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Regional Disparities in Socio-Economic Development in Post Reform Era: A Study of Indian economy

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Abstract
India has created history as one of the fastest growing economy of the world after post reform period and has well done in some indicators such as balance of payments, resilience to external shocks, service sector growth, significant accumulation of foreign exchange, information technology. In India there are large geographical and cultural differences but similarly there are many differences in the level of economic development and this originate the problem of regional disparity. The present study examines the regional disparity on the basis of social and economic indicators. The study finds out that there is a convergence of GDP growth rates in successive plan periods after post reform period. Interstate disparities in literacy rate are also diminishing because of increased investment in education sector. Disparities in MMR and IMR on interstate level are also going down.

1. Introduction

India has created history as one of the fastest growing economies of the world after witnessing so called "Hindu" rate of growth from 1950 to 1980**.** In the post reform (since 1991), India has well done in some indicators such as balance of payments, resilience to external shocks, service sector growth, significant accumulation of foreign exchange, information technology and stock market, improvement in telecommunication etc**.** India accounts for a meager 2.4 percent of the world surface and yet it sustains a whopping 16.7 percent of the world population, a little over 1 billion people residing in 29 states and 6 union territories. In India there are significant regional differences in terms of size, populations, climate, geography and culture and so on. Similarly, there are large differences in the level of economic development and hence the problem of regional disparity. Some states have achieved rapid economic growth in recent years, while others have languished. The differences are found to exist in physical features and resources endowments across states which are responsible for development disparity within a country. The prevalence of regional disparity is a common phenomenon and present in both developed and developing countries. Regional disparity denotes regional dualism or regional income or growth differentials. The co-existence of relatively developed and economically depressed states and even regions within states is known as regional imbalances**.** Balanced regional growth is necessary for the harmonious development of a nation. Unless it is achieved, a nation cannot say to be developed in real sense. Right from the independence achieving balanced growth for the whole country had been the aim and challenge before the leaders and the planning commission.

2. Review of Literature

Sarker(1994) studied the 15 Indian states between the time period 1960-1987 and taking fourteen indicators and by applying Principle Components Analysis found that there is a strong relationship between the development of states and amounts of per capita plan allocation which grew stronger over the years of the plans periods. Marjit and Mitra (1996) focused on the convergence hypothesis over the period 1961-62 to 1989-90 in the Indian context. They focused on the negative relationship between initial incomes and subsequent growth rates and results of their study showed no facts of convergence of income among the

Indian states. Das and Barua(1996)examined the regional disparities among 23 states over the period 1970-92 by computing Theil's Index and found that interstate disparity increased in almost all the sectors. Rao, Shand and Kalirajan (1999) examined convergence for the fourteen major Indian states over the period 1960 to 1995 but their analysis showed divergence or disparities among the states. Bajpai and Sachs (1999) examined the convergence hypothesis by taking the data of thirty three years (1961-93) for a sample of nineteen states and they found some evidence of convergence in 1961-71 but not for the later sub periods. Ahuluwalia (2000) compared pre reform and post reform periods data of the Indian states by using the Gini Cofficient and analyzed the performance of states in terms of per capita income, literacy, level of infrastructure, poverty and private investment during the post-reform period and compared it with performance in the previous decade. They concluded that disparities increased more in the growth rates of states in the post reform period. Kurian (2000) estimated disparities in regard of a variety of demographic indicators such as TFR (total fertility rate), IMR (infant mortality rate), urban population, female literacy, SDP (state domestic product), poverty, state government development and non-development expenditure, resource transfer from centre to states, share in plan outlay, investments, banking activities and financial infrastructure development over the period 1980-81 to 1995-96 and findings revealed an increasing regional disparity in terms of socio economic indicators in spite of the various measures adopted by the government in backward areas. Kumar and Priyesh (2007) studied the performance of 15 states in terms of net state domestic product, per capita income, life expectancy, infant mortality rate, birth rate, death rate and poverty rate to highlight the extent of regional disparity in India. Results of the study explained that poor and unsatisfactory status of social and economic indicators in backward states of India as compared to forward states. Adabar (2009) describe the differences in the steady state and re examine the hypothesis of convergence and economic growth over the period 1976-77 to 2000-01 among fourteen major Indian states. He considered variables such as per capita investment, population growth rate, human capital, initial level of per capita income as important variables to examine convergence. He found evidence of conditional convergence at the rate of twelve percent per five year span. Jahangir(2011) investigate the interstate disparities in the economic development of state by a set of indicates such as NSDP, Per capita NSDP and some social indicators like health and educations. By taking the data on the fifteen major states of India and over the twenty five years time period, the study concluded that considerable regional disparity existed among states in India despites the attempt of the central and the state government for balanced regional development. Ohlan(2012) analysed the pattern of disparities in socio-economic development at the district level in India applying the Wroclow Taxonomic technique. the results showed that wide disparities in the level of socioeconomic development exist among different districts within and between different regions of India. The level of development in infrastructural service sector is found to be positively and statistically significantly associated with the overall socio-economic development indicating that the growth and progress of the sectors have been going hand in hand in the country.

