



## An Inter-State Temporal Analysis of Human Resource Development in India

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### Abstract:

India is one of the developing countries in the world. As per, UNDP's Human Development Report-2011, it stands at the 134<sup>th</sup> position. The Planning Commission of India also suggests that there are still large regional variations within the country in terms of human resource development. The present research paper intends to analyse the inter-state temporal pattern in human resource development for the year 1981, 1991, 2001 and 2011. It is calculated by using Human Development Index. It reveals that, over the past three decades, the HDI in all the states has gone up. It has increased from 0.38 to 0.70. However, there are certain spatial variations in the level of human resource development within nation. States like Bihar (0.61), Madhya Pradesh (0.62), Orissa (0.65) and Rajasthan (0.67) are much behind in comparisons to other developed states like Kerala (0.91), Goa (0.90) etc. in terms of human resource development.

**Keywords:** Human resource development, Spatial, Temporal, Human development index

### Introduction:

Human beings are the real wealth of the nations. They are different and better than the animals as they are endowed with the power to think and power to reason. Man is superior form of life and has special capacity and potential for reflection. He has brought radical changes over the earth surface through his action. Despite tremendous development in the field of science, education and technology, there are glaring inter-regional and intra-regional disparities in the social, economical, cultural and political empowerment of men and women (Panda, 1997). The basic purpose of development is to enlarge people's choices. In principle, these choices can be infinite and can change over time. The basic objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives in accordance with their needs and interests.

Human resource development is the most strategic and crucial determinant of the growth. Abundant physical resources alone cannot generate growth, unless requisite human capabilities to exploit them are

generated. Human development is not confined to economic growth alone. It is about much more than economic growth, which is only a means of enlarging people choices. Hence, economic growth is only a means and human resource development is the end of development process. Many countries have high GNP per capita but low human development indicators and vice-versa. For example, Iraq, Kuwait, Qatar, and Mauritius have high per capita GNP but their human development indicators are relatively low, while Srilanka, Jordan and Peru have relatively low per capita GNP but their human development indicators are high.

Today the goal of all development effort is to raise the level of human well-being of all the citizens of a state or country. Hence philosophers, economists, sociologists, geographers and political leaders are emphasizing on human well-being as the purpose, the end of development.

### Study Area:

India has been selected as the study area for present investigation. India is the seventh largest country in the world. It consists of twenty-eight states and seven

Union Territories. Area covered by India is 3.3 million sq.kms. It lies in the northern hemisphere. The Indian mainland measures 3214 kms from north to south between extreme latitudes and about 2933 kms from east to west between extreme longitudes. Its land frontier is approximately 15200kms. India is also the second largest populous country in the world, next only to China. Its population is 121, 01, 93422 (as per 2011 census). Around 16% of the world's population lives in India. However, regarding area, India accounts for only 2.42% of the total world area. India lies between 8°4' and 37°6' north of the Equator. Surrounding the country is the Bay of Bengal in the east, the Arabian Sea in the west and the Indian Ocean in the south. In the neighborhood of India lie Bangladesh (in east), Pakistan (in west), Nepal (in north-east), China (in north-east) and Sri Lanka (in south). Separating India from Sri Lanka is the Gulf of Mannar and the Palk Straits. Also, a part of India is the Andaman and Nicobar Island in the Bay of Bengal and the Lakshadweep in the Arabian Sea.

#### **Significance of the Study:**

India is second largest country in terms of population. According to the UNDP's Human Development report-2011 India stands at the 134<sup>th</sup> position. Beside this, according to the Planning Commission Report, there are still large regional variations within the country also. Some states have good human development while various states remain below the average nation's condition. It is found that the high per capita income has not always resulted in improving social attainments properly. Therefore, it is intended to study the inter-state temporal pattern in human resource development in India.

#### **Objective:**

The present paper intends to analyze the inter-state temporal pattern of human resource development in India for the year 1981, 1991, 2001 and 2011.

#### **Database & Methodology:**

The present study is entirely based on secondary data. Which has been collected from India's census report and economic survey report for the year 1981, 1991, 2001 and 2011.

