

Some Measures of Human Development: An Inter-District Analysis

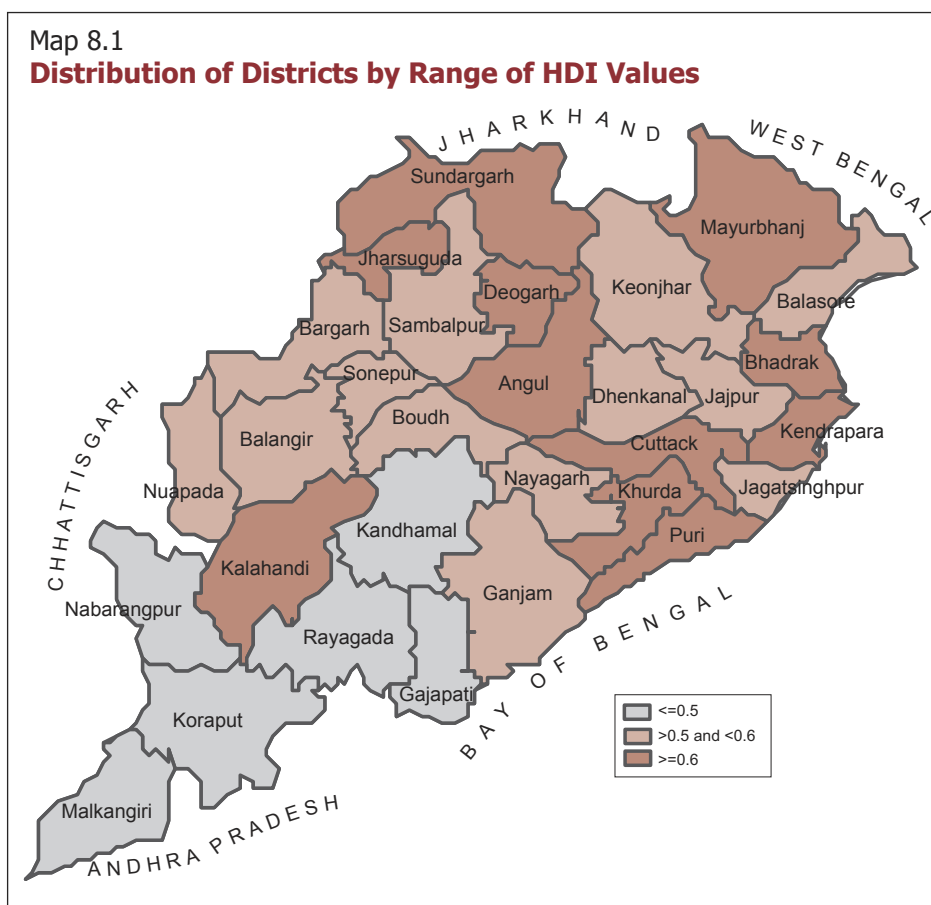
Introduction

There are three measurable indicators of human development: Human Development Index (HDI), Gender Development Index (GDI), and Reproductive Health Index (RHI). HDI is based on three dimensions of human development that are considered to be fundamental, namely, longevity, knowledge, and a measure of necessary income. GDI brings in an additional dimension, namely gender, which is of fundamental significance for the concept of human development. Finally, the RHI, focuses on the reproductive health component of the gender dimension.

HDI

The value of HDI for the state as a whole turns out to be 0.579. This may be regarded as a somewhat medium level of human development. Of the three components of HDI, the education index has the highest weight (0.723) whereas the health index has the lowest weight (0.468) and the income index (0.545) lies in between.

Map 8.1
Distribution of Districts by Range of HDI Values



On the whole, inter-district disparity in HDI values is rather low [coefficient of variation (CV): 16.95]. This is essentially because there is a bunching of 13 districts in terms of their HDI values (lying between 0.5 and 0.6) around the state mean (0.579).

GDI

The value of GDI for the state as a whole is seen to be 0.546; in this, the equally distributed education index has a much greater weight than either the health or income index, as in the case of overall HDI. The highest five and lowest five districts in terms of GDI values mostly correspond to the same in terms of HDI values. As in the case of HDI, inter-district disparity in GDI values is low (CV: 17.16) and this is again because of bunching of the GDI values of 13 districts (lying between 0.5 and 0.6) around the state mean value of GDI (0.546).

