

4. HDI and GDI Estimates for India and the States/UTs: Results and Analysis

HDI is a simple average of three dimension indices, each of which measures average achievements in a country with regard to 'A long and healthy life', 'Knowledge' and 'A decent standard of living'. GDI adjusts the average achievements in the same three dimensions that are captured in the HDI to account for the inequalities between men and women.

The indicators used to estimate each of these dimensions are listed below

Indicators for the Dimension 'A Long and Healthy Life'

- i) Infant Mortality Rate and
- ii) Life Expectancy at age 1.

The negative index for infant mortality rate was converted to a positive indicator by subtracting the value of the index from 1.

Indicators for the Dimension 'Knowledge'

- i) 7 + Literacy Rate and
- ii) Mean Years of Education for 15+ age group.

Indicators for the Dimension: 'A Decent Standard of Living'

i) Estimated Earned Income per capita per annum.

Data was collected on each of the above indicators to estimate HDI and GDI for India and 35 States/UTs for 1996 and 2006.³⁰

The aggregate HDI and GDI scores estimated for India were 0.530 and 0.514 respectively in 1996 and 0.605 and 0.590 in 2006 (Table 4.1). Over the decade, the level of human development increased by 0.075 and gender development by 0.076 points. GDI scores were below HDI scores in both years, due to the existence of gender disparities.

Table 4.1: Estimated HDI and GDI for India - 2006 and 1996

Year	Human Development Index	Gender Development Index
2006	0.605	0.590
1996	0.530	0.514

HDI and GDI scores estimated for India and the scores for each of the three dimensions for the two points of time viz., 1996 and 2006, are presented in Tables 4.2 and 4.3.

Table 4.2: Dimension Scores for HDI for India - 2006 and 1996

Year	Health Index	Education Index	Income Index	Human Devel- opment Index	
2006	0.577	0.506	0.730	0.605	
1996	0.490	0.429	0.671	0.530	

³⁰ Data sources for each of the time points and adjustments/assumptions made where gaps existed are discussed in Chapter 6.

Table 4.3: Dimension Scores for GDI for India: 2006 and 1996

Year	Health Index	Education Index	Income Index	Gender Devel- opment Index
2006	0.573	0.494	0.702	0.590
1996	0.490	0.409	0.643	0.514

Each of the three dimension indices that constitute HDI and GDI also reflect an increase over the

decade, thereby implying that progress has been made in each of these areas (Tables 4.2 and 4.3).

HDI Scores and Ranks for States/UTs

Scores achieved by India and the States/UTs on HDI and on each of its three dimensions are presented in Table 4.4. Table 4.5 gives the HDI scores and ranks for India and the States/UTs, with the highest ranking State/UT getting rank 1.

Table 4.4: Dimension-wise HDI Scores for States/UTs - 2006 and 1996

O NI-	Otataa (Hailam Tamitania		HDI	2006		HDI 1996			
S.No.	States/Union Territories	HI 06	Edl 06	YI 06	HDI 06	HI 96	Edl 96	Y1 96	HDI 96
1	Andhra Pradesh	0.588	0.434	0.733	0.585	0.525	0.363	0.668	0.519
2	Arunachal Pradesh	0.624	0.606	0.712	0.647	0.613	0.358	0.675	0.549
3	Assam	0.495	0.607	0.682	0.595	0.444	0.529	0.656	0.543
4	Bihar	0.542	0.403	0.575	0.507	0.480	0.317	0.494	0.430
5	Goa	0.792	0.654	0.845	0.764	0.735	0.629	0.764	0.709
6	Gujarat	0.599	0.545	0.757	0.634	0.544	0.481	0.697	0.574
7	Haryana	0.604	0.533	0.792	0.643	0.531	0.455	0.724	0.570
8	Himachal Pradesh	0.634	0.598	0.771	0.667	0.566	0.516	0.689	0.590
9	Jammu & Kashmir	0.601	0.483	0.686	0.590	0.531	0.434	0.661	0.542
10	Karnataka	0.632	0.504	0.730	0.622	0.594	0.417	0.662	0.558
11	Kerala	0.836	0.697	0.758	0.764	0.835	0.679	0.695	0.736
12	Madhya Pradesh	0.461	0.470	0.656	0.529	0.340	0.371	0.589	0.433
13	Maharashtra	0.699	0.596	0.773	0.689	0.631	0.531	0.725	0.629
14	Manipur	0.762	0.635	0.707	0.702	0.684	0.518	0.627	0.610
15	Meghalaya	0.562	0.612	0.713	0.629	0.570	0.566	0.648	0.595
16	Mizoram	0.695	0.642	0.728	0.688	0.565	0.634	0.656	0.618
17	Nagaland	0.719	0.647	0.734	0.700	0.640	0.628	0.692	0.653
18	Orissa	0.474	0.463	0.674	0.537	0.356	0.403	0.623	0.461
19	Punjab	0.665	0.561	0.777	0.668	0.636	0.486	0.739	0.621
20	Rajasthan	0.527	0.415	0.681	0.541	0.425	0.342	0.647	0.472
21	Sikkim	0.657	0.610	0.728	0.665	0.545	0.542	0.660	0.582
22	Tamil Nadu	0.682	0.566	0.750	0.666	0.590	0.482	0.695	0.589
23	Tripura	0.643	0.611	0.733	0.663	0.566	0.551	0.621	0.579
24	Uttar Pradesh	0.490	0.459	0.636	0.528	0.405	0.363	0.606	0.458
25	West Bengal	0.668	0.533	0.726	0.642	0.578	0.478	0.662	0.573
26	Chhattisgarh	0.523	0.429	0.696	0.549	0.393	0.371	0.589	0.451
27	Jharkhand	0.594	0.447	0.683	0.574	0.491	0.317	0.494	0.434
28	Uttarakhand	0.624	0.607	0.726	0.652	0.492	0.363	0.606	0.487

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S.No.	States/Union Territories	HDI 2006				HDI 1996			
3.NO.	States/Official Territories	HI 06	Edl 06	YI 06	HDI 06	HI 96	Edl 96	Y1 96	HDI 96
29	Andaman & Nicobar Islands	0.701	0.644	0.780	0.708	0.692	0.605	0.736	0.678
30	Chandigarh	0.765	0.684	0.901	0.784	0.739	0.632	0.797	0.723
31	Dadra & Nagar Haveli	0.682	0.619	0.730	0.677	0.560	0.488	0.671	0.573
32	Daman & Diu	0.715	0.655	0.730	0.700	0.544	0.493	0.671	0.569
33	Delhi	0.675	0.707	0.837	0.740	0.639	0.642	0.779	0.687
34	Lakshadweep	0.729	0.630	0.730	0.697	0.755	0.632	0.671	0.686
35	Puducherry	0.725	0.642	0.809	0.725	0.773	0.575	0.679	0.676
	All India	0.577	0.506	0.730	0.605	0.490	0.429	0.671	0.530

Note: HI is the Index of 'A long and healthy life' based on Infant Mortality Rate and Life Expectancy at age 1; EdI is the Index of 'Knowledge' based on 7+ Literacy Rate and Mean Years of Education for 15+ age group; YI is the Index of 'A decent standard of living' based on Earned Income and HDI is the 'Human Development Index'.