Since, human development includes several factors contributing towards human welfare, measurement of human welfare is a complex problem. Several attempts have

been in this direction. Morris (1979) constructed a composite index of infant mortality rate, literacy and life expectancy and termed it as 'physical quality of life'. The most recent Endeavour in this line of approach is the human development index (HDI), developed in 1990 by Pakistani economist Mahbub ul Haq and has been used since then by UNDP (United Nations Development Programme) in its annual human development report.

HDI is a standard means of measuring human well-being. It measures the average achievements in three basic dimensions of human development.

1. A long and healthy life as measured by life expectancy at birth.
2. Knowledge as measured by the adult literacy rate (with two third weight) and combined gross enrolment ratio/mean years of schooling (with one third weight)
3. A decent standard of living, as measured by GDP per capita.

However, the data for the prescribed indicators in UNDP's methodology was not available at District and tahsil levels. So, for making it comparative at the maso and micro level we have used substitutes of those indices for which data was not available. For example, data on income or expenditure is not available at district and tahsil levels. We have, therefore, used percentage of households above poverty line. Since, the population above poverty line is able to meet the minimum human needs such as adequate food, clothing, shelter, health care and education. Similarly, data on life expectancy was also not available at the district and tahsil level, is substituted by the infant survival rate. It is a suitable alternative to life expectancy at birth since it also reflects the status and delivery of basic health services and level of health awareness among the people.

To derive the composite index of human development, we need only positively measures of well-being. Therefore, we transformed the negative indicators into positive measures. For instance, instead of infant mortality rate infant survival rate and instead of households below poverty line, household above poverty line are considered here.

The component indices are constructed by giving specific weights to the indicators, within a component index, equal weight is given to all the indicators.

However, the different components selected for construction of index may not be of equal importance. By giving equal weights to all the selected components may create complexities. Despite this limitation, the present approach of construction of HDI can help in identifying specific areas of development to be tackled by policy makers (Karnataka Human Development Report, 1999).

In order to construct the HDI, the first step is to compute the component indices. The indicators are made scale-free/unit-free (between 0 and 1) by applying the following formula.

$$I_{ij} = \frac{X_{ij} - \min X_{ij}}{\max X_{ij} - \min X_{ij}}$$

Where,  $I_{ij}$  is the factor score for the  $j^{\text{th}}$  district/tahsil with respect to  $i^{\text{th}}$  variable.  $X_{ij}$  is the actual value for selected indicator for the  $J^{\text{th}}$  district/tahsil and  $\min X_{ij}$  and  $\max X_{ij}$  are the minimum and maximum goal post/values selected for the indicator. There is however, danger in the choice of maximum and minimum goal posts as they are subjective and change over time. Hence, these goal posts are selected on the basis of the levels that can be achievable or has been achieved elsewhere and have universal validity. However, the goal posts for some variables are minimum and/or maximum values in the data series. This does pose a problem of changing goal post with change in data over the time and place level (Karnataka Human Development Report 1999). Such goal posts are selected, as there is no firm and objective basis for deciding the goal post.

In the second and final stage, the overall human development index ( $I_j$  for  $j^{\text{th}}$  district/ tehsil) has been worked out by aggregating the component indices and dividing it by total number of indices.

$$I_j = \frac{\sum_{i=1}^n I_{ij}}{\sum_{i=1}^n 1}$$

Where,  $\sum I_{ij}$  is summation of component indices and  $\sum^n$  is the total number of indices.

Further the processed statistics has been displayed in the tabular form.

#### Limitations Of The Study:

Since the concept of human development is much broader, complex and dynamic than what can be captured in the

HDI or any other composite indices such as Human Poverty Index (HPI), Gender Development Index (GDI), Employment Index (EI), etc. Among all these indices, the primary one and socially most relevant is the HDI. However, the HDI and other composite indices can only present a broad proxy on some of the key issues of the human development. For the fuller and comprehensive picture of human development in any region will require analysis of other various human development indicators.

#### Inter-State Temporal Patterns of Human Resource Development

The human development index has been worked out for the all the 25 states (base year-1981). It has been classified into the following 5 categories namely very high (> 0.90), high (0.75 to 0.90) moderate (0.60 to 0.75), low (0.45 to 0.60), and very low (<0.45) human development.

