

Social Sector Development Index of India: An Inter-State Analysis

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ABSTRACT

India's performance on various social development parameters including literacy, nutrition, infant mortality, gender disparity and social discrimination has remained poor. The social sector development depends on the pattern of public spending on various social services like education, health, water supply and sanitation, housing, the welfare of weaker sections (SCs, STs and OBCs) and social security etc. The disparities in the level of social sector development in India has widened because all states of India have not given equal importance to different components constituting the social sector. This might have led to an inequality in the human resource development and disproportionate economic growth across the Indian states. In this paper, an effort has been made to construct the social sector development index by using the different educational and health indicators. For constructing the social sector development index, 'Factor Analysis' has been employed to determine the relative weight of the selected indicators. The relative weights to various indicators have been assigned on the basis of all the principal components. Study found that inter-state variations have declined in terms of educational development index, health development index as well as social sector development index over the period 1992-93 to 2019-20.

Keywords: Education, Health, Development

INTRODUCTION

The Indian Constitution directs the State to strive to minimise the inequalities in income, promote the educational and economic interests of the weaker sections of society, protect them from social injustice, improvement of public health and raising the level of nutrition and standard of living of its people (Govinda, 2020). India's performance on various social development parameters including literacy, nutrition, infant mortality, gender disparity and social discrimination has remained poor. The social sector development depends on the pattern of public spending on various social services like education, health, water supply and sanitation, housing, the welfare of weaker sections (SCs, STs and OBCs) and social security etc. The disparities in the level of social sector development in India has widened because all states of India have not given equal importance to different components constituting the social sector. This might have led to an inequality in the human resource development and disproportionate economic growth across the Indian states (Mishra et al., 2020).

The range of dimensions surrounding social development is actually infinite and the selection of relevant dimensions remains fundamental for constructing the social sector development index measure in a meaningful manner. In the Indian context, the measure may include people's well-being in health, education, basic amenities of life, employment and freedom from social discrimination. In this study, 26 indicators have been used to build the social sector development index in India.

Objectives and Methodology

The objective of this study is to construct the social sector development index by using the different educational and health indicators. For constructing the social sector development index, 'Factor Analysis' has been employed to determine the relative weight of the selected indicators. The relative weights to various indicators have been assigned on the basis of all the principal components.

Educational development index, health development index and social sector development index has been constructed by using the weights obtained from all principal components for 29 Indian states. The analysis has been undertaken for the year 1992-93, 1998-99, 2005-06, 2015-16 and 2019-20.

Results and Discussion

Table 1 shows the rankings and inter-state variations across Indian states in respect of educational development index during 1992-93 to 2019-20. Except three states like Bihar, Goa and Himachal Pradesh, the ranks of all Indian states have changed in terms of educational development index in 2019-20 as compared to 1992-93. During 1992-93 to 2019-20, the position of Nagaland and Meghalaya in educational development index has dropped by 17 ranks and 13 ranks respectively. The educational performance of Assam has improved by 6 ranks

and the educational performance of Arunachal Pradesh and Madhya Pradesh has declined by 6 ranks during 1992-93 to 2019-20. The state of Jammu and Kashmir and Mizoram has shifted down by 7 ranks and 5 ranks respectively in terms of their educational performance during 1992-93 to 2019-20. The ranking of Himachal Pradesh, Kerala and Odisha in terms of their educational performance has remained same during 1992-93 to 1998-99 and the ranking of Goa, Karnataka and Delhi has remained same during 2015-16 and 2019-20. The ranking of Bihar in respect of educational development index has remained same during 1992-93 to 2019-20 except 2005-06. Karnataka has shifted up by 4 ranks while Gujarat, Meghalaya and Uttar Pradesh have shifted down by 4 ranks and Tamil Nadu has shifted down by 5 ranks in terms of their educational performance during 1992-93 to 1998-99. The position of Rajasthan in educational development index has decreased by 10 ranks and the position of Tripura in educational development index has decreased by 8 ranks during 2015-16 to 2019-20. Assam and West Bengal have shifted up by 12 ranks in terms of educational performance during 2015-16 to 2019-20.