Table 4.5: HDI Scores, Score Differences, Ranks and Rank Differences for States/UTs - 2006 and 1996

S.No.	States/UTs	HDI Score 2006	HDI Score 1996	HDI Score 2006 - HDI Score 1996	Rank based on Score differ- ence in Col. 5	Rank HDI 2006	Rank HDI 1996	Rank HDI 1996 - Rank HDI 2006
Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9
1	Andhra Pradesh	0.585	0.519	0.066	20	28	27	-1
2	Arunachal Pradesh	0.647	0.549	0.098	6	20	24	4
3	Assam	0.595	0.543	0.052	27	26	25	-1
4	Bihar	0.507	0.430	0.077	13	35	35	0
5	Goa	0.764	0.709	0.055	25	2	3	1
6	Gujarat	0.634	0.574	0.060	23	23	18	-5
7	Haryana	0.643	0.570	0.073	15	21	21	0
8	Himachal Pradesh	0.667	0.590	0.077	11	15	14	-1
9	Jammu & Kashmir	0.590	0.542	0.048	29	27	26	-1
10	Karnataka	0.622	0.558	0.064	21	25	23	-2
11	Kerala	0.764	0.736	0.028	34	2	1	-1
12	Madhya Pradesh	0.529	0.433	0.096	7	33	34	1
13	Maharashtra	0.689	0.629	0.060	24	11	9	-2
14	Manipur	0.702	0.610	0.092	8	7	12	5
15	Meghalaya	0.629	0.595	0.034	32	24	13	-11
16	Mizoram	0.688	0.618	0.070	17	12	11	-1
17	Nagaland	0.700	0.653	0.047	31	8	8	0
18	Orissa	0.537	0.461	0.076	14	32	30	-2
19	Punjab	0.668	0.621	0.047	30	14	10	-4
20	Rajasthan	0.541	0.472	0.069	18	31	29	-2
21	Sikkim	0.665	0.582	0.083	10	17	16	-1

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S.No.	States/UTs	HDI Score 2006	HDI Score 1996	HDI Score 2006 - HDI Score 1996	Rank based on Score differ- ence in Col. 5	Rank HDI 2006	Rank HDI 1996	Rank HDI 1996 - Rank HDI 2006
Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9
22	Tamil Nadu	0.666	0.589	0.077	12	16	15	-1
23	Tripura	0.663	0.579	0.084	9	18	17	-1
24	Uttar Pradesh	0.528	0.458	0.070	16	34	31	-3
25	West Bengal	0.642	0.573	0.069	19	22	19	-3
26	Chhattisgarh	0.549	0.451	0.098	5	30	32	2
27	Jharkhand	0.574	0.434	0.140	2	29	33	4
28	Uttarakhand	0.652	0.487	0.165	1	19	28	9
29	Andaman & Nicobar Islands	0.708	0.678	0.030	33	6	6	0
30	Chandigarh	0.784	0.723	0.061	22	1	2	1
31	Dadra & Nagar Haveli	0.677	0.573	0.104	4	13	20	7
32	Daman & Diu	0.700	0.569	0.131	3	9	22	13
33	NCT Delhi	0.740	0.687	0.053	26	4	4	0
34	Lakshadweep	0.697	0.686	0.011	35	10	5	-5
35	Puducherry	0.725	0.676	0.049	28	5	7	2
	All India	0.605	0.530	0.075			Otata	

Note: Both Goa and Kerala are ranked 2nd on HDI in 2006 and hence the 3rd rank has not been given to any State.

Table 4.6: Categorising States/UTs on the Basis of HDI Scores, 2006 and 1996

Category/Year	2006	1996
Category I 0.701 and above	Chandigarh, Goa, Kerala, NCT Delhi, Puducherry, Andaman & Nicobar Islands, Manipur	Kerala, Chandigarh, Goa
Category II 0.601 to 0.700	Nagaland, Daman & Diu, Lakshadweep, Maharashtra, Mizoram, Dadra & Nagar Haveli, Punjab, Himachal Pradesh, Tamil Nadu, Sikkim, Tripura, Uttarakhand, Arunachal Pradesh, Haryana, West Bengal, Gujarat, Meghalaya, Karnataka	NCT Delhi, Lakshadweep, Andaman & Nicobar Islands, Puducherry, Nagaland, Maharashtra, Punjab, Mizoram, Manipur
Category III 0.501 to 0.600	Assam, Jammu & Kashmir, Andhra Pradesh, Jharkhand, Chhattisgarh, Rajasthan, Orissa, Madhya Pradesh, Uttar Pradesh, Bihar	Meghalaya, Himachal Pradesh, Tamil Nadu, Sikkim, Tripura, Gujarat, West Bengal, Dadra & Nagar Haveli, Haryana, Daman & Diu, Karnataka, Arunachal Pradesh, Assam, Jammu & Kashmir, Andhra Pradesh
Category IV below 0.500		Uttarakhand, Rajasthan, Orissa, Uttar Pradesh, Chhattisgarh, Jharkhand, Madhya Pradesh, Bihar

HDI scores for 2006 and 1996 are presented in the thematic maps in Figures 4.1 and 4.2 respectively.



