



Gendering Human Development Indices: Recasting the Gender Development Index and Gender Empowerment Measure for India

Summary Report



Towards a new dawn

MINISTRY OF WOMEN AND CHILD DEVELOPMENT
GOVERNMENT OF INDIA

2009

The Provisional Summary Report released in March 2009 has been revised and updated in line with the detailed report approved on 18th September 2009.



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This Report on “Gendering Human Development Indices: Recasting the Gender Development Index and Gender Empowerment Measure for India” is an initiative of the Ministry of Women and Child Development (MWCD), Government of India, supported by the United Nations Development Programme (UNDP) and prepared by the Indian Institute of Public Administration (IIPA), New Delhi.

I. Introduction

Gender relations are the key to understanding the inequalities between men and women. These inequalities are expressed in many ways – explicit and implicit. The explicit measures are well known and are revealed in statistics depicting differences in the sex ratio, child infanticide, literacy rates, health and nutrition indicators, wage differentials and ownership of land and property. The implicit measures are embedded in power and culture. These intra-household inequalities result in unequal distribution of power, unequal control over resources and decision-making; dependence rather than self-reliance; and unfair, unequal distribution of work, drudgery, and even food. For governments and concerned citizens seeking to redress these inequalities, gender disaggregated data and indices are tools that can be used to identify gender inequalities, determine the issues that must be addressed, take steps to redress the inequalities, provide feedback on the effectiveness of actions and re-prioritise allocation of resources.

United Nations Development Programme's (UNDP) annual Human Development Reports (HDRs) have successfully shifted the development debates and attention from uni-dimensional, income or Gross Domestic Product based indices to the inclusion of non-income and multi-dimensional variables in measurement of development. The Human Development Index (HDI) introduced by UNDP in 1990 is a simple average of three dimension indices that measure average achievements in a country with regard to 'A long and healthy life', as measured by life expectancy at birth; 'Knowledge', as measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio; and 'A decent standard of living', as measured by estimated earned income in Purchasing Power Parity (PPP) US\$. In 1995, the UNDP introduced two new indices: a Gender-related Development Index (GDI) and a Gender Empowerment Measure (GEM). UNDP's HDRs have estimated HDI each year since 1990 and GDI and GEM since 1995. The Gender Empowerment Measure focuses on opportunities and captures gender inequality in three key areas: 'Political participation and decision-making power', as measured by women's and men's percentage shares of parliamentary seats; 'Economic participation and decision-making power', as measured by two indicators – women's and men's percentage shares of positions as legislators, senior officials and managers and women's and men's percentage shares of professional and technical positions; and 'Power over economic resources', as measured by women's and men's estimated earned income (PPP US\$). The GEM was intended to measure women's and men's abilities to participate actively in economic and political life and their command over economic resources.

2. Ministry of Women and Child Development's Initiative: The Process of Recasting GDI and GEM for India and the States/Union Territories

GDI and GEM developed by UNDP need to be recast to realistically capture the gender gaps in development and empowerment in the Third World. These indices have been developed from a northern perspective and do not incorporate the perspective of the South. How can we recast GDI and GEM to make them meaningful for India within the limitations of data availability? Can GDI and GEM become effective instruments for building gender equity?

With this as the objective, the Ministry of Women and Child Development (MWCD) decided to recast GDI and GEM for India and for the States/Union Territories (UTs). UNDP also came forward to support this initiative with technical and financial assistance through the MWCD-UNDP project "Promoting Gender Equality". The Indian Institute of Public Administration (IIPA), New Delhi was identified as the Technical Collaborating Institution for the task. In January 2007, MWCD constituted a Technical Advisory Committee (TAC) with the Statistical Adviser, MWCD, as the Chairperson and Prof. Aasha Kapur Mehta, Professor of Economics, IIPA, as the Member Secretary. The TAC members comprised representatives from the Ministry of Statistics and Programme Implementation, Social Sector Ministries, a few of the women economists who had worked on these indicators in 1996 and UNDP.

