

## State Level Inequalities in Economic Development

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### Introduction

The economic reforms initiated in 1991 were drastic in relation to the conservative path that Indian economic policy had traversed since planning was introduced in 1951. It is safe to assume that the effects of such significant reforms would take a few years to become visible and show up in most macro-economic indicators. This paper attempts to document the performance of the major states in what we call the 'settled' post-reform period 1994-95 to 2007-08, using the data from the 'Data for use of Deputy Chairman, Planning Commission' prepared by the Planning Commission dated 11th Jan 2010. We note at the outset that there are severe data limitations that limit our ability to explain inter-state variations in performance, due to differences in estimation methods across states and especially due to gaps in data availability in certain years.

We attempt our inter-state analysis for 15 states of the country, which account for 90% of the Indian population (according to the 2001 census). Some of the new states like Chattisgarh and Jharkhand, special states facing great challenges like most North Eastern states (except Assam) and very small states like Goa and the capital state of Delhi have been excluded. This has been done to make for more meaningful comparison among the remaining states.

### Growth Performance

The growth performance of the 15 major states during the period can be studied on the basis of the available data on the Gross State Domestic Product (GSDP) for each state. There are differences in methods of estimating the GSDP in different states and the state GSDP series are not modified to make them consistent with each other, yet we feel that the observations as regards direction of change and the relative comparison across the states would remain valid.

**Table 1** presents the estimated growth rates of GSDP in the 15 major states in the 'settled' post-reform period 1994-95 to 2007-08. We divide the 14 years of the 'settled' post-reform period 1994-95 to 2007-08 into prior to 2000-01 and post 2000-01, ignoring the bleak performance year

of 2000-01 .This helps to illustrate and contrast the changes in the growth performance of the states between the two periods and also to comment on the impact of reform after the growth experience has intensified and extended to most parts of the country.

- i. The growth rate of the combined 15 states during 1994-2000 was 5.88%; it increased to 7.22% during 2001 to 2008.
- ii. The average growth rates for GSDP for most states were higher in the later period, 2000 to 2008 as compared to 1994 to 2000. In fact the decline in growth rate was observed only for 3 states: Rajasthan, West Bengal and almost negligibly for Tamil Nadu. The states which exhibited particularly higher growth rates in the later period were Orissa, Haryana, Assam, Madhya Pradesh and Gujarat. Good improvement in growth rates was also, observed in Andhra Pradesh, Bihar, Maharashtra and Kerala. The growth performance did not vary perceptibly between the two periods for the remaining three states of Karnataka, Punjab and U.P.
- iii. There is variation in growth performance across states in both periods, with some states growing faster than others. In the first period of our analysis the fastest growing states were Rajasthan (8.34%), Gujarat (8.01%) and Karnataka (7.66%). The slow growth states were Assam (2.1%), Bihar (4.7%), Orissa (4.43%) and U.P. (4.73%). There was visible change in this composition in the period 2001 to 2008 with Gujarat (10.1%), Haryana (9.43%) and Madhya Pradesh (8.48%) growing faster than the rest. The least growth was in Punjab (4.88%), U.P. (5.16%), Assam (5.34%) and Tamil Nadu (6.46%). The growth experienced by three out of the four erstwhile BIMARU states is to be noted, especially in case of Rajasthan in the first period and Madhya Pradesh in the later period. Studying experiences of such growth stories would be useful in learning how to further step up the growth process in the less developed regions of the country.