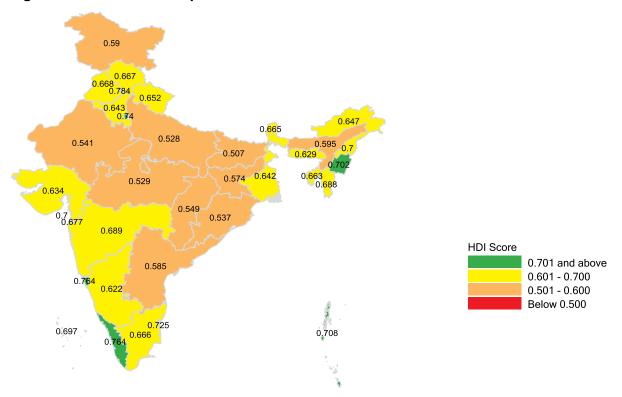
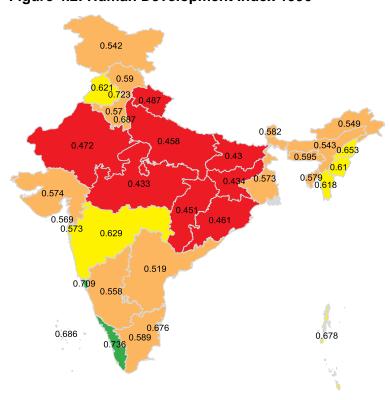


Figure 4.2: Human Development Index 1996



Four categories were demarcated on the basis of HDI Score (See Table 4.6). States/UTs with HDI values from 0.701 to 0.784 were the best performers and were placed in Category I (shaded green in Figures 4.1 and 4.2); States/UTs with HDI values between 0.601 to 0.700 were the second best performers and placed in Category II (shaded yellow); States/UTs with HDI values from 0.501 to 0.600 comprised the third level performers and were placed in Category III (shaded orange); and States/UTs with HDI values below 0.500 comprised the worst performers and were placed in Category IV (shaded red).

Some of the salient points emerging from the analysis of Tables 4.4, 4.5 and 4.6 and Figures 4.1 and 4.2 are listed below:

- The HDI score for India was 0.530 in 1996 and increased to 0.605 in 2006.
- There was significant overall improvement in performance on HDI over the decade, both in the All-India score and in the scores achieved by the States/UTs.
- 3 States/UTs achieved the highest HDI Category I in 1996 and 7 States/UTs in 2006 (shaded green).
- 9 States/UTs achieved the second highest set of HDI scores or were in HDI Category II in 1996 while 18 States/UTs achieved Category II in 2006 (shaded yellow).
- 15 States/UTs had the second lowest set of HDI scores or were in HDI Category III in 1996 and only 10 States/UTs remained in this Category in 2006 (shaded orange).
- 8 States/UTs had the lowest HDI scores or HDI Category IV in 1996 but there was no State in this Category in 2006 (shaded red).

- The 3 States/UTs that achieved Category I in both 1996 and 2006 were Kerala, Chandigarh and Goa. NCT Delhi, Puducherry, Andaman & Nicobar Islands and Manipur moved from Category II in 1996 to Category I in 2006.
- 8 States had low HDI scores or were in Category IV in 1996. These were Bihar, Madhya Pradesh, Jharkhand, Chhattisgarh, Uttar Pradesh, Orissa, Rajasthan and Uttarakhand (shaded red in Figure 4.2). None of these States/UTs remained in the low HDI category in 2006 (red in Figures 4.1 and 4.2).
- All the 8 HDI Category IV States in 1996 moved to higher HDI categories in 2006. While 7 of them moved to Category III or one category higher (from red in Figure 4.2 to orange in Figure 4.1), 1 State, Uttarakhand, achieved the highest gain in HDI score in the country (0.165), improved 9 ranks over the decade; and moved from Category IV to Category II (from red in Figure 4.2 to yellow in Figure 4.1).
- However, even Bihar, with the lowest HDI score in 1996 increased its score by 0.077 from 0.430 to 0.507. Further, the State was the 13th largest gainer on HDI score over the decade.
- Similarly, although Madhya Pradesh was ranked 34th among all the States/UTs on HDI in 1996 with a score of 0.433, its HDI score increased by 0.096 (higher than the All-India average increase of 0.075) and the State was the 7th largest gainer on HDI over the decade.
- Of the 10 Category III States in 2006, 7 were States that had moved upwards from Category IV. The other 3 were Assam, Jammu and Kashmir and Andhra Pradesh which remained in Cat-

egory III but improved their HDI scores over the decade.

- The number of States/UTs in Category II doubled from 9 to 18 over the decade. 5 Category II States/UTs remained in Category II. 4 States/ UTs that were in this Category in 1996, moved to Category I in 2006. These were NCT Delhi, Puducherry, Andaman and Nicobar Islands and Manipur. Uttarakhand was a major achiever and moved into Category II from Category IV. Except for Andhra Pradesh, Assam and Jammu and Kashmir, all the other Category III States/UTs improved their HDI scores and moved to Category II.
- Kerala was ranked first in 1996 and achieved an HDI score of 0.736. It tied with Goa for the second position in 2006 with a score of 0.764.
- Chandigarh was placed second in 1996 with a score of 0.723 but achieved the highest HDI score of 0.784 in 2006.
- Goa was ranked third in 1996 with a score of 0.709. It tied with Kerala for the second rank with a score of 0.764 in 2006.
- NCT Delhi was placed fourth on HDI in both 1996 and 2006 but improved its score from 0.687 to 0.740.
- The largest gains in HDI scores over the decade were by Uttarakhand (0.165), Jharkhand (0.140), Daman & Diu (0.131), Dadra & Nagar Haveli (0.104) and Chhattisgarh and Arunachal Pradesh (both by 0.098).
- Other States/UTs which increased their HDI scores by more than the 0.075 points that were gained on an average by India as a whole, included Madhya Pradesh, Manipur, Tripura, Sikkim, Himachal Pradesh, Tamil Nadu, Bihar and Orissa.

- The largest gain in rank was by Daman & Diu (13 ranks) followed by Uttarakhand (9 ranks). Dadra & Nagar Haveli gained 7 ranks, Manipur 5 ranks, Jharkhand and Arunachal Pradesh gained 4 ranks each, Puducherry and Chhattisgarh gained 2 ranks each and Chandigarh, Madhya Pradesh and Goa gained 1 rank each.
- Bihar, Haryana, Nagaland, Andaman & Nicobar Islands and NCT Delhi retained their ranks on HDI over the decade.
- Andhra Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Mizoram, Sikkim, Tamil Nadu and Tripura lost 1 rank each. Karnataka, Maharashtra, Orissa and Rajasthan, lost 2 ranks each over the decade.
- Uttar Pradesh and West Bengal lost 3 ranks each while Punjab lost 4 ranks.
- The largest losses in rank were in the case of Meghalaya (11 ranks) and Gujarat and Lakshadweep (5 ranks each).

The States/UTs that attained the best and worst scores on each of the three Dimensions constituting HDI, are given below.

Dimension I: 'A Long and Healthy Life'

- The States/UTs with the best performance on 'A Long and Healthy Life' Index in 2006, were Kerala, Goa, Chandigarh, Manipur and Lakshadweep.
- Kerala was the only State/UT that scored above 0.800 on this index in 2006.
- Meghalaya, Bihar, Rajasthan, Chhattisgarh, Assam, Uttar Pradesh, Orissa and Madhya Pradesh had scores below the All-India average on this index in 2006.

