

## HUMAN DEVELOPMENT INDEX AND SOCIAL SECTOR EXPENDITURE IN INDIA

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### **ABSTRACT**

*Human development reports have helped a lot for the proper policy implementation and overall development of different nations. In the present study public expenditure on social sector has been linked with the human development index of Indian states and found a strong positive association between them. Further, private per capita health expenditure has also strong positive association with human development. It advocates investment on human capital development and human development by both government and private (out of pocket) sectors is needed for the overall development.*

**KEYWORDS:** *Human Development, Social Sector, Regional Imbalances*

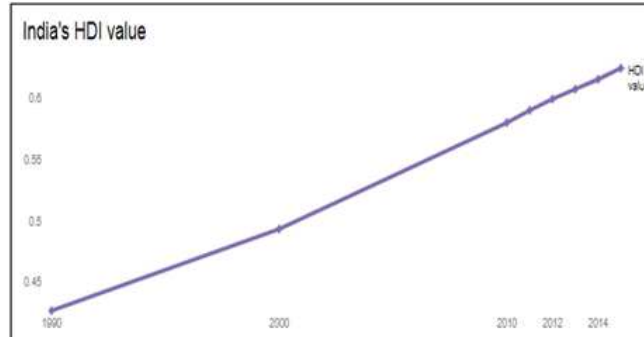
### **INTRODUCTION**

UNDP's (United Nations Development Programme) Human Development Index (HDI) has popularly been accepted as the measurement of overall development of the nation. UNDP publishes the human development reports every year since 1990. These reports have helped a lot for the proper policy implementation and overall development of different nations. In continuation of to this, many individuals, researchers, government agencies have developed human development reports at the national and sub national levels. In India also, many individuals, central and state governments have prepared human development indices at different disaggregated levels like states, districts, taluks and villages. These reports have helped a lot for the policy formulation and implementation. Human development is a simple measure of three dimensions namely, Knowledge, longevity, and decent standard of living. Knowledge is measured through the mean years of schooling and expected years of schooling; longevity is measured through the life expectancy at birth and decent standard of living is measure with per capita income. At the disaggregated levels, when the life expectancy at birth is not available, then the infant mortality rate is used. Similarly, instead of per capita income consumption expenditure is used for the decent standard of living. Thus, many moderate changes were made in different human development reports. Over the period of time, even in UNDP has also modified its indicators and measurements to construct human development index.

To improve the human development, invest in social services like education, health, sanitation, nutrition, skill development and so on is needed. Investments in social sector are largely done by the public sector (not by the private) in developing countries like India. Among the social services/social sectors, education and health are the major components. Hence, it becomes very important to analyse the public expenditure on social sector to see the government's commitment towards the improvement of HDI status. There are number of studies, which have examined the issues of social sector spending with focus on human development, some of the important studies are Prabhu (2005), Adi (2004), Kundu, Mohanan and Varghes (2013), Prasad Narendra (2005), Prabhu (2001), Agarwal (2015), Ahmad (2005), Baldacci, Clements, Gupta & Cui, (2004), Bhakta (2014), Hanagodimath (2008), Prabhu and Chatterjee (1993), Pranjal (2016) Rao Choudhury (2005) and so on. In the recent years, studies on linking the human development with social sector expenditure

are in less number. Given this background in the present study an attempt has been made to trace the link between the social sector expenditure and human development index for the Indian states.