The coefficient of variation reveals inter-state inequalities across Indian states in terms of educational development index during 1992-93 to 2019-20. The value of coefficient of variation has declined from 34.04 per cent in 1992-93 to 16.56 per cent in 2019-20. This has indicated that the inter-state inequalities across Indian states have declined over the period of time so far as their educational development index has concerned.

Table 2 presents the rankings and inter-state variations across Indian states in respect of health development index during 1992-93 to 2019-20. The ranks of all Indian states have changed in terms of health development index except Kerala and Rajasthan in 2019-20 as compared to 1992-93. During 1992-93 to 2019-20, the position of Bihar, Karnataka, Madhya Pradesh and Manipur in terms of health development index has gone down by 5 ranks and of Maharashtra by 11 ranks. The health performance of West Bengal has improved by 7 ranks while the performance of Gujarat and Meghalaya has lowered by 7 ranks during 1992-93 to 2019-20. The position of Gujarat, Madhya Pradesh, Maharashtra and Manipur in health development index has continuously declined during the period covered under study. Meghalaya and Nagaland have shifted down by 11 ranks and Arunachal Pradesh has shifted down by 7 ranks in terms of health performance during 1992-93 to 1998-99.

The position of West Bengal and Himachal Pradesh in health development index has shifted up by 7 ranks and 6 ranks respectively during 1992-93 to 1998-99. Nagaland and Arunachal Pradesh have shifted up by 14 ranks and 13 ranks respectively in terms of health performance and Maharashtra has shifted down by 8 ranks in terms of health performance during 2005-06 to 2019-20. Himachal Pradesh and Karnataka have dropped their position by 6 ranks in terms of health performance during 2005-06 to 2019-20. The position of Mizoram and West Bengal in health development index has improved by 5 ranks while the position of Punjab and Tamil Nadu has lowered by 5 ranks during 2005-06 to 2019-20. The ranking of Bihar and Chhattisgarh in terms of health development index has remained same during 2005-06, 2015-16 and 2019-20.

The coefficient of variation reflects the inter-state variations in respect of health development index in India during 1992-93 to 2019-20. Table reveals that the value of coefficient of variation has declined from 43.18 per cent in 1992-93 to 28.74 per cent in 2019-20. The declined value of coefficient of variation has indicated a converging trend across Indian states in terms of health development index. In other words, the inter-state disparities across Indian states have been declining over the period of time.

Table 3 shows the rankings and inter-state disparities across Indian states in respect of social sector development index during 1992-93 to 2019-20. Except five states such as Assam, Goa, Kerala, Punjab and Delhi, the ranks of all Indian states have changed in terms of social sector development index in 2019-20 as compared to 1992-93. The most significant progress has been observed in West Bengal as it improved its ranking in social sector development index by 6 positions, from eighteenth to twelfth during 1992-93 to 2019-20. Four states such as Meghalaya, Nagaland, Gujarat and Maharashtra have dropped their positions by 11 ranks, 10 ranks, 8 ranks and 7 ranks respectively in terms of social sector development index during 1992-93 to 2019-20. Nagaland, Meghalaya and Mizoram have shifted down by 7 ranks, 6 ranks and 4 ranks respectively in terms of their social sector development index during 1992-93 to 1998-99. Assam and Himachal Pradesh have improved their position in social sector development index by 4 ranks during 1992-93 to 1998-99. The ranking of states such as Bihar, Kerala, Madhya Pradesh, Maharashtra and Uttar Pradesh in terms of social sector development index has remained same during 1992-93 to 1998-99. Maharashtra and Meghalaya have dropped their position in social sector development index by 7 ranks and Gujarat has dropped its position by 6 ranks during 2005-06 to 2019-20. On the other hand, West Bengal and Jammu and Kashmir have shifted up by 5 and 4 ranks respectively during 2005-06 to 2019-20. The ranking of Goa, Kerala and Punjab in terms of social sector development index has remained same during 2005-06, 2015-16 and 2019-20. Tripura has shifted down by 7 ranks and West Bengal has shifted up by 8 ranks in terms of social sector development index during 2015-16 to 2019-20.

