

Geographically the state of Maharashtra extends from 15^0 45'N to 22^0 01' North latitude and 72^0 45' E to 80^0 45' East longitude. With an expansion of about 800 km from the east to west and 700 km from north to south, it has an area of 3,07,713 sq km, which is about one tenth of that of India. It ranks third in size, and second in population among the states of India. Maharashtra has a 720 km long coastline of the Arabian Sea on its west, the state of Gujarat to its north-west, Madhya Pradesh to its north and east, Andhra Pradesh, Karnataka and Goa its south. The state occupies a near-central location in the peninsular India and in many respects, marks the geographical and cultural transition from the north to the south.

The administrative structure of the state consists of Mumbai as the state capital, with Nagpur a seasonal venue for the state legislature. There are six administrative divisions-Mumbai, Pune, Nashik, Aurangabad, Amravati and Nagpur; 35 districts.The physical structure of Maharashtra is simply vast plateau sloping east-ward and bounded by hills and mountains to the west and north and a narrow coastal lowland to the west, physically, the state comprises there natural divisions- the Konkan, the Sahyadris and the Deccan plateau.

Objectives

1. To measure the levels of human development, at district level in Maharashtra during 2001 - 2011.
2. To assess the impact of geographical condition on human development index of Maharashtra.

Database and Methodology

Present research paper based on secondary data which collected from Census of India, Human Development Report 2002 and 2012. To facilitate the comparison of HDI at two points of time (2001 and 2011) the PCDDP at constant prices (1999–2000) of 2001 and 2008–09 are taken. Similarly, estimates of life expectancy at the district level for the relevant years were not available and thus estimates of the IMR were utilized to estimate its complement, namely, infant survival rate (ISR). As far as the education component is concerned, data for the total literacy rate was available, while Gross Enrolment Ratios (GERs) for primary, upper primary and secondary levels of schooling were calculated. By using data available for the period from 2001 to 2011, the HDIs for the state as well as the districts were computed for two points of time, namely, 2001 and 2011, and have been presented here. Human Development indicators index has been categorized at four levels viz., very high, high, medium and low at district level. For the purpose of mapping Quartile method have been used.

Formula:

I (i, j) = [max X (i, j) - X (i, j)] / Range

Indicators of Human Development in Maharashtra 2001 – 2011

Although it is not possible to have a flawless quantitative measure of human development, the United Nations Development Programme has developed a composite index, now known as the human Development Index (HDI). It include, i) longevity of life, ii) Knowledge base and iii) a decent material standard of living. To keep the index simple, only a limited number of variables are included. Initially, life expectancy was chosen as an index of longevity, adult literacy as an index of knowledge and per capita gross National product adjusted for purchasing power parity (PPP) as an index of decent life. These variables are expressed in different units. Therefore, a methodology was evolved to construct a composite index rather than several indices.

The present section describes the improvements in individual components of HDI.

The recent available data for all the four components literacy rate, GER, IMR and income is used for analyzing the performance of the districts on these components.

Literacy Rate

It is necessary for a person to be literate before he becomes educated. Higher level of education provides dynamism to society and helps in social upliftment. In Maharashtra district-wise performance in the literacy rate is uneven across districts in Maharashtra as shown in their box plot profiles. The profile of total literacy rate for 2011 has registered a general upward shift for all the districts; as a result, the range between the maximum and minimum district literacy rates has shown a decline from 28 to 27 percentage points. But the inter-quartile range has increased from 7 to 8 percentage points; in addition, the negative skewness among them has also increased, implying an uneven progress among the average performing districts. Nandurbar, which was the outlier and had the lowest literacy rate in 2011, has not kept pace with the mainstream; although it has shown an improvement in the literacy rate. But it remains an outlier at the lower end (in both 2001 and 2011). Gadchiroli, also an outlier in 2001, has moved up in relative ranking in 2011.

GER

GER of all the districts has improved from 2001 to 2011. Nandurbar (at the lower end) and Latur (at the upper end) were the outliers in 2001 for this indicator, while Nandurbar has remained as outlier in 2011. Its distribution was positively skewed during 2001 while in 2011 it is negatively skewed, indicating that the districts with GER values lower than the average (median) are relatively few as compared to the districts having GER values higher than the median, which is a good sign. The profile of GER 2011 has registered a general upward shift for all the districts; as a result, the range between the maximum and minimum value of GER has shown a decline from 35 to 25 percentage points. The inter-quartile range has decreased as well from 19 to 5 percentage points.