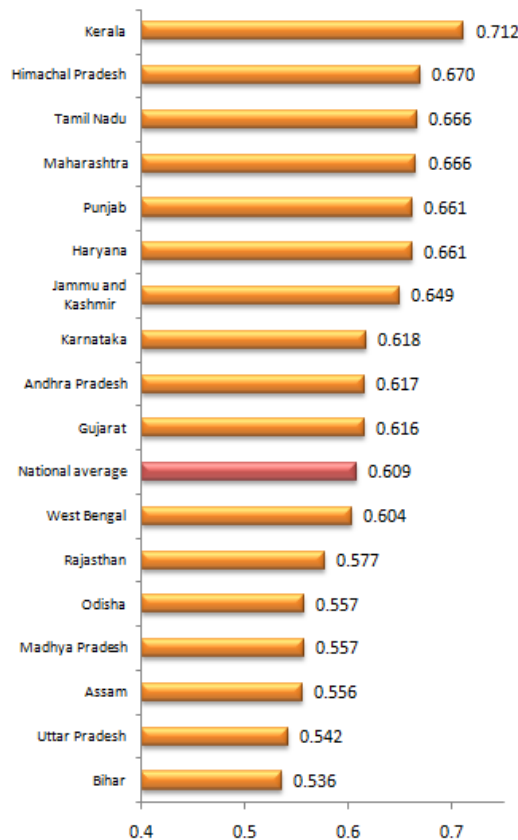
## HDI IN INDIAN STATES



**Figure 1: Human Development Index of India from 1990 to 2014.**

Indian HDI value was only 0.43 in the year 1990, which increased significantly to 0.62 in the year 2014 (Figure 1). This is mainly due to the commitment of successive governments at state and central to improve the quality of life of the people with respect of health, education, employment and so on through public investment on social sector.

In the present study, HDI values of Indian states have been taken from a study by Kundu and Tadit (2015). Figure 2 shows the information of HDI value of Indian states for the year 2015.



Sources: Kundu, Tadit (2015)

**Figure 2: Human Development Index for Indian States, 2015.**

It is found that Kerala is found in the first position with the HDI value of 0.712 and Bihar is found in the last position with the HDI value of 0.536. States like Kerala, Himachal Pradesh, Tamil Nadu, Maharashtra and Punjab are observed in the top position, while Bihar, Uttar Pradesh, Assam, Madhya Pradesh and Odisha are in the bottom position. Kerala has the 1.3 fold higher human development than Bihar, which shows the existence of inter-state disparity. To see the regional imbalances Coefficient of variation (CV) has been calculated, it shows that quantum of regional imbalances in HDI is not so high, which is evident from the fact that CV of HDI is only 8.8%.

### INTER-STATE COMPARISON OF SOCIAL SECTOR SPENDING

Most of the heads of social services have been listed in the state list, so the major responsibility of spending on social services lies with the states. In this section, state wise spending on different heads of social services has been analysed. Per capita expenditure on social service was Rs. 751 in 1990-91, which increased to Rs. 2658 in 2014-15. This increase is not similar in all the states.

**Table 1: Per Capita Public Expenditure on Social Services at Constant Prices of 2004-05**

Years	1990-91		2014-15	
	Expenditure	Rank	Expenditure	Rank
Andhra Pradesh	843	20	3777	14
Arunachal Pradesh	2773	4	7552	3
Assam	933	15	2906	17
Bihar	573	24	1540	24
Goa	4627	1	10072	2
Gujarat	921	16	4055	12
Haryana	1085	13	4432	9
Himachal Pradesh	2207	5	6123	5
Jammu and Kashmir	2132	6	4222	10
Karnataka	860	18	3467	16
Kerala	1304	10	4008	13
Madhya Pradesh	673	22	2233	22
Maharashtra	982	14	3755	15
Manipur	1761	9	4917	7
Meghalaya	1960	8	4848	8
Nagaland	3177	2	6172	4
Odisha	769	21	2530	19
Punjab	1134	12	2462	21
Rajasthan	851	19	2886	18
Sikkim	2857	3	11619	1
Tamil Nadu	1141	11	4182	11
Tripura	2099	7	5244	6
Uttar Pradesh	670	23	1728	23
West Bengal	879	17	2474	20
All States	751		2658	
CV <sup>1</sup> (%)	65.0		55.0	

Source: Calculated from the Data Available from the Different Issues of Study of State Finance, RBI