Table 1: GSDP growth rates of various states

	State	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	Average growth rate 1994-2000	CV (1994 - 2000)
1	Andhra Pradesh	5.61	5.92	6.30	-1.37	12.16	4.58	7.94	5.53	0.78
2	Assam	2.83	2.86	2.93	0.99	-0.22	3.18	2.53	2.10	0.66
3	Bihar	10.92	13.92	23.78	-3.85	7.59	3.68	16.04	4.70	2.74
4	Gujarat	18.02	5.49	14.24	2.11	7.18	1.02	-4.89	8.01	0.85
5	Haryana	7.05	2.46	11.61	1.43	5.56	7.65	8.06	5.96	0.62
6	Karnataka	5.62	6.41	8.96	6.91	12.72	5.33	-9.85	7.66	0.36
7	Kerala	8.26	4.52	3.70	2.89	7.06	7.54	1.42	5.66	0.40
8	Madhya Pradesh	2.89	6.13	6.53	5.00	6.56	10.50	3.53	6.27	0.40
9	Maharashtra	2.55	11.49	5.08	5.56	3.36	9.74	-2.10	6.30	0.57
10	Orissa	5.35	5.18	-4.74	13.14	2.45	5.17	-1.14	4.43	1.30
11	Punjab	2.95	4.16	7.36	3.00	5.59	5.63	3.93	4.78	0.36
12	Rajasthan	17.22	4.08	11.26	11.32	4.02	2.11	-2.01	8.34	0.70
13	Tamil Nadu	12.57	3.45	4.95	8.20	4.73	6.11	5.87	6.67	0.50
14	Uttar Pradesh	5.79	3.69	10.74	-0.09	2.75	5.49	2.19	4.73	0.77
15	West Bengal	6.81	7.41	6.97	8.25	6.36	6.88	3.84	7.11	0.09
	<b>Mean</b>	7.63	3.96	7.98	4.23	5.86	5.64	2.36		
	<b>SD</b>	4.97	5.42	6.27	4.73	3.41	2.60	6.11		
	<b>CV</b>	0.65	1.37	0.79	1.12	0.58	0.46	2.59		
	State	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Average growth rate 2001-2008	CV (2001 - 2008)
1	Andhra Pradesh	4.20	3.26	9.27	6.96	8.72	8.87	10.64	7.42	0.37
2	Assam	2.60	7.07	6.02	3.74	4.94	6.97	6.06	5.34	0.31
3	Bihar	-4.73	11.82	-5.15	12.17	1.49	22.00	8.04	6.52	1.52
4	Gujarat	8.41	8.14	14.77	8.88	11.18	9.17	NA	10.09	0.25
5	Haryana	7.73	6.59	10.13	8.64	9.37	14.20	9.35	9.43	0.26
6	Karnataka	6.79	2.54	8.03	15.21	2.79	12.53	6.18	7.72	0.61
7	Kerala	2.80	4.55	3.46	9.88	11.61	6.46	11.02	7.11	0.52
8	Madhya Pradesh	5.17	7.30	6.25	9.97	9.17	11.10	10.42	8.48	0.27
9	Maharashtra	4.05	6.81	8.00	8.71	9.67	9.82	9.18	8.03	0.25
10	Orissa	6.25	-0.06	14.71	12.61	6.37	12.12	5.85	8.26	0.62
11	Punjab	1.92	2.85	6.07	4.95	4.50	7.32	6.54	4.88	0.40
12	Rajasthan	10.87	-9.90	28.67	-1.85	6.70	7.81	7.11	7.06	1.69
13	Tamil Nadu	-1.56	1.75	5.99	11.45	11.89	11.29	4.41	6.46	0.82
14	Uttar Pradesh	2.17	3.72	5.27	5.40	5.25	7.18	7.16	5.16	0.35
15	West Bengal	7.32	3.78	6.20	6.89	5.72	8.77	7.74	6.63	0.24
	<b>Mean</b>	4.27	4.01	8.51	8.24	7.29	10.37	7.84		
	<b>SD</b>	3.99	4.87	7.27	4.18	3.22	3.95	2.02		
	<b>CV</b>	0.94	1.21	0.85	0.51	0.44	0.38	0.26		

Source: Data for use of Deputy Chairman, Planning Commission, 11<sup>th</sup> January 2010

## Impact of economic reforms on regional inequality

It is important to recognize that even though the reforms themselves are non-discriminatory, they will affect states differently because of differences in state specific characteristics and this could lead to differences in economic development. The abolition of licensing eliminated the central government's ability to spread investment evenly across the country. This sometimes led to fragmented capacities which were not only sub-optimally located but also could not benefit from economies of scale.

With liberalization of investment control and much stronger pressure of competition, including especially competition from imports, investment size began to be determined on economic grounds and location also was decided to a much greater extent on the basis of economic considerations like return on investment. It is very likely that in practice this has resulted in a reallocation of investment in favour of states perceived as having better infrastructure facilities, better labour skills and work culture, and a more investor friendly environment. The resulting reallocation of investment in the post-reforms period could lead to a substantial increase in investment in the better performing states, and a consequent increase in their growth rate, with a corresponding reduction in investment in less well endowed or less well governed states and consequent deceleration in their growth. However, it is also, possible that as the basic infrastructure development and other conducive environment is established across most states those states which have more unexploited opportunities attract more investment. This would increase their growth and help to mitigate inequalities. An analogy can be drawn from the case of increased FDI being attracted to emerging economies like India. The huge unexploited challenges in such countries are now attracting more MNC capital as the basic facilities and pro-growth environment have been put in place.

Thus, the risk-return trade-off can make the fast developing states like Rajasthan, Madhya Pradesh, Orissa grow faster in the future through private capital inflows, domestic or foreign. Considering the recent break through for Bihar<sup>1</sup> and the changing political scenario of the state, perhaps the next attractive destination for investment flows could be Bihar.

- i. The changing scenario of dispersion in growth between the states also, suggests that the initial increase in inequalities experienced in the 1990s (Ahluwalia, 2002) is being reversed as growth intensifies in the economy and in most of the 15 states of our study.