IMR

The reliable IMR data available with State Bureau of Health Intelligence and Vital Statistics is from 2003 to 2010, which is used for the present analysis. The progress of rural IMR is provided. The following picture emerges as result of the analysis of the IMR data: The rural IMR is seen to have declined over the period from 2003 to 2010 (State Bureau of

Health Intelligence and Vital Statistics 2012) which is a good sign. Its distribution in 2003 and 2010 was positively skewed across the districts indicating that the number of districts with IMR less than the median are more. In 2003, Gadchiroli and Nandurbar were outliers at the negative end implying their IMR was worse than other districts. However, in 2010 there are no outliers indicating that Gadchiroli and Nandurbar have progressed reasonably well and the disparity in IMR among the districts has decreased.

Income

It should be noted here that while computing HDI of 2011 we have taken the PCNDDP

at constant prices (1999–2000) for the year 2008-09. The reason was the required consistency of the base year for computing HDI of 2001 and 2011. Since the data about state and district NDDP (for the current prices) is available 2001 onwards till 2011–12, it will be worthwhile to analyse the same separately in this section. The analysis of income data leads to the following. Economic growth, when looked at as net income generated across districts, is found to be unequal and positively skewed. Mumbai was an outlier in this category in the year 2000–01. However, with progressive growth across the districts, there has been an improvement in their income-generation status as reflected by the upward movement of the box plot for the year 2011–12. Although marginal, the extent of skewness is seen to have gone down. The profile for the year 2011–12 shows only two outliers (Mumbai and Thane) in terms of income generation per capita.

Pune, Mumbai, Nagpur and Sindhudurg are the only districts which have very high human development in terms of all its three dimensions as well as at the aggregate level in 2001 and 2011. Gadchiroli, Nandurbar, Hingoli, Jalna and Nanded belong to the low HDI quartile for all the three human development dimensions in 2001 and 2011. Although Parbhani belonged to the low HDI quartile in 2001, its health indicator was in the high human development category. By 2011, it had lost its edge in the health indicators, moving to the low human development in terms of health but improved in terms of HDI moving from low to medium. Dhule, a district with low human development in 2001 and 2011, exhibits exactly opposite trend, moving from low quartile group to high quartile group on health indicator from 2001 to 2011.

In 2001 and 2011, Gondiya belonged to the medium human development quartile but in terms of education it is in the very high human development quartile and for health it is in the low quartile for both the years. Nanded belonged to the low human development quartiles at aggregate level and for the health as well as education in 2001, but moved up to very high category in 2011 in terms of health but remained in low category in terms of HDI and education. Bhandara belonged to medium human development quartile for both the years. However, it was in the low quartile of health in both the years. It moved up from high to very high in education status from 2001 and 2011. The median and the minimum value is greater than the corresponding distance between the median and the maximum value. This profile holds good for both 2001 and 2011. This means that the districts that performed less are spread over a longer interval due to the slow pace of progress made by the poor performers such as Nandurbar and Gadchiroli in 2001.

Table 1- DISTRICT - WISE HUMAN DEVELOPMENT INDICATORS : 2001 - 2011

District	Total Literacy Rate		GER		IMR		PCDDP Constant (1999-2000) Prices	
	1	2	3	4	5	6	7	8
	2001	2011	2001	2011-12	2001	2007-08	2000-01	2008-09
Ahmadnagar	75.3	80.2	71.8	87.9	44	41	16,311	27,392
Akola	81.4	87.6	67	85.6	44	28	15,822	24,055
Amravati	82.5	88.2	69.7	86	61	59	16,211	21,804
Aurangabad	72.9	80.4	80.1	82.2	51	44	19,539	30,690
Beed	68	73.5	82.2	90.4	43	33	14,398	21,013
Bhandara	78.5	85.1	71	89.3	68	60	16,110	25,735
Buldhana	75.8	82.1	65.4	87.6	49	34	10,729	19,487
Chandrapur	73.2	81.4	73.6	88.9	67	74	19,408	28,730
Dhule	71.7	74.6	64.2	83.7	56	44	13,166	21,442
Gadchiroli	60.1	70.6	69.1	80.7	75	63	11,745	14,913