Table 1

Educational Development Index (EDI)

States/UTs	EDI 1992-93	Rank	EDI 1998-99	Rank	EDI 2005-06	Rank	EDI 2015-16	Rank	EDI 2019-20	Rank
Delhi	0.823	3	0.829	2	0.800	2	0.810	1	0.811	1
Goa	0.854	2	0.774	3	0.768	4	0.777	2	0.807	2
Kerala	0.881	1	0.833	1	0.815	1	0.747	5	0.785	3
Punjab	0.693	5	0.730	4	0.726	5	0.764	3	0.782	4
Tamil Nadu	0.698	4	0.624	9	0.782	3	0.760	4	0.763	5
Himachal Pradesh	0.660	6	0.667	6	0.681	7	0.721	8	0.730	6
Sikkim	--	--	0.623	10	0.647	11	0.731	6	0.723	7
Haryana	0.607	9	0.650	7	0.652	10	0.724	7	0.707	8
Karnataka	0.462	12	0.629	8	0.639	12	0.708	10	0.705	9
Uttarakhand	--	--	--	--	0.674	8	0.630	17	0.686	10
Maharashtra	0.637	7	0.680	5	0.666	9	0.690	11	0.680	11
Gujarat	0.568	10	0.520	14	0.611	13	0.721	8	0.648	12
Mizoram	0.616	8	0.606	11	0.706	6	0.684	12	0.634	13
Andhra Pradesh	0.436	15	0.491	16	0.506	17	0.639	16	0.616	14
West Bengal	0.400	19	0.412	21	0.438	26	0.542	27	0.615	15
Assam	0.367	22	0.384	23	0.468	23	0.393	28	0.611	16
Uttar Pradesh	0.384	20	0.380	24	0.496	19	0.614	20	0.608	17
Manipur	0.421	16	0.532	13	0.589	14	0.673	13	0.605	18
Odisha	0.418	17	0.444	17	0.470	22	0.617	19	0.604	19
Jammu & Kashmir	0.459	13	0.518	15	0.475	20	0.585	23	0.596	20
Chhattisgarh	--	--	--	--	0.416	27	0.621	18	0.583	21
Tripura	0.369	21	--	--	0.453	25	0.648	15	0.581	22
Rajasthan	0.280	24	0.386	22	0.472	21	0.672	14	0.578	23
Madhya Pradesh	0.414	18	0.436	19	0.506	17	0.609	21	0.566	24
Bihar	0.262	25	0.250	25	0.164	29	0.544	26	0.553	25
Jharkhand	--	--	--	--	0.323	28	0.591	22	0.500	26
Meghalaya	0.439	14	0.439	18	0.555	15	0.392	29	0.456	27
Nagaland	0.500	11	0.593	12	0.514	16	0.568	25	0.450	28
Arunachal Pradesh	0.311	23	0.419	20	0.465	24	0.569	24	0.420	29
COV (%)	34.04	--	27.44	--	26.60	--	15.66	--	16.56	--

Source: Calculated from Selected Educational Statistics, GOI; State Profile 2005-06, MHRD; School Education in India, GOI; UDISE+ 2019-20