DIFFERENT FORMS OF DISPARITIES IN INDIA:

The disparities present in the country are in the various forms, but here we are discussing only social and economical disparities.

a) The regional disparity in terms of per capita/GDP of the states.

b) The regional disparity in terms of social development indicators.

DISPARITIES IN THE PER CAPITA/GDP OF THE STATES:

The inter-state inequalities in PCIs have been a cause of concern. These have been rising in the last three decades for two reasons. First the rate of growth of SDP of many of the states in the south, west and northern regions, like Punjab, Himachal, Gujarat, Karnataka and Tripura have been quite high as compared to some of the other states like UP, Bihar and Rajasthan. Second, the rate of population in some of the low PCI states has been fairly high. This has resulted in widening of PCIs and consumption in different states. The important objective in the eleventh plan was to reduce the inter-state inequalities in PCIs. This is feasible if the growth rates of population and related indicators, including total fertility rate and infant mortality rate show a decline

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trend. But from the last two decades the following states showing the high population growth rate and low level of growth rates. However the GDP growth trend has been reversed during the eleventh plan period. During the eight, ninth and tenth plans, states with lowest average PCIs, along with the growth rates are given in the below table.

TABLE 1.1

Comparative Growth Rates of Selected Low-Income States

States	Eight plan	Ninth plan	Tenth plan	Eleventh plan
Bihar	3.9	3.7	6.9	11.1
Orissa	2.3	2.5	5.8	6.9
Uttar Pradesh	5.0	5.1	5.0	9.4
Madhya Pradesh	6.6	4.5	5.0	9.3
Rajasthan	8.0	5.3	9.2	7.2
*	5.16*	4.22*	6.38*	8.78*

Source: Planning Commission

In the above table the five states includings all the BIMARU states and orissa show the lowest PCI in the eight plan period. All these gradually improve their growth rates, particularly in the Eleventh plan period. The average GDP growth rate of these states increased from 5.16 percent in the eight plan period to 6.38 in the tenth plan and 8.78 percent in the eleventh plan. Also, individually, several of them recorded excellent growth. Bihar which was for quite some time a cause of worry for planners has been able to record growth rate of 11.1 percent in the eleventh plan period. Similarly all BIMARU states performed well in eleventh plan period.

TABLE 1.2

Growth Rates in SDP in Different States

Sr. No	States/UTs	Eight Plan (1992-97)	Ninth Plan (1997-2002)	Tenth Plan (2002-07)	Eleventh Plan (2007-2012)
Non Special Category States					
1	Andhra Pradesh	5.4	5.5	8.2	8.3
2	Bihar	3.9	3.7	6.9	11.1
3	Chhattisgarh	NA	NA	8.8	8.4
4	Goa	9.0	5.7	8.5	9.0
5	Gujarat	12.9	2.8	11.0	9.6
6	Haryana	5.2	6.1	9.0	9.1
7	Jharkhand	NA	NA	5.0	9.3
8	Karnataka	6.2	5.8	7.7	7.6
9	Kerala	6.5	5.2	8.3	8.0
10	Madhya Pradesh	6.6	4.5	5.0	9.4
11	Maharashtra	8.9	4.1	10.0	8.6
12	Orissa	2.3	5.1	9.2	8.2
13	Punjab	4.8	4.0	6.0	6.7