Gondia	78.5	85.4	73.8	87.2	73	67	15,211	23,091
Hingoli	66.3	76	76.4	78.7	54	50	11,203	18,286
Jalgaon	75.4	79.7	69.7	88.2	50	48	16,580	28,939
Jalna	64.4	73.6	71.9	83.7	56	48	11,458	20,565
Kolhapur	76.9	82.9	75.4	88.4	38	13	23,052	36,178
Latur	71.5	79	89.4	91.1	50	53	11,811	17,674
Mumbai	77	90.3	74.4	85.5	40	18	36,883	58,818
Nagpur	84	89.5	76.5	92.6	54	40	23,323	37,995
Nanded	67.8	76.9	73	80.3	57	30	11,022	18,155
Nandurbar	55.8	63	55.8	67.7	61	75	11,248	19,156
Nashik	74.4	81	66.6	82.2	51	46	21,927	35,545
Osmanabad	69	76.3	75.7	81.9	47	50	13,011	17,847
Parbhani	66.1	75.2	74.8	86.3	50	51	12,934	23,146
Pune	80.5	87.2	71.3	88.2	32	28	31,624	50,158
Raigarh	77	83.9	72.7	88.9	42	35	32,651	34,377
Ratnagiri	75.1	82.4	72.4	89	37	25	16,388	27,685
Sangli	76.6	82.6	76.2	87.9	32	33	21,147	30,713
Satara	78.2	84.2	73.5	85.7	32	27	19,610	29,916
Sindhudurg	80.3	86.5	74.6	87.5	35	35	19,794	31,563
Solapur	71.3	77.7	74.1	89.5	43	23	16,891	28,828
Thane	80.7	86.2	73.7	78.5	39	34	31,061	50,408
Wardha	80.1	87.2	67.3	87.9	51	62	16,955	26,130
Washim	73.4	81.7	66.3	88	52	46	10,152	14,885
Yavatmal	73.6	80.7	70.3	84.9	61	47	13,562	24,118
Maharashtra	76.9	82.9	72.8	85.4	47	44	21,892	35,033

Source:

Column (1): Directorate of Census Operations Maharashtra (2001).

Column (2): Directorate of Census Operations Maharashtra (2011).

Column (3): Calculated from the enrolment data (primary and secondary) in School Education Department (2002) and age population from Directorate of Census Operations Maharashtra (2001).

Column (4): Calculated from the enrolment data (primary, upper primary and secondary) in National University of Educational Planning and Administration (NUEPA) (2011–12) and age population from Directorate of Census Operations Maharashtra (2011).

Column (5): Directorate of Census Operations Maharashtra (2001).

Column (6): Estimated by the International Institute for Population Sciences (IIPS) using data from DLHS-3 upon the author's request.

Columns (7) and (8): DES, Government of Maharashtra

Table 2- Maharashtra Human Development Index: 2001-2011

District	2001	*District*	2011
Mumbai	0.756	Ahmednagar	0.72
Pune	0.722	Mumbai	0.841
Thane	0.721	Pune	0.814
Raigarh	0.717	Thane	0.8
Nagpur	0.691	Nagpur	0.786
Kolhapur	0.678	Kolhapur	0.77
Sangli	0.67	Raigarh	0.759
Sindhudurg	0.667	Sindhudurg	0.753
Satara	0.661	Nashik	0.746
Nashik	0.652	Sangli	0.742
Aurangabad	0.65	Satara	0.742
Chandrapur	0.637	Ratnagiri	0.732
Wardha	0.634	Solapur	0.728
Amravati	0.633	Aurangabad	0.727

| Akola	0.631	Jalgaon	0.723
Ratnagiri	0.629	Wardha	0.723
Ahmednagar	0.626	Akola	0.722
Jalgaon	0.624	Bhandara	0.718
Solapur	0.624	Chandrapur	0.718
Bhandara	0.623	Amravati	0.701
Gondiya	0.617	Gondiya	0.701
Beed	0.606	Yavatmal	0.7
Latur	0.595	Buldana	0.684
Yavatmal	0.592	Parbhani	0.683
Osmanabad	0.588	Beed	0.678
Dhule	0.579	Dhule	0.671
Parbhani	0.578	Jalna	0.663
Buldana	0.567	Latur	0.663
Hingoli	0.561	Nanded	0.657
Nanded	0.558	Osmanabad	0.649
Jalna	0.554	Hingoli	0.648
Washim	0.554	Washim	0.646
Gadchiroli	0.538	Gadchiroli	0.608
Nandurbar	0.513	Nandurbar	0.604