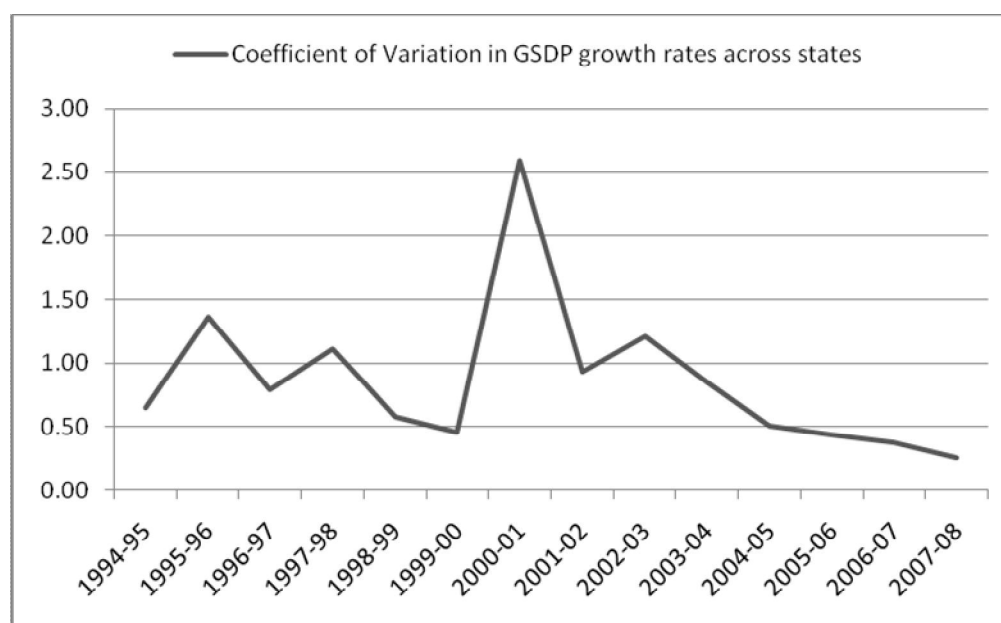
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<sup>1</sup> Bihar has clocked the second highest growth rate in the country, only second to Gujarat, between the period 2004/05 and 2008/09

- ii. The range of variation in GSDP growth in the first period was from a low of 2.10% per year for Assam to a high of 8.34% in Rajasthan, which gives a ratio of 3.97 between the highest and the lowest growing states. In the second period, the range decreased from a low of 4.88% per year for Punjab to a high of 10.09% for Gujarat, decreasing the ratio to 2.07.
- iii. The degree of dispersion in growth rates across the states decreased in both the periods but the decline was much larger in 2001 to 2008. The Coefficient of variation decreased from 0.65 in 1994-95 to 0.46 in 1999-00, a decrease of 29%, while it decreased from 0.94 in 2001-02 to 0.26 in 2007-08, a decrease of 72%. This suggests that the higher growth experienced in 2001 to 2008 is coming along with lower inter-state inequalities.

**Figure 1** graphically shows the coefficient of variation in GSDP growth rates across states for the 14-year period.

**Figure 1: Coefficient of Variation in GSDP growth rates across states**



Source: Authors' Calculations

A comparison of per capita NSDP growth rates across the states also, suggests that the inter-state variation had started to rise in the first decade of reforms but is falling in the last decade. This is significantly visible from 2003-04. The coefficient of variation has fallen from 1.89 in 2001-01 to 1.11 in 2003-04 and further showing a consistent decline to be only 0.42 in 2007-08. Though there is a rise to an inexplicable estimate of 3.68 in 2002-03.

The impact of the growth process on regional inequality can be studied both within the state and between states. To analyse the inequality between the 15 states we can use the Gini coefficient<sup>2</sup> for the total population of the 15 states, assuming that all individuals within a state have a gross income equal to the per capita GSDP. This provides a measure of inequality in the total population of the 15 states which ignores the inequality arising out of the unequal distribution within each state, and focuses only on the inequality which arises because of inter-state differences in per capita GSDP. The coefficient increased from 0.1917 in 1993-94 to 0.2771 in 2002-03. The estimates for later period are available only till 2004-05 but they are suggestive of a decline in inter-state inequality. Along with the significant reduction in the coefficient of variation for GSDP growth rates, mentioned above it appears that inter-state gaps are at least not growing wider.

Table 2 brings out the intra state inequality picture through the estimates of Gini Coefficients for each state for different years. The coefficients for inequality for the urban areas suggest marginal increase in the inequalities in income distribution for the 15 states from 1993-94 to 2004-05, the average Gini coefficient for all states increased from 0.31 to 0.34 during this period. The intra state inequality in the rural areas however decreased from 0.26 to 0.24 for the same period. This suggests that inequalities in income distribution in rural areas are becoming more similar for each of the 15 states.