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14	Rajasthan	8.0	5.3	7.1	7.2
15	Tamil Nadu	7.0	4.7	9.7	7.7
16	Uttar Pradesh	5.0	2.5	5.8	6.9
17	West Bengal	6.3	6.5	6.2	6.9
Special Category States					
18	Arunachal Pradesh	5.0	6.6	6.2	9.4
19	Assam	2.8	1.8	5.0	6.9
20	Himachal Pradesh	6.5	6.3	7.6	8.1
21	Jammu & Kashmir	5.0	4.2	5.5	6.0
22	Manipur	3.7	4.7	5.7	6.5
23	Meghalaya	4.0	7.2	6.7	8.1
24	Mizoram	NA	5.7	5.9	11.0
25	Nagaland	7.2	6.5	7.4	6.2
26	Sikkim	4.6	6.6	7.7	22.8
27	Tripura	6.7	9.4	6.9	8.7
28	Uttarakhand	NA	NA	11.7	13.7

Source: Central Statistical office (CSO).

The above table shows that the growth rates of SDP shows interesting convergence trends. First the average GDP growth rate of states with lowest PCI over the last three Plans is increasing continuously and during the eleventh plan, it exceeds the average growth rates of general category states. Second, these also exceeded the growth rates of all States (including special category) during the Eleventh Plan. Third, the ratio of average growth rates of States with lowest PCI, as against those of five highest PCI States, increased from 57 per cent (Eighth Plan) to 94 per cent (Eleventh Plan). Fourth, the coefficient of variation indicating the extent of inequality in growth rates amongst different States also shows an increasing convergence of Gross State Domestic Product (GSDP) growth rates over successive Plan period.

TABLE 1.3

Convergence of GDP Growth Rates in Successive Plans

Particulars	Eight Plan	Ninth plan	Tenth plan	Eleventh plan
Average GDP growth of top five states, amongst general category states	8.16	4.92	8.38	8.80
Ratio of average growth of bottom five states of that of all India	0.69	0.77	0.82	1.11
Ratio of average growth of bottom five states to that of non-special category states.	0.79	0.88	0.82	1.05
Ratio of average growth rate of bottom five states with that of top five(general category states)	0.63	0.86	0.76	0.99

Source: Planning Commission.

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Table 1.4 indicates the disparities in PCI since 2004-05.the variation in PCIs amongst various states has been worsening in the last two decades. The coefficient of variation had increased from 34 percentage (1993-94) to 36 percentage (2004-05) and 41 percentage in 2011-12 as showed in the following table1.4.

TABLE 1.4

Disparities in PCI (Per Capita NSDP) at 2004-05 prices

Years	State with Lowest PCI	PCI Rs	State with Highest PCI	PCI Rs	Ratio to lowest to highest PCI (%)	Coefficient of variation in PCI (%)
2004-05	Bihar	7,914	Haryana	37,972	21	36
2005-06	Bihar	7,749	Maharashtra	40,671	19	39
2006-07	Bihar	8,900	Maharashtra	45,582	20	40
2007-08	Bihar	9,233	Maharashtra	50,138	18	40
2008-09	Bihar	10,241	Maharashtra	50,183	20	40
2009-10	Bihar	10,773	Maharashtra	54,166	20	41
2010-11	Bihar	12,102	Maharashtra	59,735	20	41
2011-12	Bihar	13,971	Maharashtra	64,951	22	42

Source: Directorate of Economics and Statistics of Respective State Governments.

But the ratio of lowest to highest PCI has improved from 21 percent in the 2004-05 to 22 percent in 2011-12.The widening disparities in PCI across states show that convergence in growth rates does not appear to have resulted in convergence in income levels across states.