An iterative process was followed through three brainstorming TAC Workshops. The final choice of dimensions and indicators was based on the need to use variables that are intuitively understandable and relevant, within the constraints imposed by availability of reliable data. The decisions taken in the TAC workshops that enabled determination of these indicators are the following:

- Only two indices would be calculated: (i) GDI and (ii) GEM. These would be calculated at the national or All-India level and for States/UTs. Calculation of GDI and GEM would also be attempted for two districts to identify data gaps. The indices would be calculated for two time periods, 1996 and 2006.
- The index compiled should be simple, easily calculable and easy to interpret.
- For maintaining international comparability, the dimensions used would be the same as those used by UNDP. Equal weights would be assigned to all the dimensions. However, within dimensions, the indicators chosen, weights and goal posts would be more relevant to the Indian context.
- Critical gaps in data availability would be highlighted.

3. Dimensions, Indicators, Goal Posts and Weights for HDI, GDI and GEM

The final list of indicators used was constrained by availability of data for India and for most States and Union Territories. Data gaps exist even for the finally selected indicators, thereby requiring assumptions/applications of averages. Apart from GDI and GEM, HDI was also calculated for 1996 and 2006 based on the same dimensions and indicators identified for GDI. The Dimensions and Indicators identified for computing HDI, GDI and GEM are given below.

HDI and GDI

HDI and GDI Dimensions 1: 'A Long and Healthy Life'

Indicators: 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 from 1.

HDI and GDI Dimension 2: 'Knowledge'

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

HDI and GDI Dimension 3: 'A Decent Standard of Living'

Indicator: i) Female/Male Estimated Earned Income share per capita per annum.

GEM

GEM Dimension 1: 'Political Participation and Decision-making Power'

Indicators: i) % Share of Parliamentary Seats (elected); ii) % Share of Seats in Legislature (elected); iii) % Share of Seats in *Zilla Parishads* (elected); iv) % Share of Seats in *Gram Panchayats* (elected); v) % Candidates in Electoral Process in National Parties in the Parliamentary election and vi) % Electors Exercising the Right to Vote in the Parliamentary election.

GEM Dimension 2: 'Economic Participation and Decision-making Power'

Indicators: i) % Share of officials in service in Indian Administrative Service, Indian Police Service and Indian Forest Service; and ii) % Share of enrolment in medical and engineering colleges.

GEM Dimension 3: 'Power over Economic Resources'

Indicators: i) % Female/Male with Operational Land Holdings; ii) % Females/Males with Bank Accounts in Scheduled Commercial Banks (with credit limit above Rs. 2 lakh); iii) Share of Female/Male Estimated Earned Income Share per capita per annum.

Using goal posts and weights, the dimension indices are calculated. In case of GDI and GEM, while calculating dimension indices, the penalty for gender inequality, i.e., the value of epsilon is taken as 2, which is moderate penalty. The methodology of calculation adopted is the same as followed by UNDP.

The goal posts fixed for estimating HDI and GDI are presented in Table 3.1 and weights for combining the three dimensional indices as well as the indicators within each dimension and for HDI, GDI and GEM are in Tables 3.2 and 3.3.

Table 3.1: Goal Posts for HDI and GDI

	Maximum	Minimum
'A Long and Healthy Life'		
Infant Mortality Rate	105 per 1000 live births	0 per 1000 live births
Life Expectancy at age 1 for HDI	85 years	25 years
Life Expectancy at age 1 for GDI	87.5 years for females and 82.5 for males	27.5 years for females and 22.5 for males
'Knowledge'		
7+ Literacy Rate	100 percent	0 percent
Mean Years of Education for 15+ age group	25 years	1 year
'A Decent Standard of Living'		
Female/Male Estimated Earned Income Share per capita per annum	Rs 1,50,000	Rs 100