- The estimates for this index were lowest for Orissa and Madhya Pradesh.
- The value of this index declined over the decade for Lakshadweep and Puducherry due to worsening of the infant mortality rate in 2006.

Dimension 2: 'Knowledge'

- The highest scores on the 'Knowledge' Index in 2006 were achieved by NCT Delhi, Kerala, Chandigarh, Daman & Diu and Goa.
- Only NCT Delhi had a score above 0.700 for this Dimension with an Index value of 0.707.
- Karnataka, Orissa, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Uttar Pradesh, Jammu & Kashmir, Rajasthan, Bihar and Jharkhand were below the All-India average of 0.506 on the Knowledge Index in 2006.
- It is noteworthy that Arunachal Pradesh and Uttarakhand improved their scores on this Dimension by as much as 0.248 and 0.245 respectively.
- The score for the Knowledge Dimension decreased by 0.002 for Lakshadweep.

Dimension 3: 'A Decent Standard of Living'

 The States/UTs with the highest scores on the 'A Decent Standard of Living Index' in 2006

- were Chandigarh, Goa, NCT Delhi, Puducherry and Haryana.
- While the score for this Dimension Index was more than 0.800 for Goa, NCT Delhi and Puducherry, it exceeded 0.900 for Chandigarh.
- Arunachal Pradesh, West Bengal, Jammu & Kashmir, Sikkim, Assam, Mizoram, Meghalaya, Rajasthan, Manipur, Orissa, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Bihar and Jharkhand were below the All-India average of 0.730 on the 'A Decent Standard of Living' Index in 2006.
- The largest improvement in the value of the 'A Decent Standard of Living' Index was achieved by Jharkhand, Puducherry, Uttarakhand, Tripura, Chhattisgarh and Chandigarh, which achieved an increase between 0.104 and 0.188 in the value of this index.

GDI Scores and Ranks for States/UTs

Scores achieved by India and the States/UTs on GDI and on each of its three dimensions are presented in Table 4.7. Table 4.8 gives the GDI scores and ranks for India and the States/UTs, with the highest ranking State/UT getting rank 1.

Table 4.7: Dimension-wise GDI scores for States/UTs, 2006 and 1996

			GDI	2006		GDI 1996			
S.No.	States/UTs	HI 06	Edl 06	YI 06	GDI 06	HI 96	Edl 96	Y1 96	GDI 96
1	Andhra Pradesh	0.584	0.422	0.716	0.574	0.525	0.346	0.656	0.509
2	Arunachal Pradesh	0.621	0.603	0.702	0.642	0.615	0.351	0.667	0.544
3	Assam	0.497	0.608	0.650	0.585	0.440	0.523	0.606	0.523
4	Bihar	0.536	0.377	0.524	0.479	0.474	0.274	0.449	0.399
5	Goa	0.792	0.652	0.797	0.747	0.733	0.627	0.711	0.691
6	Gujarat	0.600	0.529	0.742	0.624	0.540	0.454	0.682	0.559
7	Haryana	0.601	0.521	0.773	0.632	0.530	0.434	0.700	0.555
8	Himachal Pradesh	0.631	0.594	0.767	0.664	0.561	0.506	0.689	0.585
9	Jammu & Kashmir	0.600	0.466	0.639	0.568	0.527	0.411	0.638	0.525
10	Karnataka	0.632	0.494	0.707	0.611	0.591	0.403	0.642	0.545
11	Kerala	0.834	0.697	0.705	0.745	0.836	0.678	0.649	0.721
12	Madhya Pradesh	0.457	0.451	0.641	0.516	0.340	0.335	0.576	0.417
13	Maharashtra	0.697	0.587	0.748	0.677	0.626	0.516	0.704	0.616
14	Manipur	0.759	0.631	0.705	0.699	0.684	0.505	0.611	0.600
15	Meghalaya	0.564	0.609	0.700	0.624	0.570	0.565	0.640	0.592
16	Mizoram	0.698	0.640	0.723	0.687	0.566	0.630	0.641	0.612
17	Nagaland	0.719	0.644	0.727	0.697	0.585	0.626	0.666	0.626
18	Orissa	0.471	0.450	0.651	0.524	0.355	0.380	0.600	0.445
19	Punjab	0.680	0.558	0.749	0.663	0.634	0.479	0.701	0.605
20	Rajasthan	0.526	0.381	0.672	0.526	0.423	0.284	0.637	0.448
21	Sikkim	0.656	0.608	0.713	0.659	0.546	0.537	0.616	0.566
22	Tamil Nadu	0.684	0.559	0.722	0.655	0.589	0.469	0.671	0.576
23	Tripura	0.641	0.608	0.628	0.626	0.567	0.542	0.529	0.546
24	Uttar Pradesh	0.487	0.437	0.604	0.509	0.401	0.321	0.563	0.429
25	West Bengal	0.666	0.526	0.675	0.622	0.578	0.468	0.614	0.553
26	Chhattisgarh	0.524	0.413	0.688	0.542	0.392	0.335	0.576	0.434
27	Jharkhand	0.590	0.418	0.665	0.558	0.490	0.274	0.449	0.404
28	Uttarakhand	0.622	0.600	0.718	0.647	0.487	0.321	0.563	0.457
29	Andaman & Nicobar Islands	0.698	0.642	0.737	0.692	0.689	0.594	0.723	0.669
30	Chandigarh	0.774	0.684	0.832	0.763	0.741	0.633	0.744	0.706
31	Dadra & Nagar Haveli	0.679	0.619	0.722	0.673	0.562	0.480	0.667	0.569
32	Daman & Diu	0.716	0.660	0.654	0.677	0.546	0.458	0.624	0.543
33	NCT Delhi	0.674	0.703	0.727	0.701	0.640	0.641	0.707	0.663
34	Lakshadweep	0.728	0.627	0.551	0.635	0.757	0.636	0.589	0.660
35	Puducherry	0.721	0.638	0.759	0.706	0.774	0.564	0.645	0.661
	All India	0.573	0.494	0.702	0.590	0.490	0.409	0.643	0.514

Note: HI is the Index of 'A long and healthy life' based on Infant Mortality Rate and Life Expectancy at age 1; EdI is the Index of 'Knowledge' based on 7+ Literacy Rate and Mean Years of Education; YI is the Index of 'A decent standard of living' based on Earned Income and GDI is the 'Gender Development Index'.