**Table 2: Intra state Gini Coefficients for rural and urban areas**

		1973-74	1977-78	1983	1993-94	1999-00	2004-05
	State	Rural	Rural	Rural	Rural	Rural	Rural
1	Andhra Pradesh	0.29	0.3	0.29	0.29	0.24	0.24
2	Assam	0.2	0.18	0.19	0.18	0.2	0.17
3	Bihar	0.27	0.26	0.26	0.22	0.21	0.17
4	Gujarat	0.23	0.29	0.25	0.24	0.23	0.25
5	Haryana	0.29	0.29	0.27	0.3	0.24	0.31
6	Karnataka	0.28	0.32	0.3	0.27	0.24	0.23
7	Kerala	0.31	0.35	0.33	0.29	0.27	0.29
8	Madhya Pradesh	0.29	0.33	0.29	0.28	0.24	0.24
9	Maharashtra	0.26	0.46	0.28	0.3	0.26	0.27
10	Orissa	0.26	0.3	0.27	0.24	0.24	0.25
11	Punjab	0.27	0.3	0.28	0.26	0.24	0.26
12	Rajasthan	0.28	0.46	0.34	0.26	0.21	0.2
13	Tamil Nadu	0.27	0.32	0.32	0.31	0.28	0.26
14	Uttar Pradesh	0.24	0.3	0.29	0.28	0.25	0.23
15	West Bengal	0.3	0.29	0.28	0.25	0.22	0.24
	<b>Mean</b>	0.27	0.32	0.28	0.26	0.24	0.24
	<b>Standard Deviation</b>	0.03	0.07	0.04	0.03	0.02	0.04
	<b>CV</b>	0.11	0.22	0.13	0.13	0.09	0.16
		1973-74	1977-78	1983	1993-94	1999-00	2004-05
	State	Urban	Urban	Urban	Urban	Urban	Urban
1	Andhra Pradesh	0.29	0.32	0.31	0.32	0.31	0.34
2	Assam	0.3	0.32	0.25	0.29	0.31	0.3

<sup>2</sup> The Gini coefficient measures the extent to which the distribution of income among individuals or households within a country deviates from a perfectly equal distribution. A value of zero represents perfect equality and a value of 1 represents perfect inequality.

3	Bihar	0.26	0.3	0.3	0.31	0.32	0.31
4	Gujarat	0.25	0.31	0.26	0.29	0.29	0.32
5	Haryana	0.31	0.31	0.3	0.28	0.29	0.36
6	Karnataka	0.29	0.34	0.33	0.32	0.32	0.36
7	Kerala	0.37	0.36	0.37	0.34	0.32	0.35
8	Madhya Pradesh	0.27	0.38	0.29	0.33	0.32	0.37
9	Maharashtra	0.33	0.36	0.33	0.35	0.35	0.35
10	Orissa	0.34	0.32	0.29	0.3	0.29	0.33
11	Punjab	0.29	0.38	0.32	0.28	0.29	0.32
12	Rajasthan	0.29	0.3	0.3	0.29	0.28	0.3
13	Tamil Nadu	0.31	0.33	0.35	0.34	0.38	0.34
14	Uttar Pradesh	0.29	0.33	0.31	0.32	0.33	0.34
15	West Bengal	0.32	0.32	0.33	0.33	0.34	0.36
	<b>Mean</b>	0.30	0.33	0.31	0.31	0.32	0.34
	<b>Standard Deviation</b>	0.03	0.03	0.03	0.02	0.03	0.02
	<b>CV</b>	0.10	0.08	0.10	0.07	0.09	0.07

Source: Data for use of Deputy Chairman, Planning Commission, 11th January 2010

## Poverty Scenario

A look at the poverty scenario for the states would also be useful in shedding light on the effect of growth on income distribution and development, we are using the estimates made by the Planning Commission based on the so-called "large sample" surveys covering about 120,000 households, conducted periodically by the National Sample Survey Organisation (NSSO). For 2004-05 we are using the MRP estimates<sup>3</sup>. The poverty ratios given in Table 3 indicate that significant reduction in the poverty problem has been experienced by almost all the 15 states, where the ratio indicates the percentage of population below the poverty line<sup>4</sup>.