REGIONAL DISPARITIES IN TERMS OF SOCIAL INDICATORS:

As we know that per capita income is not a sufficient indicator for the measurement of economic development and it does not have special features which the non-monetary or social indicators have. Therefore, there is a general consensus that per capita income must be accompanied by social indicators of development (e.g. life expectancy, mortality rates, literacy etc.) to be able to

make an assessment of the level of development or to measure the level of development. Some of the social indicators taken up in the study are:

Education: in education the main indicator which is studying here is literacy rate.

- Literacy

Health: in health there are there indicators which are studying here:

- Infant Mortality Rate (IMR)
- Maternal Mortality Rate (MMR)

Literacy Rate in India

Education is an important factor for the rapid economic development of a country. This table discusses the literacy rate in India for 1991 and 2001 and 2011 on the basis of census reports. As it clear from the table 1.5 that in 1991, 2001 and 2011 the overall literacy rate of the country was 52.21 percent and 66.4 percent and 74.0 respectively as shown in the table 1.5. Kerala was exceptional with the highest literacy rate throughout the period (89.81 in 1991 and 90.86 in 2001 and 93.91 in 2011) and remained at top. The second most literate state was Maharashtra throughout the period. Lowest literacy rate was found in the states of Bihar, Rajasthan

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and Uttar-Pradesh for the under the study. The other which remained at the bottom were Orissa and Madhya-Pradesh. In 2001, in the state of Rajasthan there was an impressive improvement in literacy rate from a low 38 percent in 1991 to 60 percent in 2001. States like Tamil Nadu, Kerala, and Maharashtra are the leading states throughout the period followed by Punjab, Gujarat, West Bengal and Karnataka. While Bihar, Uttar-Pradesh, Madhya Pradesh, Rajasthan, Andhra Pradesh, Orissa and Assam continued to be lagging states in all the three census years. But overall performance of states in terms of literacy improved and is evident from declining trend in coefficient of variation over the period. Coefficient of variation has decreased from 24.46 percent in 1991 and further to 14.83 percent in 2001 and 9.87 in 2011 showing decreased regional disparity in the literacy levels during the study period. This is in accordance with Kuznets hypothesis. Thus, during the period of study, literacy rate among states has improved considerably. This led to reduction in interstate disparities in literacy rate due to increased investment in the education sector.

TABLE 1.5

Literacy rate in India: State-wise Literacy Rates (1981-2011)

States	1991	2001	2011
Andhra Pradesh	44.08	60.47	67.66
Assam	52.89	63.25	73.18
Bihar	37.49	47.00	63.82
Gujarat	61.29	69.14	79.31
Haryana	55.85	67.91	76.64
Karnataka	56.04	66.64	75.6
Kerala	89.81	90.86	93.91
Madhya Pradesh	44.67	63.08	70.63
Maharashtra	64.87	76.88	82.91
Orissa	49.09	63.08	73.45
Punjab	58.51	69.65	76.68
Rajasthan	38.55	60.41	67.06
Tamil Nadu	62.66	73.45	80.33
Uttar Pradesh	40.71	56.27	69.72
West Bengal	57.70	68.64	77.08
All India	52.21	64.64	74.04
Average	54.2	66.4	75.19
Standard deviation	13.2	9.8	7.42
Coefficient of variation	24.4	14.8	9.87

Source: Office of the Registrar General, India.

Note: Uttarakhand, Jharkhand and Chhattisgarh up to 2001 are included under Uttar Pradesh, Bihar and Madhya-Pradesh respectively.(this table include only 15 states excluded special category states.

Infant Mortality Rate

Infant mortality is defined as the number of deaths of infants per 1000 live births. It is an important social indicator reflecting, in some measure, the state of public health in the economy. In a developing country widespread prevalence of poverty, a rudimentary health infrastructure and illiterate and ill informed population prone to traditional behavior are factors that lead to a high Infant mortality. In India also Infant

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Mortality Rate is high which is 77 in 1991, 71 in 2001, 30.15 in 2009 and 40 in 2013 which is showing in table 1.6.lowest percentage of IMR was found in Kerala in all the four measuring time periods and the states which have the highest percentage of IMR are MP, Orissa and UP respectively. This is also evident from the minor change in coefficient of variation over the period under review. The table 1.6 below shows that over the period 1981 to 2008, Overall reduction in IMR has taken place over the period except in Haryana and Andhra Pradesh where IMR increased from 52 to 69 and 55 to 66 respectively. Reduction in IMR is highest in MP from 133 to 97 only. It is also the state where the IMR was lowest throughout the period. And the value of standard deviation is shows the diminishing trend throughout the time period

