

Social Infrastructure as an Essential Elements for Human Development: Evidence from Assam, India

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Abstract

The Human Development Index (HDI) is a comprehensive measure that assesses country's development beyond just economic growth. It focuses on three key dimensions: a long and healthy life, knowledge, and a decent standard of living. On the other hand, social infrastructure plays a vital role in contributing to a country's HDI. This includes governance, health facilities and education facilities. Investing in social infrastructure can lead to improved human development outcomes, such as better education and health care. The present paper tries to highlight the status of HDI in Assam and the importance of social infrastructure of a state to achieve a better HDI among the different states of the country.

Keywords: Human Development, Education, Health, Social Infrastructure, etc.

INTRODUCTION

The Human Development Index (HDI) is a comprehensive measure that assesses country's development beyond just economic growth. It focuses on three key dimensions: a long and healthy life, knowledge, and a decent standard of living. The first two of the above are outcomes of the development of social infrastructure and last one is due to the development of economic infrastructure. Social infrastructure, therefore, plays a vital role in contributing to a country's HDI. This includes governance, health facilities and education facilities. Investing in social infrastructure can lead to improved human development outcomes, such as better education and healthcare. For instance, increased access to quality education can boost the average years of schooling, while improved health care can increase life expectancy. In essence, social infrastructure is critical to achieving higher HDI scores. By prioritizing investments in health, education and governance, country can drive human development and improve the overall well-being of their people.

Assam is one of the six schedule states of India comprising low life expectancies, low literacy, low per capita, high rate of poverty, slow urbanization and so on. Assam's HDI score is 0.597, indicating that the state's overall human development is roughly halfway to achieving desirable levels. As per Assam Human

Development Report 2014, the state health index is 0.727, with a life expectancy of 67.24 years and expected years of schooling is 11.88 years. Moreover, the state's education index during that reference period is 0.552 with a mean of 6.655 years schooling. The income index of the state is 0.633, with a log gross national income per capita of 8.793. The state has ranked at 30 in terms of Human development among the Indian states in 2021.

Education, Health and Human development

The discussion on human development signifies a shift away from the growth-centric nations of development to a more human centric approach towards social goals. UNDP (1990) stressed that “the real wealth of a country is its people, and the purpose of development is to create an enabling environment for them to enjoy long, creative, and wealthy lives. According to World Health Organization (1995), health is a state of complete physical, mental, and social well-being and not merely the absence of disease and susceptibility. Education is an investment in human capital, and it leads to higher productivity and higher earning power (HDR Assam, 2003). As an instruments of development, education fosters and enhances work skill and life skills such as confidence and sociability (Bloom David E. 2005). Education also helps reaches social mobility and income redistribution. Infant mortality, health status of children, empowerment of women and size of family are positively associated to educational accomplishment. The performance of the Indian states in terms of human development indicators specially the education and health, i.e. the literacy rate, the life expectancy at birth, the infant mortality rate, fertility rate, gross enrolment ratio, etc. and their contribution to upgrade the HDI indices are shown in Table 1.

Table 1

Status of HDI and different social infrastructure indicators in some major states of India

States	H D rank	HDI as on 2021	Literacy rate as on 2023	Gross enrolment rate (i-viii) (2020)	Life expectancy at birth (2020)	Infant mortality rate(2020)	Fertility rate (2020)
Kerala	1	0.752	96.2	101.0	71.2	6	1.80
Goa	2	0.751	87.4	91.1	73.3	8	1.35
Chandigarh	3	0.744	86.43	88.5	66.5	13	1.98
Delhi	4	0.730	88.7	121.3	68.0	11	1.55
Puducherry	5	0.726	86.55	77.0	64.46	9	1.47
Lakshadweep	6	0.715	92.28	73.2	71.2	8	1.38
Himachal Pradesh	7	0.703	86.6	106.0	70.6	19	1.70
Sikkim	8	0.702	82.2	92.9	65.9	5	1.12
Mizoram	13	0.688	91.58	137.5	72.1	3	2.09
Manipur	15	0.678	79.85	117.6	67.6	10	2.17
Nagaland	17	0.670	80.11	87.3	75.4	3	1.67

Arunachal Pradesh	19	0.665	66.95	111.5	67.5	29	2.13
Meghalaya	22	0.643	75.48	155.7	68.8	33	2.89
Gujarat	24	0.638	82.4	92.4	67.7	25	1.90
Andhra Pradesh	25	0.630	66.4	100.1	63.4	25	1.74
Tripura	26	0.629	87.75	109.1	66.0	21	1.66
West Bengal	27	0.624	80.5	108.5	64.7	20	1.56
Dadra and Nagar Haveli	28	0.620	77.65	89.8	-	11	1.91
Chhattisgarh	29	0.605	86.43	95.9	63.8	40	1.98
Assam	30	0.597	85.9	109.8	66.1	40	1.92
Odisha	31	0.597	77.3	95.4	64.2	38	2.14
Madhya Pradesh	32	0.598	73.7	88.7	66.2	46	1.98
Uttar Pradesh	33	0.592	73.0	98.1	63.0	41	2.38
Jharkhand	34	0.589	74.3	97.0	64.7	27	2.31
Bihar	35	0.571	70.9	96.2	64.4	29	3.02
All India		0.633	77.7	100.1	65.8	30	2.0