#### A) Inter-State Pattern of Human Resource Development in 1981:

In 1981, there was not a single state in the very high and high human development category. Only Goa and Kerala were remained at the moderate category while 11 states were observed at the low human development category with scoring index value between 0.45 to 0.60 and remaining 12 states were observed at very low category of human development. Especially, state likes Orissa, Bihar and Madhya Pradesh recorded below the 0.30 HDI value. It is due the very worst condition in the field of education, health and economic sector.

#### B) Inter-State Pattern of Human Resource Development in 1991:

In 1991, states like Kerala and Goa were moved from moderate to high category of human development with 0.77 and 0.75 HDI value respectively. Eight states namely, Andhra Pradesh, Gujarat, Haryana, Jammu Kashmir, Manipur, Mizoram, Punjab and Tamil Nadu were observed in moderate category. While Bihar, Madhya Pradesh, Orissa and Uttar Pradesh were remained in very low category of human development due to the unsatisfactory condition in the health, economic and educational sector. State like Maharashtra remained in low category due to the worst index of P.A.P.L., though the conditions of other two sectors were good in the state.

Table No. 1: India: Human Resource Development- 1981

Sr. No.	States	Index of P.A.P.L.	Index of I.S.R.	Index of Literacy	H.D.I.
1	Andhra Pradesh	0.59	0.54	0.28	0.47
2	Arunachal Pradesh	0.42	0.37	0.17	0.32
3	Assam	0.42	-	-	0.42
4	Bihar	0.11	0.53	0.24	0.29
5	Goa	0.73	0.55	0.62	0.63
6	Gujarat	0.53	0.42	0.47	0.47
7	Haryana	0.69	0.37	0.38	0.48
8	Himachal Pradesh	0.76	0.28	0.46	0.50
9	Jammu & Kashmir	0.65	0.46	0.25	0.45
10	Karnataka	0.45	0.59	0.40	0.48
11	Kerala	0.42	0.73	0.79	0.65
12	Madhya Pradesh	0.29	0.25	0.29	0.28
13	Maharashtra	0.38	0.40	0.51	0.43
14	Manipur	0.47	0.84	0.44	0.58
15	Meghalaya	0.44	0.60	0.36	0.47
16	Mizoram	0.48	0.58	0.71	0.59
17	Nagaland	0.44	0.66	0.45	0.52
18	Orissa	0.07	0.18	0.34	0.20
19	Punjab	0.77	0.36	0.42	0.52
20	Rajasthan	0.51	0.29	0.22	0.34
21	Sikkim	0.43	0.36	0.35	0.38
22	Tamil Nadu	0.26	0.48	0.49	0.41
23	Tripura	0.42	0.35	0.44	0.40
24	Uttar Pradesh	0.33	0.35	0.26	0.31
25	West Bengal	0.22	0.52	0.43	0.39
	<b>All India</b>	<b>0.36</b>	<b>0.42</b>	<b>0.37</b>	<b>0.38</b>

Source: Compiled by Author

Table No. 2: India: Human Resource Development- 1991

Sr. No.	States	Index of P.A.P.L.	Index of I.S.R.	Index of Literacy	H.D.I.
1	Andhra Pradesh	0.66	0.72	0.44	0.61
2	Arunachal Pradesh	0.39	0.54	0.41	0.45
3	Assam	0.37	0.54	0.52	0.48
4	Bihar	0.15	0.62	0.38	0.38
5	Goa	0.77	0.74	0.75	0.75
6	Gujarat	0.62	0.61	0.61	0.61
7	Haryana	0.61	0.74	0.56	0.64
8	Himachal Pradesh	0.56	0.59	0.64	0.59
9	Jammu & Kashmir	0.61	-	-	0.61
10	Karnataka	0.49	0.63	0.56	0.56
11	Kerala	0.61	0.79	0.90	0.77
12	Madhya Pradesh	0.34	0.33	0.44	0.37
13	Maharashtra	0.43	0.63	0.65	0.57
14	Manipur	0.48	0.86	0.60	0.65
15	Meghalaya	0.42	0.60	0.49	0.50
16	Mizoram	0.60	0.73	0.82	0.72
17	Nagaland	0.41	0.74	0.61	0.59
18	Orissa	0.25	0.37	0.48	0.37
19	Punjab	0.82	0.63	0.58	0.68
20	Rajasthan	0.58	0.56	0.38	0.51
21	Sikkim	0.36	0.70	0.56	0.54
22	Tamil Nadu	0.46	0.73	0.63	0.61
23	Tripura	0.40	0.59	0.60	0.53
24	Uttar Pradesh	0.37	0.50	0.42	0.43