Table 4.8: GDI Scores, Score Differences, Ranks and Rank Differences for States/UTs, 2006 and 1996

			·					
S.No.	States/UTs	GDI Score	GDI Score	GDI Score	Rank based	Rank GDI 2006	Rank GDI 1996	Rank GDI 1996
		2006	1996	2006	on Score	05.200	05. 1000	- Rank
				- GDI	differ-			GDI 2006
				Score	ence in			
		• • •		1996	Col. 5		• • •	• • •
Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8	Col 9
1	Andhra Pradesh	0.574	0.509	0.065	22	27	27	0
2	Arunachal Pradesh	0.642	0.544	0.098	8	18	23	5
3	Assam	0.585	0.523	0.062	24	26	26	0
4	Bihar	0.479	0.399	0.080	10	35	35	0
5	Goa	0.747	0.691	0.056	28	2	3	1
6	Gujarat	0.624	0.559	0.065	23	22	18	-4
7	Haryana	0.632	0.555	0.077	17	20	19	-1
8	Himachal Pradesh	0.664	0.585	0.079	13	13	14	1
9	Jammu & Kashmir	0.568	0.525	0.043	30	28	25	-3
10	Karnataka	0.611	0.545	0.066	21	25	22	-3
11	Kerala	0.745	0.721	0.024	33	3	1	-2
12	Madhya Pradesh	0.516	0.417	0.099	6	33	33	0
13	Maharashtra	0.677	0.616	0.061	25	10	9	-1
14	Manipur	0.699	0.600	0.099	7	6	12	6
15	Meghalaya	0.624	0.592	0.032	32	23	13	-10
16	Mizoram	0.687	0.612	0.075	18	9	10	1
17	Nagaland	0.697	0.626	0.071	19	7	8	1
18	Orissa	0.524	0.445	0.079	15	32	30	-2
19	Punjab	0.663	0.605	0.058	26	14	11	-3
20	Rajasthan	0.526	0.448	0.078	16	31	29	-2
21	Sikkim	0.659	0.566	0.093	9	15	17	2
22	Tamil Nadu	0.655	0.576	0.079	14	16	15	-1
23	Tripura	0.626	0.546	0.080	11	21	21	0
24	Uttar Pradesh	0.509	0.429	0.080	12	34	32	-2
25	West Bengal	0.622	0.553	0.069	20	24	20	-4
26	Chhattisgarh	0.542	0.434	0.108	4	30	31	1
27	Jharkhand	0.558	0.404	0.154	2	29	34	5
28	Uttarakhand	0.647	0.457	0.190	1	17	28	11
29	Andaman & Nicobar Islands	0.692	0.669	0.023	34	8	4	-4
30	Chandigarh	0.763	0.706	0.057	27	1	2	1
31	Dadra & Nagar Haveli	0.673	0.569	0.104	5	12	16	4
32	Daman & Diu	0.677	0.543	0.134	3	11	24	13
33	NCT Delhi	0.701	0.663	0.038	31	5	5	0
34	Lakshadweep	0.635	0.660	-0.025	35	19	7	-12
35	Puducherry	0.706	0.661	0.045	29	4	6	2
	All India	0.590	0.514	0.076				

GDI scores for 2006 and 1996 are presented in the thematic maps in Figures 4.3 and 4.4 respectively.



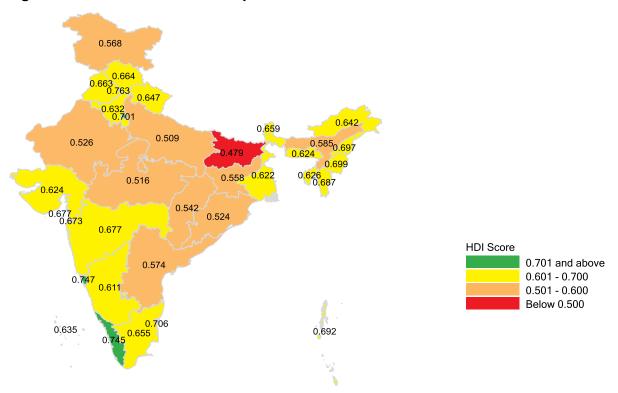
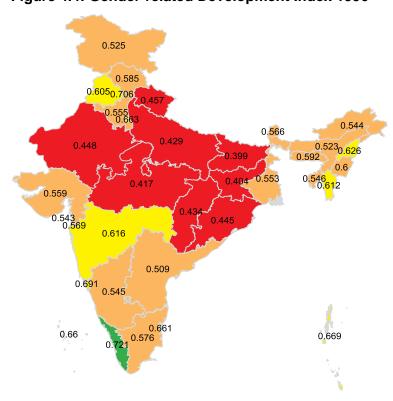


Figure 4.4: Gender-related Development Index 1996



Category/Year	2006	1996
Category I 0.701 and above	Chandigarh, Goa, Kerala, Puducherry, NCT Delhi	Kerala, Chandigarh
Category II 0.601 to 0.700	Manipur, Nagaland, Andaman & Nicobar Islands, Mizoram, Maharashtra, Daman & Diu, Dadra & Nagar Haveli, Himachal Pradesh, Punjab, Sikkim, Tamil Nadu, Uttarakhand, Arunachal Pradesh, Lakshadweep, Haryana, Tripura, Gujarat, Meghalaya, West Bengal, Karnataka	Goa, Andaman & Nicobar Islands, NCT Delhi, Puducherry, Lakshadweep, Nagaland, Maharashtra, Mizoram, Punjab
Category III 0.501 to 0.600	Assam, Andhra Pradesh, Jammu & Kashmir, Jharkhand, Chhattisgarh, Rajasthan, Orissa, Madhya Pradesh, Uttar Pradesh	Manipur, Meghalaya, Himachal Pradesh, Tamil Nadu, Dadra & Nagar Haveli, Sikkim, Gujarat, Haryana, West Bengal, Tripura, Karnataka, Arunachal Pradesh, Daman & Diu, Jammu & Kashmir, Assam, Andhra Pradesh
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Table 4.9: Categorising States/UTs on the basis of GDI Scores, 2006 and 1996

As in the case of HDI, States/UTs were divided into four categories (see Table 4.9), with Category I comprising the best performers (shaded green in Figures 4.3 and 4.4), Category II comprising the second best performers (shaded yellow), Category III comprising the third level performers (shaded orange) and Category IV comprising the worst performers (shaded red). States/UTs in Category I achieved GDI value between 0.701 to 0.784; States/UTs in Category II achieved GDI value between 0.601 to 0.700; States/UTs in Category III achieved GDI value between 0.501 to 0.600; and States/UTs in Category IV achieved GDI value below 0.500.

below 0.500

Some of the salient points emerging from analysis of Tables 4.7, 4.8 and 4.9 and Figures 4.3 and 4.4 are listed below:

- The GDI score for India was 0.514 in 1996 and increased to 0.590 in 2006.
- There was significant overall improvement in performance on GDI over the decade, both in the All-India score and in the scores achieved by 34 out of 35 States/UTs.