Source: Author's calculations based on data
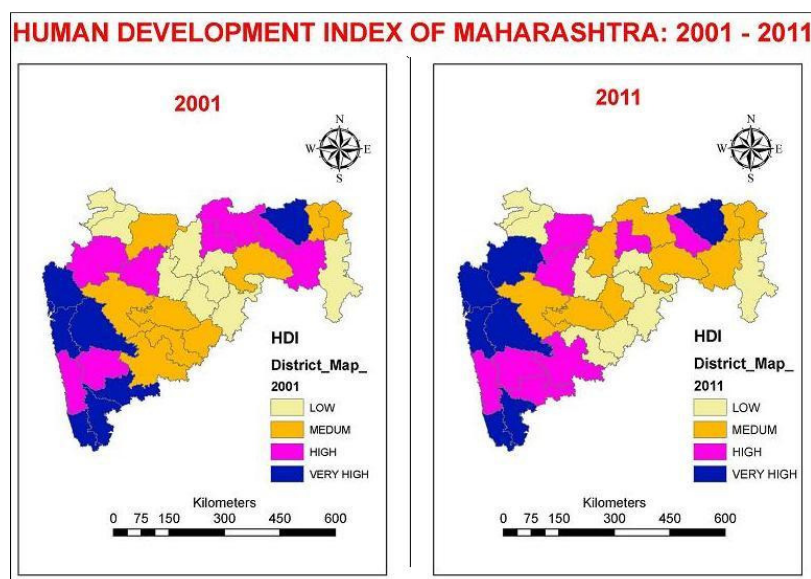
Figure 1

Conclusion:

Individual human development indicator scores as well as aggregate HDIs show an improvement across districts between 2001 and 2011 for Maharashtra. There has hardly been any substantial change in the relative human development status of other districts but for some marginal changes in rank permutations. Progress in general was greater at the lower end than at the higher end when districts were ranked by their HDIs.

Estimates of HDIs and income across districts corroborate those in the MHDR 2002, showcasing a positive association between human development and income. The rank correlation between income and HDI is positive and significant. Pair-wise comparisons for HDIs in 2001 and 2011 show that all the districts in the category of richest quartile group by income also belong to the classification of very high human development quartile by HDI. Barring Buldhana, all the poor districts of Maharashtra also belong to the low human development quartile.

It is observed that the districts of Nashik, Solapur, Jalgaon, Buldhana and Parbhani have improved their relative category on the HDI. On the other hand, the districts of Osmanabad, Latur, Chandrapur, Amrawati and

Satara, which although have improved their HDI, have moved down relatively in the HDI categorization.

Maharashtra throws up some surprises at the disaggregated level, given the general belief about a positive association among the three human development dimensions. For example, in 2001 and 2011, Gondiya belonged to the medium human development quartile but in terms of education it is in the very high human development quartile and for health it is in the low quartile for both the years.

When the IHDI is considered, Maharashtra falls in the medium HDI category in terms of the international classification of countries. Amongst the states in India, it emerges as a state with very high human development both before and after adjustments for inequality. The extent of relative loss is seen to vary with respect to the different dimensions of human development. The loss due to inequality in income is higher in Maharashtra than for the country. But for the education and health parameters, the loss due to inequality is lesser for Maharashtra vis-à-vis India. In other words, there is considerable scope for realizing improvements in human development through a strategy that equalizes achievements across persons with respect to the different human development dimensions.

The radar profiles of the human development indicators across districts point towards the inequalities that prevail in the status of all the four human development indicators (income, literacy ratio, GER and IMR).

References:

1. Directorate of Census Operations Maharashtra (2001).
2. Directorate of Census Operations Maharashtra (2011).
3. Calculated from the enrolment data (primary and secondary) in School Education Department (2002) and age population from Directorate of Census Operations Maharashtra (2001).
4. Calculated from the enrolment data (primary, upper primary and secondary) in National University of Educational Planning and Administration (NUEPA) (2011–12) and age population from Directorate of Census Operations Maharashtra (2011).
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