Table 8.1
HDI for 30 Districts of Orissa

District	IMR (1999)	Health Index	DDP per capita in 1998-99 (in Rs) (at 1993-94 prices)	Income Index	Overall literacy rate (2001)
Angul	95	0.481	10,877	0.748	69.4
Balasore	101	0.442	3,961	0.466	70.94
Bargarh	100	0.449	4,765	0.517	64.13
Bhadrak	65	0.673	3,916	0.463	74.64
Balangir	97	0.468	4,538	0.504	54.93
Boudh	104	0.423	4,436	0.497	58.43
Cuttack	63	0.686	6,116	0.587	76.13
Deogarh	49	0.776	5,022	0.532	60.78
Dhenkanal	97	0.468	5,046	0.534	70.11
Gajapati	143	0.173	5,498	0.558	41.73
Ganjam	107	0.404	5,013	0.532	62.94
Jagatsinghpur	125	0.288	5,340	0.549	79.61
Jajpur	118	0.333	4,468	0.499	72.19
Jharsuguda	71	0.635	11,210	0.757	71.47
Kalahandi	51	0.763	4,043	0.471	46.2
Kandhamal	169	0.006	4,743	0.516	52.95
Kendrapara	77	0.596	3,964	0.466	77.33
Keonjhar	117	0.340	5,286	0.547	59.75
Khurda	57	0.724	7,353	0.639	80.19
Koraput	136	0.218	5,148	0.539	36.2
Malkangiri	151	0.122	4,436	0.497	31.26
Mayurbhanj	48	0.782	4,297	0.489	52.43
Nabarangpur	117	0.340	3,787	0.453	34.26
Nayagarh	98	0.462	4,236	0.485	71.02
Nuapada	62	0.692	4,018	0.470	42.29
Puri	73	0.622	4,933	0.527	78.4
Rayagada	131	0.250	5,300	0.547	35.61
Sambalpur	102	0.436	6,171	0.590	67.01
Sonepur	96	0.474	4,353	0.492	64.07
Sundargarh	62	0.692	6,823	0.618	65.22
Orissa	97	0.468	5,264	0.545	63.61

Table 8.1 contd.



District	Combined Gross Enrolment Ratio (6–14 years) (2003-04)	Overall Literacy Rate Index	Combined Gross Enrolment Ratio (6–14 years) Index	Education Index	HDI Value	HDI Rank
Angul	89.12	0.694	0.891	0.760	0.663	6
Balasore	89.16	0.709	0.892	0.770	0.559	18
Bargarh	89.98	0.641	0.900	0.727	0.565	17
Bhadrak	91.69	0.746	0.917	0.803	0.646	8
Balangir	89.81	0.549	0.898	0.666	0.546	21
Boudh	89.44	0.584	0.894	0.688	0.536	23
Cuttack	91.64	0.761	0.916	0.813	0.695	3
Deogarh	87.84	0.608	0.878	0.698	0.669	5
Dhenkanal	91.64	0.701	0.916	0.773	0.591	12
Gajapati	84.82	0.417	0.848	0.561	0.431	28
Ganjam	89.39	0.629	0.894	0.718	0.551	20
Jagatsinghpur	90.70	0.796	0.907	0.833	0.557	19
Jajpur	91.37	0.722	0.914	0.786	0.540	22
Jharsuguda	89.00	0.715	0.890	0.773	0.722	2
Kalahandi	83.03	0.462	0.830	0.585	0.606	11
Kandhamal	87.68	0.530	0.877	0.645	0.389	29
Kendrapada	89.95	0.773	0.900	0.815	0.626	10
Keonjhar	91.72	0.598	0.917	0.704	0.530	24
Khurda	93.03	0.802	0.930	0.845	0.736	1
Koraput	88.12	0.362	0.881	0.535	0.431	27
Malkangiri	84.73	0.313	0.847	0.491	0.370	30
Mayurbhanj	89.20	0.524	0.892	0.647	0.639	9
Nabarangpur	86.33	0.343	0.863	0.516	0.436	26
Nayagarh	87.77	0.710	0.878	0.766	0.571	15
Nuapada	90.13	0.423	0.901	0.582	0.581	14
Puri	90.02	0.784	0.900	0.823	0.657	7
Rayagada	88.21	0.356	0.882	0.531	0.443	25
Sambalpur	88.71	0.670	0.887	0.742	0.589	13
Sonepur	91.20	0.641	0.912	0.731	0.566	16
Sundargarh	91.49	0.652	0.915	0.740	0.683	4
Orissa	89.58	0.636	0.896	0.723	0.579	