 2 States/UTs achieved the highest GDI Category I in 1996 and 5 States/UTs in 2006 (shaded green).

Chhattisgarh, Uttar Pradesh, Madhya

Pradesh, Jharkhand, Bihar

- 9 States/UTs achieved the second highest set of GDI scores or were in GDI Category II in 1996 while 20 States/UTs achieved Category II in 2006 (shaded yellow).
- 16 States/UTs had the second lowest set of GDI scores or were in GDI Category III in 1996 but only 9 States/UTs remained in this Category in 2006 (shaded orange).
- 8 States/UTs had the lowest GDI scores or were in GDI Category IV in 1996 but only 1 State remained in this category in 2006 (shaded red).
- The 2 States/UTs that achieved Category I on GDI in both 1996 and 2006 were Kerala and Chandigarh. The 3 other States/UTs that achieved Category I on GDI in 2006 from Category II in 1996, were NCT Delhi, Puducherry and Goa.
- 8 States had low GDI scores or were in Category IV in 1996. These were Bihar, Jharkhand,

Madhya Pradesh, Uttar Pradesh, Chhattisgarh, Orissa, Rajasthan and Uttarakhand (shaded red in Figure 4.3). Of these only 1 State, Bihar, remained in the low GDI category in 2006 (red in Figures 4.3 and 4.4). The other 7 moved to higher GDI categories in 2006. While 6 of them moved to Category III or one category higher (from red in Figure 4.4 to orange in Figure 4.3), 1 State, Uttarakhand, achieved the highest gain in GDI score in the country (0.190), improved 11 ranks over the decade and moved from Category IV to Category II in 2006 (from red in Figure 4.4 to yellow in Figure 4.3).

- However, even Bihar, with the lowest GDI score in 1996 increased its score by 0.080 from 0.399 to 0.479. Further, the State was the 10th largest gainer on GDI over the decade.
- Similarly, although Madhya Pradesh was ranked 33rd among all the States/UTs on GDI in 1996 with a score of 0.417, its GDI score increased to 0.516 in 2006, or by 0.099 (higher than the All-India average increase of 0.076) and the State was the 6th largest gainer on GDI over the decade.
- Of the 9 Category III States in 2006, 6 were States that had moved upwards from Category IV. The other 3 were Assam, Andhra Pradesh and Jammu & Kashmir, which remained in Category III but improved their GDI scores over the decade.
- The number of States/UTs in Category II increased from 9 to 20 over the decade. 6 States/UTs that were in Category II in 1996 remained in the same category in 2006. These were Punjab, Lakshadweep, Andaman & Nicobar Islands, Nagaland, Maharashtra and Mizoram. As mentioned above, 3 States/UTs, NCT Delhi, Puducherry and Goa were in Category II in 1996 and moved to Category I in 2006. Except for Assam, Andhra

Pradesh and Jammu & Kashmir, all the other States/UTs that were in Category III in 1996, improved their GDI scores and moved to Category II in 2006.

- Kerala was ranked first in 1996 and achieved a GDI score of 0.721. It moved to third place in 2006 with a score of 0.745.
- Chandigarh was placed second in 1996 with a score of 0.706 but achieved the highest GDI score at 0.763 in 2006.
- Goa was ranked third in 1996 with a GDI score of 0.691. It improved to second rank in 2006 with a score of 0.747.
- Andaman & Nicobar Islands was placed fourth in 1996 with a GDI score of 0.669. It ranked eighth in 2006.
- NCT Delhi was placed fifth on GDI in both 1996 and 2006 but improved its score from 0.663 to 0.701.
- The newly formed States of Uttarakhand, Jharkhand and Chhattisgarh achieved the largest gains on GDI and showed a marked improvement in performance on gender development over the decade. Between 1996 and 2006, these 3 States improved their GDI rank by 11, 5 and 1 places and GDI scores by 0.190, 0.154 and 0.108, respectively.
- Other States/UTs which increased their GDI scores by more than the All-India average gain of 0.076 points, included Daman & Diu, Dadra & Nagar Haveli, Madhya Pradesh, Manipur, Arunachal Pradesh, Sikkim, Bihar, Tripura, Uttar Pradesh, Himachal Pradesh Tamil Nadu, Orissa, Rajasthan and Haryana.
- Major gainers in rank on GDI were Daman and Diu by 13 ranks; Uttarakhand by 11; Manipur by 6; Arunachal Pradesh and Jharkhand by 5.

- Other gainers in rank included Dadra & Nagar Haveli by 4; Sikkim and Puducherry by 2; and Goa, Himachal Pradesh, Mizoram, Nagaland, Chhattisgarh and Chandigarh by 1 rank each.
- Andhra Pradesh, Assam, Bihar, Madhya Pradesh, NCT Delhi and Tripura retained their ranks on GDI over the decade.
- The largest losers in rank on GDI were Lakshadweep with a loss of 12 ranks and Meghalaya with 10 ranks. Additionally, West Bengal, Gujarat and Andaman and Nicobar Islands lost 4 ranks each; Punjab, Karnataka and Jammu and Kashmir lost 3 ranks each; Rajasthan, Orissa, Kerala, and Uttar Pradesh lost 2 ranks each; while Haryana, Maharashtra and Tamil Nadulost 1 rank each.
- The GDI score declined over the decade in one State/UT, Lakshadweep, by 0.025 points due to weakening in performance in several indicators, as seen below.

The States/UTs that attained the best and worst scores on each of the three Dimensions constituting GDI, are given below.

Dimension I: 'A Long and Healthy Life'

 As in the case of HDI, the States/UTs with the best performance on Dimension 1, 'A Long and Healthy Life' in 2006, were Kerala, Goa, Chandigarh, Manipur and Lakshadweep.

- Kerala was the only State/UT that scored value above 0.800 on this Index in 2006.
- Meghalaya, Bihar, Rajasthan, Chhattisgarh, Assam, Uttar Pradesh, Orissa and Madhya Pradesh had scores below the All-India average on this index in 2006.
- Although the value of this index was the highest for Kerala at 0.834 and high at 0.728 and 0.721 for Lakshadweep and Puducherry, it declined by 0.002, 0.029 and 0.053 over the decade for these States/UT and by 0.006 for Meghalaya. The decline in the value of the index was due to worsening of the infant mortality rate over the decade. (See Table 4.10).