Table 3.2: Weights for Dimensions and Indicators - HDI and GDI

Dimensions/Indicators	Weights
Dimension 1: 'A Long and Healthy Life'	One-third
Infant Mortality Rate	Half for each indicator within the dimension
Life Expectancy at age 1	
Dimension 2: 'Knowledge'	One-third
7+ Literacy rate	Two thirds within the dimension
Mean Years of Education for 15+ age group	One third within the dimension
Dimension 3: 'A Decent Standard of Living'	One-third
Female/Male Estimated Earned Income Share per capita per annum	

Table 3.3: Weights for Dimensions and Indicators - GEM

Dimensions/Indicators	Weights
Dimension 1: 'Political Participation and Decision-making Power'	One-third
% Share of Parliamentary Seats (elected)	One sixth for each indicator within the dimension
% Share of Seats in Legislature (elected)	
% Share of Seats in Zilla Parishads (elected)	
% Share of Seats in Gram Panchayats (elected)	
% Candidates in Electoral Process in National Parties	
% Electors exercising the right to vote	
Dimension 2: 'Economic Participation and Decision-making Power'	One-third
% Share of officials in service in Indian Administrative Service, Indian Police Service and Indian Forest Service	Half for each indicator within the dimension
% Share of Enrolment in Medical and Engineering Colleges	
Dimension 3: 'Power over Economic Resources'	One-third
% Share of Operational Land Holdings	One third for each indicator within the dimension
% Females/Males with Bank Accounts in Scheduled Commercial Banks (with credit limit above Rs. 2 lakh)	
% Female/Male Estimated Earned Income Share per capita per annum	

4. HDI and GDI Estimates for India: Results and Analysis

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 4.1, 4.2 and 4.3 respectively.

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

Table 4.2: Dimension scores for HDI for India: 2006 and 1996

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

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

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

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 value of the Human Development Index increased by 0.075 points and the Gender Development Index by 0.076 points. The Gender Development Index is the HDI adjusted for disparities between women and men and the estimated GDI scores for India are lower than the HDI score at both points of time due to the existence of gender based disparities in all three dimensions.

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 and GDI Scores for States/UTs

Tables 4.4 and 4.5 present HDI and GDI scores and their dimensions for India and the States/UTs.

- In 1996, Kerala had the highest score in the country achieving scores of 0.736 on HDI and 0.721 on GDI. However, in 2006, Kerala was ranked 2nd on HDI and 3rd on GDI with scores of 0.764 and 0.745 respectively.
- Chandigarh was ranked 2nd on both HDI and GDI in 1996 but attained the highest HDI and GDI scores in 2006 at 0.784 and 0.763 respectively.
- Goa was ranked 3rd on both HDI and GDI in 1996. It improved its rank to 2nd on HDI (0.764) and GDI (0.747) in 2006.
- The States with consistently low achievement on both HDI and GDI are Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan and Orissa.
- Bihar had the lowest rank among the 35 States/UTs on HDI and GDI in both 1996 and 2006.
- Uttar Pradesh was 31st on HDI and 32nd on GDI in 1996. The State declined to the second lowest rank (34th) with regard to both HDI and GDI in 2006.
- Madhya Pradesh ranked 33rd among all the States/UTs on GDI in both 1996 and 2006 and 34th and 33rd on HDI for 1996 and 2006 respectively.
- 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 All-India average of 0.075 points, included Madhya Pradesh, Manipur, Tripura, Sikkim, Himachal Pradesh, Tamil Nadu, Bihar and Orissa
- 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 three 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 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.
- None of the States/UTs has a GDI score less than 0.5 in 2006 except Bihar.
- The lowest score for HDI is 0.507 for Bihar in 2006 (from 0.430 in 1996). The lowest score for GDI is 0.479 for Bihar (from 0.399 in 1996).