<sup>1</sup>The coefficient of variation (CV) is defined as the ratio of the standard deviation  $\sigma$  to the mean  $\mu$ . It shows the extent of variability in relation to the mean of the population.

$$CV = \frac{\sigma}{\mu} \times 100$$

Goa, Nagaland, Sikkim, Arunachal Pradesh and Himachal Pradesh were found in the group of top spending states in both the time periods. Rajasthan, Odisha, Madhya Pradesh, Uttar Pradesh and Bihar states are spending lower on per capita public social services. With respect to Andhra Pradesh, the state has shown a significant improvement from 20th position in 1990-91, to 14th position in 2014-15. Similarly, Gujarat (16th to 12th) and Haryana (13th to 9th) have also improved their positions in the same period. Punjab has deteriorated its position from 12th in 1990-91 to 21st in 2014-15. Similarly, Jammu Kashmir has also experienced negative change in its rank from 6th to 10th in the same period.

Totally, out of 24 states, 8 states have registered negative change, ten states have shown positive change and remaining six states have not shown any changes in their ranks from 1990-91 to 2014-15 in per capita expenditure on social services. To see the regional imbalances coefficient of variation has been calculated, which has been presented in the last column of the table. It is found that over the period of time, inter-state disparity in per capita expenditure on social services has come down, which is evident from the fact that the CV in the year 1990-91 was 65.0 per cent, that has decreased to 55 per cent.

### RELATIONSHIP OF HDI AND SOCIO-ECONOMIC INDICATORS AND INDICES

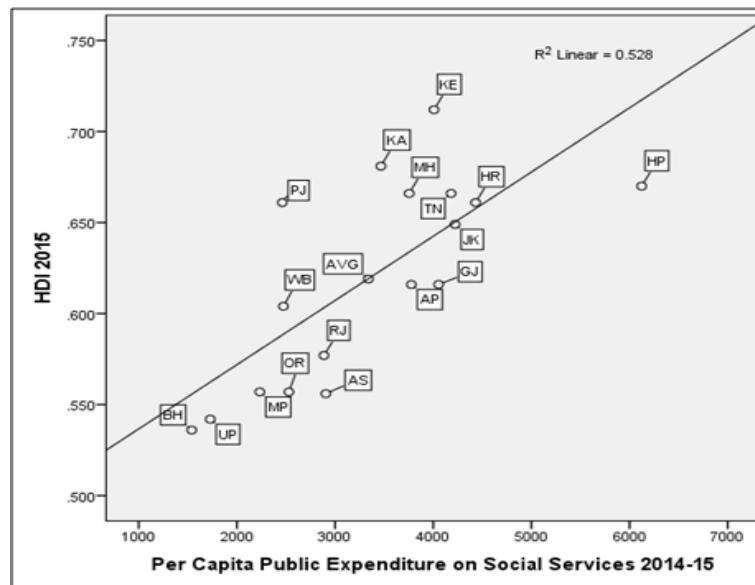
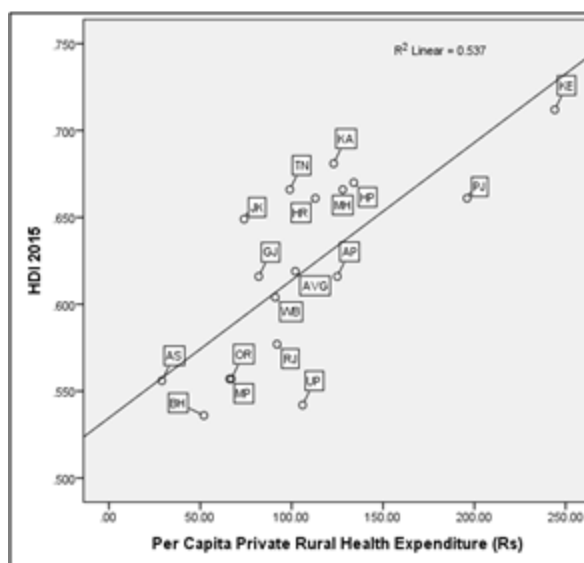