Source: Compiled from different reports (i.e. Economic Survey, 2012-13, UNDP Human Development Report, 2011, NFHS-5, Census of India, 2011, Sample registration System of Registrar General of India 2020, UDISE 2021-22, Global Data lab, 2021)

State Kerala who achieved the 1st rank ever since from the initiation of human development measurement in the country. The literacy rate of state Kerala is unswervingly high with other indices related with health and education. On the other hand, Assam has lost his previous rank 10th (in 1981 & 1991), 14 (2001) and 16 (2011) consistently over the last four decades. Owing to the low literacy rate (LR), low gross enrolment ratio (GER), high infant mortality rate (IMR), low life expectancies (LE) and some other economic indicators such as low per capita income, high poverty rate, etc. Assam has been incessantly in the back foot in case of HDI. In fact, Assam is the worst performer (40) while Mizoram and Nagaland (03 in each) are the best performer in case of IMR rate is concerned.

Growth of Human Development in Assam

Assam has been achieving an increasing rate of growth in terms of HDI since the last four decades, but the rate of growth is not so high compared with highly developed state of India. This is due to the slow growth rate of literacy, high infant mortality rate, low life expectancies of birth, etc. Therefore, the HD rank of the state fall considerably during these decades. The HDI of Assam was 0.272 in the year 1981 which was increased up to 0.597 in 2021, i.e. the HDI of Assam has achieved 0.325 per cent point over the last five. During these five decades the HDI of Kerala has increased 0.252 point and all India hike is 0.331 points. Moreover, all the indices of HDI regarding education and health were shown as very high compared with state of Kerala and all India average in the last decade, as shown in Table 2.

Table: 2**Trends of HDI and growth of social infrastructure indices in different decades**

	Assam				Kerala				India		
Year	HD rank	HDI	IMR	LR	HD rank	HDI	IMR	LR	HDI	IMR	LR
1981	10	0.272	107	-	1	0.5	54	78.85	0.302	115	43.57
1991	10	0.348	55	52.89	1	0.591	42	89.91	0.301	77	52.21
2001	14	0.386	66	63.25	1	0.638	11	90.86	0.472	66	64.84
2011	16	0.444	55	73.2	1	0.790	12	93.91	0.467	44	74.04
2021	30	0.597	39*	NA	1	0.752	4*	NA	0.633	29	NA

Source: Compiled from different report i.e. Economic Survey, 2012-13, Human Development Report of India, 2021

**indicates rural infant mortality rate in 2020*

Note: NA indicates data not available

Status of Education and Health sector

The quality of education in a state basically depends on the numbers of teacher involvement in their educational institution. Student-teacher ratio, therefore, is a significant index of the development of educational infrastructure. The Right to education act (RTE) mandates an [optimal student teacher ratio](#) of 30:1 for all Indian Schools. But the student teacher ratio of Assam as per the Universal District Information System on Education (U-DISE) report is 20:1 during 2014-15 which is quite impressive compared with the proposed mandate student-teacher ratio. The student – teacher ratio is worst in Bihar (49:1) while lowest in Lakshadweep and Sikkim (8:1). It is 16:1 in state Kerala, the highest literate state of India. The teachers-students all India average is 25: 1 in the said period. Apart from this, the standard of school building, the uses of furniture in the school, etc. are some another important index for the growth of educational infrastructure.

In case of health indices, as per the NITI Aayog (2020-21 reference year) state Kerala was ranked as the best performer (77.53), while Uttar Pradesh was the worst (34.44). Assam indices was 45.84 which is comparatively very less; ranked in 14 positions among the Indian states.

However, the patient doctor's ratio is concern, India remained a major supplier of doctors and nurses to the developed countries over the years, the domestic scenario looked bleak with the country ranking 67th among the developing nations in case of doctor-population ratio. According to the official statistics available with the health ministry, the total number of registered allopathic doctors in the country is 13 lakh. On the other hand, the doctor-population ratio in the country was 1:834 as of December 2022 (Ministry of Health and Family Welfare, 2023) which is better than the WHO standard 1:1000. Percentage of doctors in Assam (1.95%) out of total doctors of the nation, while it is 5.58 % in case of Kerala as of December 2022. There are around 36.14 lakh nurses in the country and the nurses-population ratio comes to 1:476.

Conclusion

It has come from the study that the development of human resources basically depends upon the development of societal structure of the country. In other words, social infrastructure has a profound impact on a country's Human Development Indices. Investing in social infrastructure can significantly improve human development outcomes. The different indices of health and education sector i.e. the high literacy rate, high life expectancies at birth, high fertility rate, high gross enrolment ratio, etc. are positively impact on the growth of human development while the high infant mortality rate, high maternal mortality rate, etc. are negatively impact on human development. Therefore, the development of these two sectors, namely the development of health and education is possible through minimizes the student-teacher ratio and doctors-population ratio, etc. Moreover, the development of physical infrastructure of these two sectors is highly crucial in terms of human development of the country in general and the state in particular.

By recognizing the critical role of social infrastructure in driving human development, policymakers can make informed decisions to invest in essential services, fostering a more equitable and prosperous society.

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