- 14 States/UTs rank better on GDI than on HDI in 2006. These are Andhra Pradesh, Gujarat, Haryana, Maharashtra, Manipur, Meghalaya, Nagaland, Dadra & Nagar Haveli and Puducherry by 1 rank each, Arunachal Pradesh, Himachal Pradesh, Sikkim and Uttarakhand by 2 ranks each; and Mizoram by 3 ranks.
- 8 States/UTs rank lower on GDI than HDI in 2006. These are Jammu & Kashmir, Kerala and Delhi by 1 rank each; and West Bengal, Andaman & Nicobar Islands, Lakshadweep, Tripura and Daman & Diu with larger differences.
- 13 States/UTs maintain their ranks for HDI and GDI in 2006. These are Assam, Bihar, Goa, Karnataka, Madhya Pradesh, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Chhattisgarh, Jharkhand and Chandigarh.

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

S.No.	States/Union Territories	HDI 2006				HDI 1996			
		HI 06	EdI 06	YI 06	HDI 06	HI 96	EdI 96	YI 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
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: Dimension-wise GDI scores for States/UTs - 2006 and 1996

S.No.	States/UTs	GDI 2006				GDI 1996			
		HI 06	EdI 06	YI 06	GDI 06	HI 96	EdI 96	YI 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 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'.

5. GEM: Results and Analysis

Gender Empowerment Measure (GEM) is intended to measure women's and men's ability to participate actively in economic and political life and their command over economic resources. It focuses on opportunities and captures gender inequality in three key areas, 'Political Participation and Decision-making Power', 'Economic Participation and Decision-making Power' and 'Power over Economic Resources'. The aggregate score for GEM for India was 0.497 in 2006 and 0.416 in 1996 (Table 5.1).

Table 5.1: GEM Scores for India, 2006 and 1996

Year	PI	EI	PoERI	GEM
2006	0.625	0.546	0.319	0.497
1996	0.573	0.443	0.231	0.416

Note: **PI** = Index of 'Political Participation & Decision-Making Power'; **EI** = Index of 'Economic Participation and Decision-making Power'; **PoERI** = Index of 'Power over Economic Resources'; and **GEM** = Gender Empowerment Measure.

The GEM scores for India estimated by UNDP are a very low 0.228 (UNDP HDR 1998). Using the indicators listed above is more relevant for India and although it yields GEM scores that are double (0.497) those estimated by UNDP, the values attained still reflect the existence of sharp disparities in gender empowerment.

Scores for the three composite indices, Index of 'Political Participation and Decision-making Power' (PI), Index of 'Economic Participation and Decision-making Power' (EI) and Index of 'Power over Economic Resources' (PoERI) are also presented in Table 5.1. The scores are highest for PI at 0.573 and lowest for PoERI at 0.231 in 1996. While all three indices reflect an increase over the decade, the increase is smallest for PI (from 0.573 in 1996 to 0.625 in 2006) and largest for EI (from 0.443 in 1996 to 0.546 in 2006). The Index 'Power over Economic Resources' (PoERI) increased from 0.231 in 1996 to 0.319 in 2006.

Table 5.2 shows that:

- There was overall improvement in performance on GEM over the decade, both in the All-India score and in the scores achieved by all the States/UTs. 14 States/UTs achieved GEM scores above 0.485 in 2006 while only 2 had achieved scores higher than this in 1996.
- The States/UTs that achieved GEM scores above 0.485 in both 1996 and 2006 were Goa and Kerala.
- NCT Delhi had the highest score for GEM for 2006. It moved from the 3rd rank in 1996 to the 1st rank in 2006 with a significant improvement in its GEM score.
- Nagaland had the lowest rank in both 2006 and 1996 with GEM scores of 0.289 and 0.165 respectively.
- While 13 states improved their ranks over the decade, 19 states lost their relative position on GEM during the same period.
- The newly formed states of Jharkhand and Uttarakhand achieved large gains of 0.157 and 0.132 respectively on GEM scores and improved their GEM ranks by 6 positions each over the decade. While the GEM scores for Uttar Pradesh and Bihar also increased significantly, the improvement in their GEM scores was lower in comparison (0.118 and 0.101 respectively). However, Chhattisgarh improved its GEM score by only 0.058, compared with an improvement of 0.056 by Madhya Pradesh. These States lost 4 and 5 ranks respectively over the decade.
- Other States/UTs which increased their GEM scores by more than the All-India average of 0.081 points included Arunachal Pradesh, Puducherry, Himachal Pradesh, Sikkim, Andaman & Nicobar Islands, Nagaland, Dadra & Nagar Haveli, Meghalaya, Daman & Diu, Assam, Karnataka, West Bengal and NCT Delhi.
- States/UTs that improved their rank on GEM over the decade were Arunachal Pradesh, Himachal Pradesh and Puducherry by 13 and 14 ranks; Sikkim and Andaman and Nicobar Islands by 8 ranks each; and Jharkhand and Uttarakhand by 6 ranks each.
- Other gainers on rank included Dadra & Nagar Haveli with a gain of 4 ranks; Uttar Pradesh and Karnataka with a gain of 3 ranks each; Bihar and NCT Delhi with a gain of 2 ranks each and Daman & Diu with a gain of 1 rank.
- The largest losers on GEM rank were Jammu & Kashmir, Kerala, Madhya Pradesh, Manipur, Rajasthan, Tamil Nadu, Tripura, Chandigarh and Lakshadweep with a fall of between 5 and 9 positions over the decade.