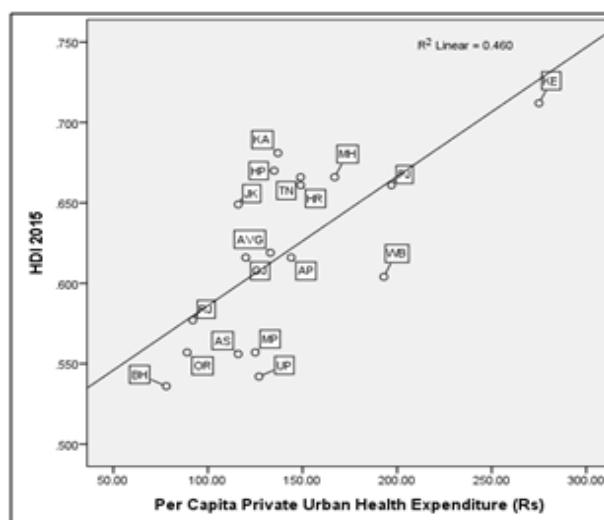
Figure 3: Scatter Diagram of HDI and Per Capita Public Expenditure on Social Services.

In this section HDI value of Indian states have been linked with the per capita public social services of Indian states, which has been presented in figure 3. It is observed from the figure that there is a high positive association exists between per capita social services expenditure and HDI value. It means higher the investment by the government on social services, higher will be the HDI. It also reveals that spending on social services has yielded on improved human development in India. To improve the education and health status of the people, not only public expenditure but out of pocket expenditure is also important. To see the per capita out of pocket health expenditure and its association with HDI, two scatter diagrams have been made and presented in future 4 and 5. It is found from the figures that per capita out of pocket rural as well as urban expenditures have positive association with HDI values. An interesting point here is to be noted that between rural and urban out of pocket health expenditures, rural expenditure has higher positive association. Totally, it is clear that higher the out of pocket expenditure leads for high in HDI status.



Source: Appendix Table 1

**Figure 4: Scatter Diagram of HDI and Per Private Rural Health Expenditure.**



Source: Appendix Table 1

**Figure 5: Scatter Diagram of HDI and Per Private Urban Health Expenditure.**

## CONCLUSIONS

The Main objective of the social sector spending is to achieve the higher human development. In the olden days, only economic growth was considered as the improvement or development, which was measured through the per capita income. This approach failed to cover overall inclusive development concept. Hence, human development approach came into existence in academic as well as in policy formulation process. In the forgoing analysis public expenditure on social sector has been linked with the human development index of Indian states and found a strong positive association between them. Further, private per capita health expenditure has also strong positive association with human development. It advocates investment on human capital development and human development by both government and private (out of pocket) sectors is needed to get the desired results.

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Appendix Table 1: State-wise HDI and Per Capita Rural and Urban Health Expenditures

States	Human Development Index 2015	Per Capita Private Rural Health Expenditure (Rs)	Per Capita Private Urban Health Expenditure (Rs)
Andhra Pradesh	0.616	125	144
Assam	0.556	29	116
Bihar	0.536	52	78
Chhattisgarh	..	57	88
Delhi	..	150	114
Gujarat	0.616	82	120
Haryana	0.661	113	149
Himachal Pradesh	0.67	134	135
Jammu & Kashmir	0.649	74	116
Jharkhand		40	108
Karnataka	0.681	123	137
Kerala	0.712	244	275
Madhya Pradesh	0.557	66	125
Maharashtra	0.666	128	167
Orissa	0.557	67	89
Punjab	0.661	196	197
Rajasthan	0.577	92	92
Tamil Nadu	0.666	99	149
Uttar Pradesh	0.542	106	127
West Bengal	0.604	91	193

Sources: Human Development Index 2015: Kundu and Tadit (2015), Per Capita Private Rural and urban Health Expenditure (Rs): NSSO,