**Table 3: Percentage of population below poverty line**

	State	1973-74	1977-78	1983	1987-88	1993-94	1999-00	2004-05
1	Andhra Pradesh	48.86	39.31	28.91	25.86	22.19	15.77	11.1
2	Assam	51.21	57.15	40.47	36.21	40.86	36.09	15
3	Bihar	61.91	61.55	62.22	52.13	54.96	42.6	32.5
4	Gujarat	48.15	41.23	32.79	31.54	24.21	14.07	12.5
5	Haryana	35.36	29.55	21.37	16.64	25.05	8.74	9.9
6	Karnataka	54.47	48.78	38.24	37.53	33.16	20.04	17.4
7	Kerala	59.79	52.22	40.42	31.79	25.43	12.72	11.4
8	Madhya Pradesh	61.78	61.78	49.78	43.07	42.52	37.43	32.4
9	Maharashtra	53.24	55.88	43.44	40.41	36.86	25.02	25.2
10	Orissa	66.18	70.07	65.29	55.58	48.56	47.15	39.9
11	Punjab	28.15	19.27	16.18	13.2	11.77	6.16	5.2
12	Rajasthan	46.14	37.42	34.46	35.15	27.41	15.28	17.5
13	Tamil Nadu	54.94	54.79	51.66	43.39	35.03	21.12	17.8
14	Uttar Pradesh	57.07	49.05	47.07	41.46	40.85	31.15	25.5
15	West Bengal	63.43	60.52	54.85	44.72	35.66	27.02	20.6
	<b>Mean</b>	52.71	49.24	41.81	36.58	33.63	24.02	19.59
	<b>Standard Deviation</b>	10.44	13.64	13.94	11.67	11.20	12.58	9.76
	<b>CV</b>	0.20	0.28	0.33	0.32	0.33	0.52	0.50

Source: Data for use of Deputy Chairman, Planning Commission, 11th January 2010

<sup>3</sup> As per NSSO, in order to present results for the 61st round 2004-05 comparable with the 55th round 1999-00 results, 61st round estimates must be prepared by the MRP method. Accordingly we are using estimates of poverty, intra-state Gini coefficient, etc as per the Mixed Reference Period (MRP).

<sup>4</sup> Poverty line as per the Planning Commission (Eleventh five Year plan 2007-12) is Rs.356 monthly per capita consumption for rural areas and Rs.539 for urban areas in 2004-05.

While the poverty ratios have significantly declined for all the states through the entire period from 1993-94 to 2004-05, the fall has been larger in the period 1993-94 to 1999-00. The poverty ratio for all the states fell from 33.63% in 1993-94 to 24.02% in 1999-00 and 19.59% in 2004-05. Orissa and Assam however, experienced higher cut in poverty from 1999-00 to 2004-05 and Madhya Pradesh experienced the decline at an almost same pace for both the periods.

Despite the reductions in poverty and the good growth in GSDP noted earlier, the poverty in absolute terms continues to be very high for Orissa, Bihar and Madhya Pradesh. Uttar Pradesh also has a high poverty ratio which along with a less than average growth rate of GSDP is enabling a decline in poverty only at a slow pace. Maharashtra has a poverty ratio of 25.2% inspite of having above average growth rates for GSDP since even before the 1991 reforms.

India's poverty reduction strategy has consisted of a two-pronged approach relying upon acceleration in growth to bring about a general improvement in living standards, supplemented by poverty alleviation programmes directed at identified poverty groups that may not benefit sufficiently from the 'trickle-down' effect of the growth process. It appears that for states which continue to have high poverty along with high growth, a further strengthening of their poverty programmes is required.

The coefficient of variation in poverty ratios amongst states has increased from 0.33 in 1993-94 to 0.52 in 1999-00, declining marginally to 0.50 in 2004-05. This also indicates that while poverty ratios have become lower for most states the gap in poverty has increased. Focussed action to alleviate poverty in the weaker states should now be more effective as it will be coupled with the higher growth rates of GSDP being achieved by most of the states, specially states like Madhya Pradesh, Rajasthan and Bihar which have high poverty ratios. For example Bihar has the second highest poverty ratio of 32.5% and as earlier mentioned has the second highest GSDP growth rate for 2004 to 2008.

### **Plan Expenditure as a proxy for state support for development**

To analyse the role of state governments in promoting development within their state the best quantifiable indicator available is plan expenditure. Plan expenditure is not identical to public investment, but it has the advantage that data are available on an annual basis. Plan expenditure is undertaken by both the central government and the state government and what is relevant for the development of a state is the volume of total plan expenditure in the state by both the centre as well as the state. Unfortunately, while data on total plan expenditure by the central government are readily available, they cannot be disaggregated according to the state in which the expenditure was incurred. The only information available on plan expenditure in a state therefore relates to the state plan. This is presented in Table 4 as Plan Expenditure as a percentage of GSDP.