Dimension 2: 'Knowledge'

- The highest scores on the 'Knowledge' Index in 2006 were achieved by NCT Delhi, Kerala, Chandigarh, Daman & Diu and Goa.
- Only NCT Delhi had a score above 0.700 for this Dimension with an Index value of 0.703.
- Orissa, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Uttar Pradesh, Jammu and Kashmir, Rajasthan, Bihar and Jharkhand were below the All-India average of 0.494 on the Knowledge Index in 2006.
- It is noteworthy that Uttarakhand, Arunachal Pradesh and Daman & Diu improved their scores on this Dimension by as much as 0.279, 0.252 and 0.202 respectively.

Table 4.10: Infant Mortality Rate in Selected States

	IMR 2006		IMR 1996			
	Males	Females	Total	Males	Females	Total
Kerala	14	16	15	13	14	14
Meghalaya	53	52	53	44.7	50.5	47.7
Lakshadweep	29	21	25	25.2	5.9	16.3
Puducherry	20	36	28	10.9	18.1	14.6
All India	56	59	57	71	73	72

Source: Statistical Tables p. 132 - 133

 The value of the Knowledge Index decreased by 0.009 in the case of Lakshadweep.

Dimension 3: 'A Decent Standard of Living'

- The five States/UTs with the highest scores on the 'A Decent Standard of Living Index' in 2006 were Chandigarh, Goa, Haryana, Himachal Pradesh and Puducherry.
- The score for this Dimension Index was more than 0.800 only in the case of Chandigarh.
- West Bengal, Jammu and Kashmir, Assam, Meghalaya, Rajasthan, Orissa, Uttar Pradesh, Madhya Pradesh, Tripura, Daman and Diu, Lakshadweep, Chhattisgarh, Bihar and Jharkhand were below the All-India average of 0.702 on the 'A Decent Standard of Living' Index in 2006.
- The largest improvement in the value of the 'A Decent Standard of Living' Index was achieved by Jharkhand, Puducherry, Uttarakhand and Chhattisgarh, which achieved an increase between 0.112 and 0.215 in the value of this index.
- The value of the 'A Decent Standard of Living' Index decreased by 0.038 in the case of Lakshadweep.

Gender Gaps in Development: Score and Rank Differences between HDI and GDI in 2006 and 1996 in States/UTs

Estimates of differences between HDI and GDI scores and ranks for the 35 States/UTs for 1996 and 2006 are presented in Table 4.11. Columns 3 and 4 present disparity between HDI and GDI scores attained by the 35 States/UTs in 2006 and 1996. The GDI score is less than the HDI score if gender disparities exist and equal to it if there are no gender dis-

parities. Change in the level of gender disparity in development between 1996 and 2006 is presented in column 5. Negative values show that gender disparity has increased over the decade while positive values show that it has decreased. Ranks based on the HDI-GDI gaps or differentials in 2006 and 1996 are presented in columns 6 and 7 respectively. The State/UT with the least gap between HDI and GDI is assigned the first rank.

Higher values of the differential between HDI and GDI in Table 4.11 columns 3 and 4 imply lack of gender balance in human development. It is observed that:

- There is a slight reduction in the differential between HDI and GDI for India which is 0.015 in 2006 from 0.016 in 1996.
- While gender imbalances exist in all States and UTs, in 2006 the imbalances were higher than the national average of 0.015 in 14 States and UTs. The differentials were largest in Lakshadweep (0.062), NCT Delhi (0.039) and Tripura (0.037), followed by Bihar (0.028), Daman & Diu (0.024), Jammu & Kashmir (0.021), Chandigarh (0.020), West Bengal (0.020), Uttar Pradesh and Puducherry (0.019), Kerala (0.018), Goa and Jharkhand (0.017) and Andaman & Nicobar Islands (0.016).
- Gender imbalance in Rajasthan was equal to the All-India level at 0.015.
- In 2006, gender imbalances were lower than the national average of 0.015 in as many as 20 States/UTs.
- In 2006, gender imbalances were lowest in Mizoram (0.002), Nagaland and Manipur (0.003), Himachal Pradesh and Dadra & Nagar Haveli (0.004) and Meghalaya, Arunachal Pradesh, Punjab and Uttarakhand (0.005).

Table 4.11: HDI and GDI Score Differences and Rank Differences for States/UTs, 2006 and 1996

		States/UT	•	<u></u>		
S.No.	States/UTs	HDI - GDI Score 2006	HDI - GDI Score 1996	Change in HDI-GDI Gap in Scores (1996 - 2006)	Rank on HDI-GDI score 2006	Rank on HDI-GDI score 1996
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Andhra Pradesh	0.011	0.010	-0.001	14	8
2	Arunachal Pradesh	0.005	0.004	-0.001	7	3
3	Assam	0.010	0.020	0.010	12	25
4	Bihar	0.028	0.031	0.004	32	34
5	Goa	0.017	0.019	0.002	23	23
6	Gujarat	0.010	0.015	0.005	13	15
7	Haryana	0.011	0.015	0.004	15	13
8	Himachal Pradesh	0.004	0.005	0.001	4	4
9	Jammu & Kashmir	0.021	0.017	-0.005	30	21
10	Karnataka	0.011	0.012	0.001	16	9
11	Kerala	0.018	0.015	-0.003	25	14
12	Madhya Pradesh	0.013	0.016	0.003	19	19
13	Maharashtra	0.012	0.013	0.001	18	11
14	Manipur	0.003	0.010	0.007	3	7
15	Meghalaya	0.005	0.003	-0.002	6	1
16	Mizoram	0.002	0.006	0.005	1	5
17	Nagaland	0.003	0.028	0.025	2	30
18	Orissa	0.013	0.015	0.002	20	16
19	Punjab	0.005	0.016	0.011	8	17
20	Rajasthan	0.015	0.024	0.009	21	26
21	Sikkim	0.006	0.016	0.010	10	18
22	Tamil Nadu	0.011	0.013	0.001	17	10
23	Tripura	0.037	0.033	-0.004	33	35
24	Uttar Pradesh	0.019	0.030	0.010	27	31
25	West Bengal	0.020	0.020	0.000	28	24
26	Chhattisgarh	0.008	0.017	0.009	11	22
27	Jharkhand	0.017	0.030	0.013	24	32
28	Uttarakhand	0.005	0.030	0.024	9	33
29	Andaman & Nicobar Islands	0.016	0.009	-0.007	22	6
30	Chandigarh	0.020	0.017	-0.004	29	20
31	Dadra & Nagar Haveli	0.004	0.003	0.000	5	2
32	Daman & Diu	0.024	0.026	0.003	31	29
33	NCT Delhi	0.039	0.024	-0.015	34	27
34	Lakshadweep	0.062	0.026	-0.036	35	28
35	Puducherry	0.019	0.015	-0.004	26	12
	All India	0.015	0.016	0.001		

• Among the other States/UTs with differentials below the national average, the gap was relatively larger in Orissa and Madhya Pradesh (0.013), Maharashtra, (0.012), Tamil Nadu, Karnataka and Haryana and Andhra Pradesh (0.011); Gujarat and Assam (0.010), Chhattisgarh, (0.008), and Sikkim (0.006).