Table 2

Health Development Index

States/UTs	Health Development Index 1992-93	Rank	Health Development Index 1998-99	Rank	Health Development Index 2005-06	Rank	Health Development Index 2015-16	Rank	Health Development Index 2019-20	Rank
Sikkim	--	--	0.658	5	0.767	3	0.762	3	0.819	1
Kerala	0.779	2	0.824	1	0.871	2	0.885	1	0.769	2
Mizoram	0.848	1	0.672	4	0.656	8	0.681	6	0.752	3
Goa	0.767	3	0.759	2	0.898	1	0.810	2	0.737	4
Nagaland	0.707	4	0.508	15	0.456	19	0.618	12	0.712	5
Jammu & Kashmir	0.486	10	0.512	14	0.638	10	0.642	11	0.699	6
Arunachal Pradesh	0.493	9	0.494	16	0.412	20	0.672	7	0.655	7
Delhi	0.599	6	0.716	3	0.730	5	0.693	5	0.650	8
Tamil Nadu	0.470	11	0.597	9	0.762	4	0.661	9	0.648	9
Manipur	0.634	5	0.629	8	0.641	9	0.653	10	0.642	10
Punjab	0.562	7	0.638	7	0.688	6	0.710	4	0.637	11
West Bengal	0.371	19	0.540	12	0.534	17	0.563	15	0.616	12
Himachal Pradesh	0.436	12	0.648	6	0.664	7	0.600	13	0.608	13
Tripura	0.375	18	--	--	0.540	16	0.671	8	0.560	14
Haryana	0.398	17	0.530	13	0.555	13	0.561	17	0.554	15
Uttarakhand	--	--	--	--	0.544	15	0.507	19	0.523	16
Andhra Pradesh	0.418	14	0.488	17	0.551	14	0.523	18	0.518	17
Karnataka	0.431	13	0.548	11	0.567	12	0.562	16	0.517	18
Maharashtra	0.512	8	0.564	10	0.614	11	0.585	14	0.511	19
Rajasthan	0.365	20	0.217	21	0.287	24	0.377	24	0.475	20
Odisha	0.187	23	0.281	20	0.342	22	0.379	23	0.452	21
Gujarat	0.414	15	0.472	18	0.474	18	0.477	21	0.424	22
Meghalaya	0.409	16	0.174	25	0.294	23	0.494	20	0.395	23
Assam	0.217	21	0.400	19	0.374	21	0.439	22	0.388	24
Chhattisgarh	--	--	--	--	0.278	25	0.287	25	0.384	25
Jharkhand	--	--	--	--	0.156	28	0.247	27	0.351	26
Madhya Pradesh	0.212	22	0.182	23	0.198	26	0.260	26	0.322	27
Uttar Pradesh	0.103	25	0.181	24	0.158	27	0.184	28	0.263	28
Bihar	0.156	24	0.199	22	0.147	29	0.157	29	0.231	29
COV (%)	43.18	--	38.68	--	41.88	--	34.48	--	28.74	--

Source: National Family Health Survey (various years)