25	West Bengal	0.45	0.69	0.58	0.57
	<b>All India</b>	<b>0.45</b>	<b>0.56</b>	<b>0.52</b>	<b>0.51</b>

Source: Compiled by Author

**Table No. 3: India: Human Resource Development- 2001**

Sr. No.	States	Index of P.A.P.L.	Index of I.S.R.	Index of Literacy	H.D.I.
1	Andhra Pradesh	0.77	0.67	0.57	0.67
2	Arunachal Pradesh	0.52	0.78	0.50	0.60
3	Assam	0.48	0.61	0.60	0.56
4	Bihar	0.39	0.66	0.45	0.50
5	Goa	0.94	0.82	0.80	0.85
6	Gujarat	0.80	0.68	0.63	0.70
7	Haryana	0.87	0.65	0.65	0.72
8	Himachal Pradesh	0.89	0.68	0.73	0.77
9	Jammu & Kashmir	0.95	0.77	0.49	0.74
10	Karnataka	0.71	0.71	0.63	0.68
11	Kerala	0.82	0.92	0.90	0.88
12	Madhya Pradesh	0.46	0.51	0.61	0.52
13	Maharashtra	0.64	0.75	0.75	0.71
14	Manipur	0.59	0.87	0.65	0.70
15	Meghalaya	0.52	0.74	0.59	0.62
16	Mizoram	0.72	0.81	0.87	0.80
17	Nagaland	0.53	0.79	0.63	0.65
18	Orissa	0.33	0.51	0.59	0.48
19	Punjab	0.91	0.73	0.67	0.77
20	Rajasthan	0.78	0.58	0.57	0.64
21	Sikkim	0.48	0.74	0.66	0.63
22	Tamil Nadu	0.70	0.73	0.70	0.71
23	Tripura	0.51	0.75	0.71	0.66
24	Uttar Pradesh	0.55	0.57	0.61	0.58
25	West Bengal	0.61	0.73	0.66	0.67
	<b>All India</b>	<b>0.63</b>	<b>0.64</b>	<b>0.61</b>	<b>0.63</b>

Source: Compiled by Author

**Table No. 4: India: Human Resource Development- \*2011**

Sr. No.	States	Index of P.A.P.L.	Index of I.S.R.	Index of Literacy	H.D.I.
1	Andhra Pradesh	0.77	0.74	0.64	0.71
2	Arunachal Pradesh	0.71	0.84	0.63	0.72
3	Assam	0.58	0.68	0.70	0.65
4	Bihar	0.49	0.74	0.62	0.61
5	Goa	0.90	0.95	0.86	0.90
6	Gujarat	0.74	0.75	0.77	0.75
7	Haryana	0.78	0.77	0.74	0.76
8	Himachal Pradesh	0.90	0.78	0.82	0.83
9	Jammu & Kashmir	0.91	0.75	0.65	0.77
10	Karnataka	0.74	0.77	0.73	0.75
11	Kerala	0.86	0.94	0.93	0.91
12	Madhya Pradesh	0.52	0.68	0.67	0.62
13	Maharashtra	0.73	0.83	0.81	0.79
14	Manipur	0.48	0.93	0.77	0.73
15	Meghalaya	0.81	0.71	0.72	0.75
16	Mizoram	0.78	0.81	0.90	0.83
17	Nagaland	0.77	0.87	0.79	0.81
18	Orissa	0.59	0.65	0.70	0.65
19	Punjab	0.82	0.79	0.74	0.78

20	Rajasthan	0.72	0.68	0.63	0.67
21	Sikkim	0.85	0.83	0.80	0.82
22	Tamil Nadu	0.81	0.84	0.78	0.81
23	Tripura	0.80	0.83	0.86	0.83
24	Uttar Pradesh	0.68	0.72	0.66	0.68
25	West Bengal	0.70	0.82	0.74	0.75
	<b>All India</b>	<b>0.66</b>	<b>0.79</b>	<b>0.66</b>	<b>0.70</b>