**Table 4: Plan Expenditure as % of GSDP**

	State	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
1	Andhra Pradesh	3.87	4.33	3.79	5.02	5.26	4.95	5.64
2	Assam	5.63	5.06	4.80	4.71	4.74	3.28	3.09
3	Bihar	5.08	6.21	6.34	3.49	3.12	3.39	3.92
4	Gujarat	4.28	3.74	5.96	4.58	4.41	3.82	4.51
5	Haryana	3.37	3.49	3.43	3.12	2.92	2.55	2.37
6	Karnataka	6.06	6.43	6.70	6.49	7.29	6.92	6.68
7	Kerala	5.80	5.97	4.71	4.23	3.31	4.57	3.77
8	Madhya Pradesh	5.57	4.88	4.61	4.31	3.74	6.14	4.95
9	Maharashtra	4.07	3.90	4.28	4.02	3.20	2.59	2.43
10	Orissa	6.32	7.26	6.42	6.60	5.83	4.93	3.97
11	Punjab	4.12	3.60	2.87	2.84	3.06	2.14	1.77
12	Rajasthan	6.22	5.24	4.58	4.78	4.93	5.02	5.43
13	Tamil Nadu	3.87	3.82	4.29	4.09	3.71	3.69	4.03
14	Uttar Pradesh	4.11	4.14	3.98	3.44	3.29	3.22	2.73
15	West Bengal	2.90	2.99	3.10	4.03	2.99	1.59	1.34
	<b>Mean</b>	4.75	4.74	4.66	4.38	4.12	3.92	3.78
	<b>SD</b>	1.11	1.26	1.21	1.07	1.27	1.49	1.51
	<b>CV</b>	0.23	0.27	0.26	0.24	0.31	0.38	0.40
	State	2004-05	2005-06	2006-07	2007-08	2008-09	Average 1997-2000	Average 2001-2008
1	<b>Andhra Pradesh</b>	5.44	5.69	6.76	10.45	13.46	4.25	7.21
2	<b>Assam</b>	3.39	3.25	4.24	5.49	6.39	5.05	4.23
3	<b>Bihar</b>	4.33	5.60	9.07	9.96	11.67	5.28	6.38
4	<b>Gujarat</b>	4.08	5.08	5.86	5.76	6.24	4.64	4.97
5	<b>Haryana</b>	2.25	2.82	3.35	4.17	4.44	3.35	3.11
6	<b>Karnataka</b>	8.00	7.43	9.44	8.09	10.63	6.42	8.06
7	<b>Kerala</b>	3.31	3.26	3.43	4.61	4.67	5.18	3.87
8	<b>Madhya Pradesh</b>	6.16	6.40	7.44	8.53	9.15	4.84	6.56
9	<b>Maharashtra</b>	2.59	3.39	3.18	3.61	3.80	4.07	3.10
10	<b>Orissa</b>	3.83	3.59	3.98	5.88	7.20	6.65	4.90
11	<b>Punjab</b>	2.01	3.49	4.66	4.03	4.50	3.36	3.21
12	<b>Rajasthan</b>	5.72	6.20	6.31	7.76	8.12	5.21	6.19
13	<b>Tamil Nadu</b>	4.13	3.93	5.15	5.08	5.20	4.02	4.37
14	<b>Uttar Pradesh</b>	3.42	4.83	6.50	7.21	8.93	3.92	5.02
15	<b>West Bengal</b>	2.05	2.54	2.66	3.26	3.55	3.26	2.50
	<b>Mean</b>	4.05	4.50	5.47	6.26	7.20		
	<b>SD</b>	1.69	1.50	2.11	2.29	3.05		
	<b>CV</b>	0.42	0.33	0.39	0.37	0.42		

Source: Data for use of Deputy Chairman, Planning Commission, 11th January 2010

The following features are worth noting:

- i. State plan expenditure as a percentage of GSDP declined in almost all the states up to the early 2000s from 1997-98. It started increasing noticeably for most states from 2004-05.
- ii. The average of Plan expenditure as a percentage of GSDP for all 15 states also started increasing from 2004-05. In fact only in 2006-07, it managed to cross for the first time the 4.75% figure of 1997-98, reaching 5.47%. The increase in this indicator is especially significant for Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh. The afore mentioned 7 states are all large in terms of geographical size and in terms of population. Out of the seven, five states have been at the top of the perception of less developed states of India for a long time (Andhra Pradesh and Karnataka being the exceptions).

To further assess the inter-state development outcomes, we consider the estimates for literacy, infant mortality and the combined index prepared as the Human development Index (HDI): a composite index measuring average achievement in three basic dimensions of human development - a long and healthy life, knowledge and a decent standard of living.

## Literacy

The rate of literacy is commonly used as a proxy for the quality of human resources. Literacy rate is the percentage of the population 7 years and above who are literate (Prior to 1991 census the rate was for population 5 years and above). The data on literacy is summarised in Error! Reference source not found..