Table 5.2: Dimension-wise GEM Scores 2006 and 1996

S.No.	State/UT	GEM 2006				GEM 1996			
		PI	EI	PoERI	GEM	PI	EI	PoERI	GEM
1	Andhra Pradesh	0.628	0.597	0.418	0.547	0.559	0.498	0.344	0.467
2	Arunachal Pradesh	0.482	0.566	0.360	0.469	0.223	0.370	0.330	0.307
3	Assam	0.588	0.476	0.187	0.417	0.529	0.354	0.057	0.313
4	Bihar	0.628	0.252	0.258	0.379	0.399	0.303	0.133	0.278
5	Goa	0.494	0.697	0.463	0.551	0.458	0.638	0.387	0.494
6	Gujarat	0.585	0.554	0.317	0.485	0.544	0.426	0.256	0.409
7	Haryana	0.682	0.586	0.328	0.532	0.604	0.558	0.204	0.455
8	Himachal Pradesh	0.696	0.605	0.318	0.540	0.491	0.482	0.206	0.393
9	Jammu & Kashmir	0.407	0.451	0.207	0.355	0.358	0.474	0.147	0.326
10	Karnataka	0.581	0.611	0.385	0.526	0.549	0.417	0.301	0.422
11	Kerala	0.610	0.537	0.426	0.525	0.561	0.505	0.393	0.486
12	Madhya Pradesh	0.632	0.531	0.225	0.463	0.622	0.430	0.167	0.406
13	Maharashtra	0.605	0.567	0.376	0.516	0.556	0.461	0.298	0.438
14	Manipur	0.498	0.403	0.353	0.418	0.585	0.404	0.151	0.380
15	Meghalaya	0.279	0.176	0.583	0.346	0.407	0.131	0.156	0.231
16	Mizoram	0.250	0.418	0.455	0.374	0.250	0.338	0.349	0.312
17	Nagaland	0.250	0.254	0.364	0.289	0.249	0.040	0.205	0.165
18	Orissa	0.635	0.375	0.169	0.393	0.611	0.293	0.084	0.329
19	Punjab	0.707	0.643	0.191	0.514	0.634	0.613	0.106	0.451
20	Rajasthan	0.627	0.490	0.208	0.442	0.640	0.438	0.130	0.403
21	Sikkim	0.536	0.581	0.223	0.447	0.393	0.327	0.178	0.300
22	Tamil Nadu	0.611	0.480	0.404	0.498	0.499	0.526	0.352	0.459
23	Tripura	0.491	0.408	0.247	0.382	0.552	0.305	0.148	0.335
24	Uttar Pradesh	0.625	0.517	0.213	0.452	0.565	0.303	0.134	0.334
25	West Bengal	0.678	0.426	0.202	0.435	0.643	0.308	0.098	0.350
26	Chhattisgarh	0.590	0.495	0.309	0.464	0.622	0.430	0.168	0.407
27	Jharkhand	0.614	0.415	0.277	0.435	0.399	0.303	0.133	0.278
28	Uttarakhand	0.556	0.566	0.276	0.466	0.565	0.303	0.135	0.334
29	Andaman & Nicobar Islands	0.701	0.431	0.547	0.560	0.575	0.355	0.381	0.437
30	Chandigarh	0.505	0.715	0.279	0.500	0.514	0.683	0.151	0.449
31	Dadra & Nagar Haveli	0.590	0.459	0.389	0.479	0.532	0.333	0.290	0.385
32	Daman & Diu	0.594	0.490	0.426	0.503	0.575	0.330	0.333	0.413
33	NCT Delhi	0.609	0.657	0.426	0.564	0.560	0.597	0.280	0.479
34	Lakshadweep	0.575	0.417	0.397	0.463	0.577	0.337	0.341	0.418
35	Puducherry	0.585	0.624	0.464	0.558	0.282	0.565	0.371	0.406
	All India	0.625	0.546	0.319	0.497	0.573	0.443	0.231	0.416