TABLE 1.6

State-wise Infant Mortality Rate (1991-2013)

States	1991(persons)	2001	2009	2013
Andhra Pradesh	55	66	49	39
Assam	92	78	61	54
Bihar	75	67	52	42
Gujarat	78	64	48	36
Haryana	52	69	51	41
Karnataka	74	58	41	31
Kerala	42	16	12	12
Madhya Pradesh	133	97	67	54
Maharashtra	74	49	31	34
Orissa	125	98	65	51
Punjab	74	54	38	26
Rajasthan	87	83	59	47
Tamil Nadu	54	53	28	21
Uttar Pradesh	99	85	63	50
West Bengal	62	53	33	31
All India	77	71	30.15	40
Average	78.4	66	46.5	37.93
Standard deviation	25.8	20.9	15.85	12.41
Coefficient of variation	32.9	31.7	34.06	32.73

Source: Office of the Registrar General of India, Ministry of Home Affairs

Maternal Mortality Rate

Another important indicator of health is Maternal Mortality Rate or MMR. Maternal Mortality Rate is defined as the maternal deaths per 100,000 live births in one year. In developing countries, prevalence of widespread poverty, poor nutrition, low quality of health care, lack of awareness of healthy living styles, low age of marriage and frequent pregnancies are some of the

factors responsible for maternal deaths at the time of delivery or soon after. Maternal mortality is high in India but there are great variations between different states. Table 1.7 reveals interstate disparity in maternal mortality rate varying from 480 (2004-06) in Assam, the highest obtained to 95 in Kerala, the lowest among the states. In 1997-98 drastic reduction occurred in the maternal mortality rate of Gujarat which reduced to 29.

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States like Kerala (95), Tamil Nadu (111), Maharashtra (130), Haryana (186) and Gujarat (160) had lower maternal mortality because of implementation of various schemes which emphasized on institutional deliveries, presence of emergency obstetric assistance etc. while backward states such as Assam (480), Uttar Pradesh (440), Rajasthan (388), Bihar (312), Orissa (303) and Madhya Pradesh (335) had high maternal mortality. It is also shown from the table 1.7 that the value of coefficient of variation is continuously decreasing means that rate of IMR is going down in India

TABLE 1.7

Maternal Mortality Rate in Selected States in India (1997-12)

States	1997-98	2004-06	2007-09	2010-12
Andhra Pradesh	154	154	134	110
Assam	401	480	390	328
Bihar	451	312	261	219
Gujarat	29	160	148	122
Haryana	105	186	153	146
Karnataka	195	213	178	144
Kerala	195	95	81	66
Madhya Pradesh	498	335	269	230
Maharashtra	135	130	104	87
Orissa	361	303	258	235
Punjab	196	192	172	155
Rajasthan	577	388	318	255
Tamil Nadu	76	111	97	90
Uttar Pradesh	707	440	359	292
West Bengal	264	141	145	117
All India	408	254	212	178
Average	309.6	242.6	204.46	173.06
Standard deviation	199.6	124.4	97.97	80.82
Coefficient of variation	64.5	51.2	47.91	46.70

Source: Statistical report, Registrar General of India

- Rate per 100,000 live births; Registrar general of India, Special Material Mortality in India, 2004-06 SPS
- Retrospective MMR Surveys
- SRS prospective household reports

Conclusion:

in our study we are try to find out the regional inequality in terms of social and economic indicators of development. In economic indicators we are studying GDP of the and PCI of the states. The findings show that BIMARU states well performed in eleventh five year plan period and convergence is increasing after post reform era in GSDP, but widening the disparities in PCI across states during 2004-05 to 2011-12. In case of

social indicators interstate disparity in literacy rate is declining due to increase investment in education sector, and if we talk about another social variable that is health and includes IMR and MMR, interstate variation in these variables is also declining.

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