This confirms that literacy has been growing steadily and even before the process of reforms got underway literacy growth was steady and significant. There are six states however, which experienced much higher growth in the period post-reforms, 1991-2001. These are Rajasthan, with a whopping 56.71% growth in literacy from 1991 to 2001, Madhya Pradesh with 42.69%, Uttar Pradesh with 38.22%, Andhra Pradesh with 37.18% and Bihar with 25.37% literary growth. Other states which also had high growth during the period were Orissa, Haryana, Punjab, West Bengal, etc. but their literacy growth was more significant in pre-reform period 1981 to 1991. In spite of very good growth, literacy continues to be below the average for the seven states of Bihar, Rajasthan, Andhra Pradesh, Uttar Pradesh, Orissa, Assam and Madhya Pradesh.

If the growth in literacy achieved in the last decade is sustainable into this decade most of the states would cross the 75% mark of literacy rates. The states which will probably lag behind this 75% figure could be Bihar, Uttar Pradesh and Orissa.

**Table 5: Literacy Rates**

		1981	1991	2001	Growth rate 1981 - 1991	Growth rate 1991-2001
1	Andhra Pradesh	35.66	44.08	60.47	23.61	37.18
2	Assam	NA	52.89	63.25		19.59
3	Bihar	32.32	37.49	47.00	16.00	25.37
4	Gujarat	44.92	61.29	69.14	36.44	12.81
5	Haryana	37.13	55.85	67.91	50.42	21.59
6	Karnataka	46.21	56.04	66.64	21.27	18.92
7	Kerala	78.85	89.81	90.86	13.90	1.17
8	Madhya Pradesh	38.63	44.67	63.74	15.64	42.69
9	Maharashtra	57.24	64.87	76.88	13.33	18.51
10	Orissa	33.62	49.09	63.08	46.01	28.50
11	Punjab	43.37	58.51	69.65	34.91	19.04
12	Rajasthan	30.11	38.55	60.41	28.03	56.71
13	Tamil Nadu	54.39	62.66	73.45	15.21	17.22
14	Uttar Pradesh	32.65	40.71	56.27	24.69	38.22
15	West Bengal	48.65	57.70	68.64	18.60	18.96
	<b>Mean</b>	43.84	54.28	66.49		
	<b>Standard Deviation</b>	13.12	13.28	9.86		
	<b>CV</b>	0.30	0.24	0.15		

Source: Data for use of Deputy Chairman, Planning Commission, 11th January 2010

## Infant Mortality<sup>5</sup> rate as an indicator of health

The data in Table 6 gives a dismal picture where the infant mortality rate per thousand births continues to be as high as 50 compared to rates for countries like China which have an infant mortality rate of 19 per thousand births as of 2007. For developed countries, USA for example has an infant mortality rate of 7 per thousand births<sup>6</sup> as of 2007.

The decline in mortality rates is likely to be larger when the absolute figures are high. It is thus, only to be expected that the large decline in average Infant Mortality rate (IMR) from 100.67 in 1981 to 74.07 in 1991 will be difficult to match in the next decade unless accompanied by further intensified efforts or technological breakthroughs. The IMR in 2001 was 62.27, a smaller absolute and proportionate decline compared to the earlier decade. However, the achieved reduction in IMR in the period after 2001 appears to be more in absolute and proportionate terms. IMR in 2008 was 49.47. This can perhaps be attributed to faster growth in post 2001 period. The scenario is more depressing for states like Madhya Pradesh, Orissa, Uttar Pradesh, Rajasthan (all four of the BIMARU states) and Assam. They have current IMRs of above 60.

**Table 6: Infant Mortality Rate**

No.	State	1981	1991	1995	1996	1997	1998	1999	2000
1	Andhra Pradesh	86	73	67	65	63	66	66	65
2	Assam	106	81	77	74	76	76	76	75
3	Bihar	118	69	73	71	71	67	63	62
4	Gujarat	116	69	62	61	62	64	63	62
5	Haryana	101	68	69	68	68	70	68	67
6	Karnataka	69	77	62	53	53	58	58	57
7	Kerala	37	16	15	14	12	16	14	14
8	Madhya Pradesh	142	117	99	97	94	98	90	87
9	Maharashtra	79	60	55	48	47	49	48	48
10	Orissa	135	124	103	96	96	98	97	95
11	Punjab	81	53	54	51	51	54	53	52
12	Rajasthan	108	79	86	85	85	83	81	79
13	Tamil Nadu	91	57	54	53	53	53	52	51
14	Uttar Pradesh	150	97	86	85	85	85	84	83
15	West Bengal	91	71	58	55	55	53	52	51
	<b>Mean</b>	100.67	74.07	68.00	65.07	64.73	66.00	64.33	63.20
	<b>SD</b>	29.58	25.84	21.52	21.38	21.54	20.97	20.39	19.81
	<b>CV</b>	0.29	0.35	0.32	0.33	0.33	0.32	0.32	0.31
No.	State	2001	2002	2003	2004	2005	2006	2007	2008
1	Andhra Pradesh	66	62	59	59	57	56	54	52
2	Assam	74	70	67	66	68	67	66	64
3	Bihar	62	61	60	61	61	60	58	56
4	Gujarat	60	60	57	53	54	53	52	50
5	Haryana	66	62	59	61	60	57	55	54
6	Karnataka	58	55	52	49	50	48	47	45
7	Kerala	11	10	11	12	14	15	13	12

<sup>5</sup> Infant Mortality is the probability of dying before the first birthday.