Note: (i) The estimates of infant mortality rate (IMR) for 30 newly created districts of Orissa are indirect estimates built up by the International Institute of Population Sciences (IIPS), Mumbai based on 20–25 years age group by CES–CB method.
(ii) The IMR estimates for the districts of Deogarh, Kalahandi, Nuapada, and Mayurbhanj appear to be very much on the lower side. Hence, the rankings of these four districts based on their HDI values should be regarded as pushed up on that count.
(iii) Even while life expectancy at birth (LEB) estimates for 30 districts were available from the same source as IMR, IMR has been used since IMR for male and female separately for 30 districts could be worked out (required for GDI computation), which was not the case with LEB. However, IMR is an adequate proxy for LEB as the correlation between IMR and LEB is known to be very strong.
(iv) Education Index is a weighted average of overall literacy rate (two-third weight) and combined gross enrolment ratio (one-third weight).
(v) Given the different years to which the individual parameters pertain, the HDI values may be regarded as pertaining to around 2001 (so also the GDI values; see below).

Source: (i) DDP per capita: Government of Orissa (1999), *District Domestic Product of Thirty Districts of Orissa, 1993/94–1998/99 (1993–94 base)*, Summary Results, Directorate of Economics and Statistics, District Income Cell, Bhubaneswar, Orissa. (ii) Overall Literacy Rate: Government of India (2001), *Census of India: Provisional Population Totals, Series-22: Orissa*, Directorate of Census Operations, Orissa. (iii) Combined gross enrolment ratio: Office of the DPEP, Bhubaneswar.



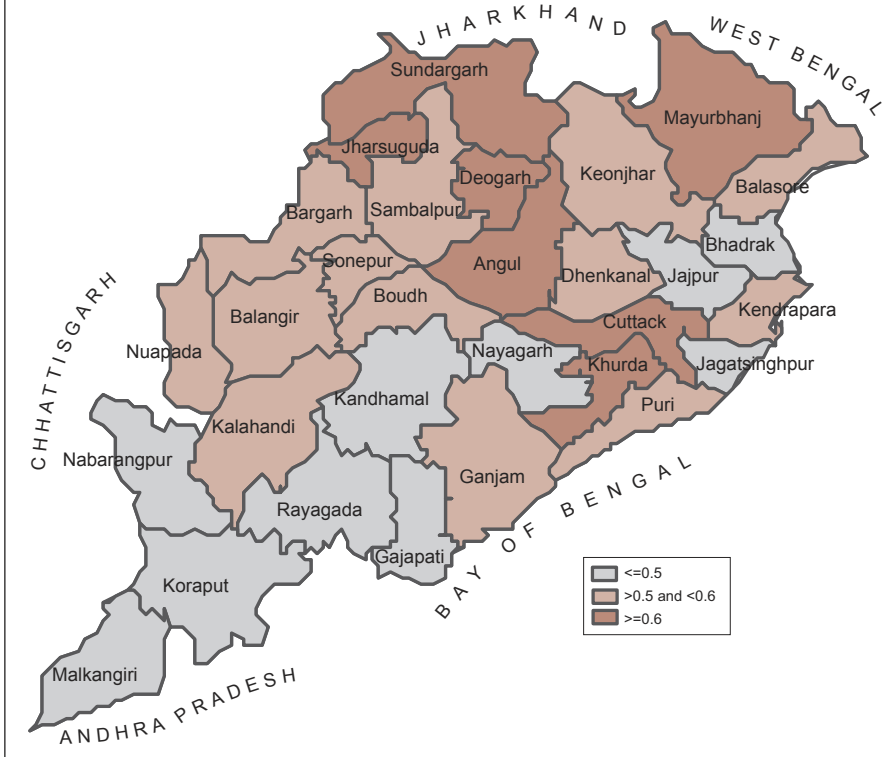
The proportionate difference between HDI and GDI values becomes a simple yet sensitive indicator of basic gender inequity.

RHI

The mean value of RHI for the state as a whole turns out to be 0.55. This suggests, as in the cases of HDI and GDI, a somewhat medium level of reproductive health status of Orissa.

Overall, the three measures of human development suggest a low average attainment, which is essentially due to the fact that a majority of districts have values of HDI/GDI/RHI close to the mean value for the state as a whole. Therefore, the challenge of human development in the context of Orissa is to focus not only on the districts at the bottom end but also on a large number of districts that are average performers.

Map 8.2
Distribution of Districts by Range of GDI Values



Map 8.3
Distribution of Districts by Range of RHI Values