Table 3

Social Sector Development Index

States/UTs	Social Sector Development Index 1992-93	Rank	Social Sector Development Index 1998-99	Rank	Social Sector Development Index 2005-06	Rank	Social Sector Development Index 2015-16	Rank	Social Sector Development Index 2019-20	Rank
Kerala	0.830	1	0.829	1	0.843	1	0.816	1	0.777	1
Goa	0.811	2	0.767	3	0.833	2	0.794	2	0.772	2
Sikkim	--	--	0.641	6	0.707	5	0.747	4	0.771	3
Delhi	0.711	4	0.773	2	0.765	4	0.752	3	0.731	4
Punjab	0.628	5	0.684	4	0.707	5	0.737	5	0.710	5
Tamil Nadu	0.584	7	0.611	9	0.772	3	0.711	6	0.706	6
Mizoram	0.732	3	0.639	7	0.681	7	0.683	7	0.693	7
Himachal Pradesh	0.548	9	0.658	5	0.673	8	0.661	9	0.669	8
Jammu & Kashmir	0.473	13	0.515	14	0.557	14	0.614	15	0.648	9
Haryana	0.503	11	0.590	10	0.604	12	0.643	11	0.631	10
Manipur	0.528	10	0.581	12	0.615	10	0.663	8	0.624	11
West Bengal	0.386	18	0.476	17	0.486	18	0.553	20	0.616	12
Karnataka	0.447	14	0.589	11	0.603	13	0.635	13	0.611	13
Uttarakhand	--	--	--	--	0.609	11	0.569	19	0.605	14
Maharashtra	0.575	8	0.622	8	0.640	9	0.638	12	0.596	15
Nagaland	0.604	6	0.551	13	0.485	19	0.593	17	0.581	16
Tripura	0.372	19	--	--	0.497	17	0.660	10	0.571	17
Andhra Pradesh	0.427	15	0.490	16	0.529	16	0.581	18	0.567	18
Arunachal Pradesh	0.402	17	0.457	18	0.439	20	0.621	14	0.538	19
Gujarat	0.491	12	0.496	15	0.543	15	0.599	16	0.536	20
Odisha	0.303	22	0.363	20	0.406	23	0.498	22	0.528	21
Rajasthan	0.323	20	0.302	23	0.380	24	0.525	21	0.527	22
Assam	0.292	23	0.392	19	0.421	22	0.416	27	0.500	23
Chhattisgarh	--	--	--	--	0.347	26	0.454	23	0.484	24
Madhya Pradesh	0.313	21	0.309	21	0.352	25	0.435	25	0.444	25
Uttar Pradesh	0.244	24	0.281	24	0.327	27	0.399	28	0.436	26
Jharkhand	--	--	--	--	0.240	28	0.419	26	0.426	27
Meghalaya	0.424	16	0.307	22	0.425	21	0.443	24	0.426	27
Bihar	0.209	25	0.225	25	0.156	29	0.351	29	0.392	29
COV (%)	34.98	--	31.47	--	32.28	--	21.22	--	18.80	--

Source: Author's Calculations.

The values of coefficient of variation for different years have reflected the regional disparities across Indian states in terms of social sector development index during 1992-93 to 2019-20. Table shows that the inter-state variations in terms of social sector development index have decreased over the period of study as the value of coefficient of variation has declined from 34.98 per cent in 1992-93 to 18.80 per cent in 2019-20.

Section-IV

Conclusion and Policy Implications

There is a need of huge investment in social sector to achieve social equity, environmental sustainability and Sustainable Development Goals (SDGs). Even though the State governments have spent more on social sector as compared to the Central government, the social sector development has not found to be homogenous across the states of India. Study found that except few states, the ranks of almost all Indian states have changed in terms of educational development index, health development index and social sector development index in 2019-20 as compared to 1992-93. The ranking of some states has improved while that of others has declined during 1992-93 to 2019-20 in respect of educational development index, health development index and social sector development index.

Further, study found that during 1992-93 to 2019-20, the position of Nagaland and Meghalaya in educational development index has dropped by 17 ranks and 13 ranks respectively. The educational performance of Assam has improved by 6 ranks and the educational performance of Arunachal Pradesh and Madhya Pradesh has declined by 6 ranks during 1992-93 to 2019-20. Among the 29 Indian states, Kerala has occupied the top position with highest value of educational development index while Bihar has placed at the bottom in terms of educational development index ranking during 1992-93, 1998-99 and 2005-06. However, during 2015-16 and 2019-20 Delhi has occupied the top position with highest value of educational development index. During 1992-93 to 2019-20, the position of Nagaland and Meghalaya in educational development index has dropped by 17 ranks and 13 ranks respectively. The educational performance of Assam has improved by 6 ranks and the educational performance of Arunachal Pradesh and Madhya Pradesh has declined by 6 ranks during 1992-93 to 2019-20. The ranking of Himachal Pradesh, Kerala and Odisha in terms of their educational performance has remained same during 1992-93 to 1998-99. Rajasthan has shifted down by 10 ranks and Tripura has shifted down by 8 ranks in terms of educational performance during 2015-16 to 2019-20. Assam and West Bengal have shifted up by 12 ranks in terms of educational performance during 2015-16 to 2019-20. The declined value of coefficient of variation indicates that the inter-state inequalities across Indian states have decreased over the period of time so far as their educational development index has concerned.