Note: PI = Index of 'Political Participation & Decision-making Power'; EI = Index of 'Economic Participation and Decision-making Power'; PoERI = Index of 'Power over Economic Resources'; and GEM = Gender Empowerment Measure.

6. Conclusions

The HDI, GDI and GEM scores attained by the 35 States/UTs reflect their performance on human and gender development indices. Changes in the scores and ranks over time depict the extent to which a State/UT has progressed in translating its growth into a better quality of life for **all** its people. Disparities in outcomes and access to resources are penalised and result in lower levels of attainment on GDI and GEM. States/UTs can be ranked on the basis of HDI, GDI and GEM scores at the two time points and the improvement in them. However it may be reiterated that the scores and ranks achieved are sensitive to the choice of indicators (constrained by available gender disaggregated data), choice of goal posts, weights used, etc.

Scores and ranks obtained by the States/UTs for HDI, GDI and GEM and the dimensions that comprise these indices, reveal gender-based disparities that can meaningfully be used by policy-makers and analysts. For instance, while Andhra Pradesh performs relatively well on health and income indicators, the Female Literacy Rate and Mean Years of Education are lower than the estimates for some of the States/UTs with high levels of income poverty. The indices draw attention to this and call for corrective action. Similarly, the low scores attained nation-wide on the 'Power over Economic Resources' Dimension draw attention to the severe gender disparities that exist with regard to access to resources and assets and the historical discrimination faced by women in access to land, livestock, credit and other productive resources, despite their unpaid and unrecognised contribution to agriculture and farm and non-farm family based economic activities. This requires special attention as access to resources can enhance opportunities and lead to enhancement of capabilities, thereby leading to higher levels of gender empowerment as well as development.

Human and gender development indices can be used as tools to re-allocate resources for programmes and schemes designed to correct gender gaps at all levels of governance through monitoring and tracking progress regularly and ensuring implementation; provide access to assets and income earning opportunities for women such as providing right to work to all citizens; provide access to work at decent wages to enable exit from poverty and thereby reduce gender disparities in work and standard of living; provide access to safe drinking water to reduce the disease burden; and provide access to health facilities and timely access to medical care to reduce gender disparities in morbidity and mortality.

MWCD's Vision Statement is "Ensuring overall survival, development, protection and participation of women and children of the country" and Mission Statement is "Budgeting for Gender Equity". Together with Gender Budgeting, HDI, GDI and GEM are tools that can be used to identify deep-rooted gender based inequities and demand that corrective policies, programmes and schemes be implemented in order to achieve gender just and equitable development outcomes. Data gaps continue to constrain the construction of appropriate indices especially in the context of access to land, productive assets, credit, income, etc. It is high time that due priority is accorded to bridging the data gaps in gender disaggregated data so that gender disparities can be better measured and corrected through policies, programmes and schemes.



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