Source: Compiled by Author

Table No. 5: India: Human Development Index (1981-2011)

Sr. No.	States	1981	1991	2001	2011
1	Andhra Pradesh	0.47	0.61	0.67	0.71
2	Arunachal Pradesh	0.32	0.45	0.60	0.72
3	Assam	0.42	0.48	0.56	0.65
4	Bihar	0.29	0.38	0.50	0.61
5	Goa	0.63	0.75	0.85	0.90
6	Gujarat	0.47	0.61	0.70	0.75
7	Haryana	0.48	0.64	0.72	0.76
8	Himachal Pradesh	0.50	0.59	0.77	0.83
9	Jammu & Kashmir	0.45	0.61	0.74	0.77
10	Karnataka	0.48	0.56	0.68	0.75
11	Kerala	0.65	0.77	0.88	0.91
12	Madhya Pradesh	0.28	0.37	0.52	0.62
13	Maharashtra	0.43	0.57	0.71	0.79
14	Manipur	0.58	0.65	0.70	0.73
15	Meghalaya	0.47	0.50	0.62	0.75
16	Mizoram	0.59	0.72	0.80	0.83
17	Nagaland	0.52	0.59	0.65	0.81
18	Orissa	0.20	0.37	0.48	0.65
19	Punjab	0.52	0.38	0.77	0.78
20	Rajasthan	0.34	0.51	0.64	0.67
21	Sikkim	0.38	0.54	0.63	0.82
22	Tamil Nadu	0.41	0.61	0.71	0.81
23	Tripura	0.40	0.53	0.66	0.83
24	Uttar Pradesh	0.31	0.43	0.58	0.68
25	West Bengal	0.39	0.57	0.67	0.75
	<b>All India</b>	<b>0.38</b>	<b>0.51</b>	<b>0.63</b>	<b>0.70</b>

Source: Compiled by Author

### C) Inter-State Pattern of Human Resource Development in 2001:

In 2001, five states namely Kerala, Goa, Mizoram, Punjab and Himachal Pradesh were belonging to the high human development category, due to the high development in economic, educational and health sectors. While 15 States were belonging to the moderate category due to the moderate development in basic sectors of human well-being. Remaining 5 States were found in low category which was Orissa, Bihar, Assam, Madhya Pradesh and Utter Pradesh. It is due to the low literacy rate, inadequate health care facilities and low proportion of population above poverty line. In this period not a single state was observed

in very low category of human development though, all the states had registered some development in basic sector of human well-being, it was not much enough. Still, there was immense scope for development in these states.

### D) Inter-State Pattern of Human Resource Development in 2011:

In this period, it is first time, when two states namely Kerala (0.91) and Goa (0.90) are observed in the very high category of human development. From the outset, these states have sustained and enhanced their position in each sector of human development. In 2011, large numbers of states (14 states) are found in high category of human development with index value 0.75

to 0.90. It is a good indicator for India's development process. However, still 09 states in India are belonging to moderate category of human development. Moreover, states like Bihar (0.61), Madhya Pradesh (0.62), Orissa (0.65) and Rajasthan (0.67) are much behind in comparison to the other developed states in terms of human resource development. It suggests that there are still vast variations in terms of human development.

#### Conclusion:

The foregoing analysis reveals that, over the past three decades, the HDI in all states has gone up. India's human development index has increased from 0.38 to 0.70 in last thirty years. However, there are certain spatial variations in levels of HRD within nation. The two states viz. Kerala and Goa are identified with very high HDI due to relatively better economic condition, high literacy rate and well facilitated with medical facilities. While 14 states fall in high category of development due to the good condition in three representative sectors of human resource development. It is good sign for developing India. However, there is immense scope for human resource development in the states like Orissa, Bihar, Assam, Madhya Pradesh and Utter Pradesh, due to worst condition in basic sector of human development. As compared to international level, there is immense scope for human development in India.

Eventually, it is clear that the underlying factors responsible for the spatio-temporal variations in human development is not carried out fully, because of non-inclusion of the other various dimensions of human well-being e.g., basic amenities, infrastructural variables, political dimension etc. Therefore, it is a partial analysis; it seems to be a major limitation of the present exercise. We also feel that more detailed analysis needs to be done by including the other dimensions of the human well-being.

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