Regarding health development index, it has been found that during 1992-93 to 2019-20, the position of Bihar, Karnataka, Madhya Pradesh and Manipur has gone down by 5 ranks and the position of Maharashtra has declined by 11 ranks. The health performance of West Bengal has improved by 7 ranks while the performance of Gujarat and Meghalaya has lowered by 7 ranks during 1992-93 to 2019-20. The most significant progress has been observed in West Bengal as it improved its ranking in health development index by 7 positions, from nineteenth to twelfth during 1992-93 to 2019-20. Kerala has occupied the top position with highest value of health development index during 1998-99 and 2015-16. Bihar has been placed at the bottom with lowest value of health development index during 2005-06, 2015-16 and 2019-20. Meghalaya and Nagaland have shifted down by 11 ranks and West Bengal has shifted up by 7 ranks in terms of their health performance during 1992-93 to 1998-99. Nagaland and Arunachal Pradesh have shifted up by 14 ranks and 13 ranks respectively in terms of health performance and Maharashtra has shifted down by 8 ranks in terms of health performance during 2005-06 to 2019-20. The ranking of Bihar and Chhattisgarh in terms of health development index has remained same during 2005-06, 2015-16 and 2019-20. The declined value of coefficient of variation has indicated a converging trend across Indian states in terms of health development index.

The most significant progress has been observed in West Bengal as it improved its ranking in social sector development index by 6 positions, from eighteenth to twelfth during 1992-93 to 2019-20. Four states such as Meghalaya, Nagaland, Gujarat and Maharashtra have dropped their positions by 11 ranks, 10 ranks, 8 ranks and 7 ranks respectively in terms of social sector development index during the same period. The state of Kerala followed by Goa has secured the top position with highest value of social sector development index over the period of time. On the other hand, Madhya Pradesh, Uttar Pradesh and Bihar have placed at the bottom so far as their social sector development index ranking has concerned. Nagaland, Meghalaya and Mizoram have shifted down by 7 ranks, 6 ranks and 4 ranks respectively in terms of their social sector development index during 1992-93 to 1998-99. The

ranking of states such as Bihar, Kerala, Madhya Pradesh, Maharashtra and Uttar Pradesh in terms of social sector development index has remained same during 1992-93 to 1998-99. Maharashtra and Meghalaya have dropped their position in social sector development index by 7 ranks and Gujarat has dropped its position by 6 ranks during 2005-06 to 2019-20. Tripura has shifted down by 7 ranks and West Bengal has shifted up by 8 ranks in terms of social sector development index during 2015-16 to 2019-20. The ranking of Goa, Kerala and Punjab in terms of social sector development index has remained same during 2005-06, 2015-16 and 2019-20. The declined value of coefficient of variation indicates that inter-state variations in terms of social sector development index have fallen over the period of study. Overall, study found that inter-state variations have declined in terms of educational development index, health development index as well as social sector development index over the period 1992-93 to 2019-20.

Education and health of the population significantly affects social development as well as economic progress of the country. Therefore, it is imperative to ensure equitable access to health care and educational services by identifying priority areas and making improvements in quality of health care and educational services.

Policy implications flow from the analysis and results of the study

To attain better education and enjoying the highest attainable standard of health are the fundamental rights of every human. Therefore, government should deliver quality basic education and healthcare to all their citizens especially, the poor people. Access to quality healthcare and educational facilities should not be restricted only to the rich section of the society. It must reach the doorstep of the poorest of the poor. In developing countries, nutrition along with health, has considered not only as an end in itself but also a means to improve the productivity of labour and quality of human resources. Some Indian states such a have focused on mid-day meal programmes to improve the nutritional status of children whereas other states have concentrated on indirect measures such as supply of cereals to the poorer households at highly subsidized rates. In India, the nutritional status of majority of population has considered to be very low. The WHO has recommended that the government should spend at least five per cent of GDP on the health sector in order to provide decent health care to most of the population of a country.

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