Analysing the extent to which States/UTs were able to close the existing gap between HDI and GDI over the decade (Table 4.11 column 5) shows that:

- The largest reduction in the gap between HDI and GDI during the period from 1996 to 2006 was in the case of Nagaland, Uttarakhand and Jharkhand, which achieved a reduction of 0.025, 0.024 points and 0.013 points respectively.
- Several other States also progressed towards closing the gap between HDI and GDI. These include Punjab, Sikkim, Uttar Pradesh, Assam, Rajasthan and Chhattisgarh which reduced the gap between HDI and GDI over the decade by 0.011 to 0.009 points; Manipur by 0.007 points; Gujarat and Mizoram by 0.005 points; and Haryana, Bihar, Madhya Pradesh, Daman & Diu, Goa, Orissa, Tamil Nadu, Karnataka, Maharashtra and Himachal Pradesh by 0.001 to 0.004 points.
- There was neither progress nor worsening of differentials between HDI and GDI in the case of West Bengal, and Dadra & Nagar Haveli.
- There were small increases (0.001 to 0.004) in differentials between HDI and GDI in Andhra Pradesh, Arunachal Pradesh, Meghalaya, Kerala, Tripura, Puducherry and Chandigarh and larger increases (0.005 to 0.007) for Jammu & Kashmir and Andaman & Nicobar Islands. However, the differentials increased sharply for NCT Delhi (0.015) and Lakshadweep (0.036).

It is important to stress that the value of HDI and GDI is sensitive to choice of indicators and goals posts. Despite the severe data gaps pertaining to Life Expectancy whether at Birth (LEB) or at age 1, this indicator is widely used both nationally and internationally. Data for Life Expectancy is available only for 16 out of 35 States/UTs. Hence the average for India/value for adjacent States has been applied to the remaining States/UTs, thereby raising the value of the health index for these States/UTs. Further, estimates are not available at the district level and the indicator does not reflect the systematic bias faced by women and girl children in the context of high morbidity and malnutrition.

In this context, the Eleventh Plan notes³¹ that "High levels of malnutrition continue to affect a large part of our child population, limiting their learning capacity and influencing morbidity and mortality ratios in the country. Our maternal mortality ratio and infant mortality rate are far too high. The incidence of anaemia among women and children is at unacceptable levels. Far too large a proportion of the population, especially in rural areas, lacks access to affordable health care. These problems need to be addressed by multiple interventions, many of which range beyond curative health care. These include dietary improvement, nutrition supplementation for children, better child care practices, and access to safe drinking water, improved sanitation, and immunization. However, these efforts must be accompanied by a much better system of affordable curative health care which is lacking at present."

As is well known, estimates of the maternal mortality ratio (MMR) for India are excessively high in India at 254 per 100,000 live births for 2004-06 compared with only 10 for Japan and 56 for China. As

Sensitivity of HDI and GDI Scores to Inclusion of Other Critical Indicators

³¹ Planning Commission, Eleventh Plan 2007-12, Volume 2, p. 59.

Table 4.12: Maternal Mortality Ratio (MMR) - Major States

Major States	2001-03	2004-06
Andhra Pradesh	195	154
Assam	490	480
Bihar/Jharkhand	371	312
Gujarat	172	160
Haryana	162	186
Karnataka	228	213
Kerala	110	95
Madhya Pradesh/Chhattisgarh	379	335
Maharashtra	149	130
Orissa	358	303
Punjab	178	192
Rajasthan	445	388
Tamil Nadu	134	111
Uttar Pradesh/Uttarakhand	517	440
West Bengal	194	141
India	301	254

Source: SRS System, Office of the Registrar General of India

presented in Table 4.12 estimates of MMR for Uttar Pradesh/Uttarakhand, Assam, Rajasthan, Madhya Pradesh/Chhattisgarh, Bihar/Jharkhand and Orissa are unacceptably high and need urgent attention and action.

However, it needs to be noted that the most serious gender discrimination that confronts us is female foeticide that is reflected in the alarmingly low sex ratio. Special cognisance needs to be taken of this since it is not accounted for while calculating GDI. While Punjab, Haryana, Chandigarh, NCT Delhi, Gujarat and Himachal Pradesh attain higher than average scores on GDI, the sex ratio reported for Punjab at 798 and Haryana at 819 as also the estimates for Chandigarh, NCT Delhi, Gujarat, Himachal Pradesh and other States are cause for serious concern (Table 4.13).

Where critical indicators, such as child sex ratio, MMR, etc., show unacceptable values, even if a State/UT performs well on GDI, it must be recognised that the situation warrants further investigation.

Table 4.13: Child Sex Ratio (0-6 years)
States/UTs, 2001

S.No.	States/Union Territories	Females/ 1000 Males
1	Andhra Pradesh	961
2	Arunachal Pradesh	964
3	Assam	965
4	Bihar	942
5	Goa	938
6	Gujarat	883
7	Haryana	819
8	Himachal Pradesh	896
9	Jammu & Kashmir	941
10	Karnataka	946
11	Kerala	960
12	Madhya Pradesh	932
13	Maharashtra	913
14	Manipur	957
15	Meghalaya	973
16	Mizoram	964
17	Nagaland	964
18	Orissa	953
19	Punjab	798
20	Rajasthan	909
21	Sikkim	963
22	Tamil Nadu	942
23	Tripura	966
24	Uttar Pradesh	916
25	West Bengal	960
26	Chhattisgarh	975
27	Jharkhand	965
28	Uttarakhand	908
29	Andaman & Nicobar Islands	957
30	Chandigarh	845
31	Dadra & Nagar Haveli	979
32	Daman & Diu	926
33	NCT Delhi	868
34	Lakshadweep	959
35	Puducherry	967
	All India	927

Source: Census of India 2001.

Chapter 5 presents the calculated GEM indices for India and the States/UTs.