<sup>6</sup> The Infant mortality rates for USA and China have been obtained from UNICEF. For more statistics, refer to [http://www.unicef.org/infobycountry/china\\_statistics.html](http://www.unicef.org/infobycountry/china_statistics.html)

8	Madhya Pradesh	86	85	82	79	76	74	72	70
9	Maharashtra	45	45	42	36	36	35	34	33
10	Orissa	91	87	83	77	75	73	71	69
11	Punjab	52	51	49	45	44	44	43	41
12	Rajasthan	80	78	75	67	68	67	65	63
13	Tamil Nadu	49	44	43	41	37	37	35	31
14	Uttar Pradesh	83	80	76	72	73	71	69	67
15	West Bengal	51	49	46	40	38	38	37	35
	<b>Mean</b>	62.27	59.93	57.40	54.53	54.07	53.00	51.40	49.47
	<b>SD</b>	20.10	19.63	18.61	17.87	17.64	16.87	16.74	16.67
	<b>CV</b>	0.32	0.33	0.32	0.33	0.33	0.32	0.33	0.34

Source: Data for use of Deputy Chairman, Planning Commission, 11th January 2010

## Human Development Index (HDI) as a sum up measure

The construction of the Human development index presents a convenient, ready-made indicator for any development study and comparison.

Table 7 shows that while the states have been continuing to hold their ranks (plus minus one place) in the index from 1991 to 2001, only Rajasthan has improved by 2 places and Assam has lost 4 places. In fact most states continue to keep their ranks since 1981, except Tamil Nadu which had jumped from seventh to third position between 1981 and 1991. They have however gained ground by way of higher estimates for HDI. The top performers continue to be Kerala, Punjab and Tamil Nadu, but the states who have the larger increase in their HDI values are Rajasthan, Uttar Pradesh and Maharashtra. The slowest achievers for 1991 to 2001 were Assam and Andhra Pradesh resulting in losing their earlier rankings as well. Although Bihar, as earlier mentioned, has achieved the second highest GSDP growth rate in the last five years yet, it remains at the bottom of the Human Development Index.

**Table 7: Human Development Index**

	State	1981		1991		2001	
		Value	Rank	Value	Rank	Value	Rank
1	Andhra	0.298	9	0.377	9	0.416	10
2	Assam	0.272	10	0.348	10	0.386	14
3	Bihar	0.237	15	0.308	15	0.367	15
4	Gujarat	0.36	4	0.431	6	0.479	6
5	Haryana	0.36	5	0.443	5	0.509	5
6	Karnataka	0.346	6	0.412	7	0.478	7
7	Kerala	0.5	1	0.591	1	0.638	1
8	Madhya	0.245	14	0.328	13	0.394	12
9	Maharashtra	0.363	3	0.452	4	0.523	4
10	Orissa	0.267	11	0.345	12	0.404	11
11	Punjab	0.411	2	0.475	2	0.537	2
12	Rajasthan	0.256	12	0.347	11	0.424	9
13	Tamil Nadu	0.343	7	0.466	3	0.531	3
14	Uttar Pradesh	0.255	13	0.314	14	0.388	13
15	West Bengal	0.305	8	0.404	8	0.472	8

Source: National Human Development Report, Planning Commission.

## Conclusion

In spite of significant data limitations we observe the following changes in the picture of regional inequalities across Indian states:

- 1) The 1991 economic reforms have strengthened the growth story for India. The higher pace of growth was however accompanied by increased regional inequalities in the first decade after the reforms, 1991-2000 (Ahluwalia, 2002). But as the growth process has gained both momentum and depth, it has reversed the inequality scenario. It appears according to various indicators considered in the paper that inequalities among states are reducing.
- 2) The increase in growth post-reforms and its further enhancement after 2001 has had favourable development outcomes for almost all the 15 states. Yet, considerable gap between desired developmental goals of 0% poverty and 100% literacy and the actual rates in these development indicators continues to exist for almost all the states.
- 3) The intensifying of efforts towards growth and development by states like Rajasthan, Madhya Pradesh and Bihar is noteworthy. We feel that growth in these states will soon result in further reducing the inequality amongst states.

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