

## Chapter 3

# KERALA: A UNIQUE HUMAN DEVELOPMENT MODEL IN INDIA?

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*I should perhaps underline here the fact that I am referring to “the Kerala experience” rather than what is often called “the Kerala model.” .....To think of a “Kerala model” does have its merits, but it is, I believe, ultimately counterproductive, especially for Kerala itself. ....To call something a model is to hint some alleged unimprovability. That is not the case with Kerala’s experience.*

**- Amartya Sen (2001: 2)**

### **3.1 Introduction**

A study about the human development of a country will be incomplete and of course, misleading, if it confines only to national average values of various human development indicators as the national averages can conceal great inequalities. The severity of the problem increases, when it comes to the assessment of the human development performance of very large countries like India, where several states are larger and diverse than many countries in the world, in area, population, traditions and culture. The UNDP proposed the disaggregation of human development indicators and indices at sub-national levels, to get a better idea about the diversities and disparities in human development progress within countries.<sup>1</sup> The disparities in human development performance of Indian States are quite pronounced; not less significant than among the nations of the world. Many authors, who have devoted their attention to the interstate variations in human development in India, have arrived at the conclusion that Kerala’s performance in this field is indeed unique. The purpose

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<sup>1</sup> See UNDP (1993, 1994) and Akder (1994), for instance.

of this Chapter is, to examine whether Kerala enjoys such uniqueness in various dimensions of human development, among Indian States.

The State of Kerala, located between North latitudes 8°18' and 12° 48' and East longitudes 74° 52' and 77° 22', at the South-West coast of the Indian peninsula, has an area of 38,863 sq km and a population of 31,841,374 persons consisting of 15,468,614 males and 16,372,760 females.<sup>2</sup> In terms of the size of population, although Kerala is larger than some countries of the world, considering the overall geographical size and population strength of India she is a relatively small state, occupying just 1.27% of land area and 3.1% of population. "However, being small within India in terms of population and geographic size has not prevented Kerala from attracting attention both within and outside India."<sup>3</sup> Her climate, culture and commodities commanded international acclamation centuries back in history. In the recent past, her significant achievements in enhancing human capabilities in the backdrop of relatively poor performance on the production front have been received global attention.<sup>4</sup>

Kerala's achievement of high human capabilities with relatively low levels of income, industrialisation and employment has been a major topic of discussion in Development Economics, ever since the publication of *Poverty, Unemployment and Development Policy: A Case Study of Selected Issues with Reference to Kerala* by the Centre for Development Studies (CDS), Thiruvananthapuram in

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<sup>2</sup> As per Census 2001

<sup>3</sup> Govindan Parayil (ed.), 2000, vii

<sup>4</sup> For a good collection of papers dealing with various aspects of Kerala's development, see International Congress on Kerala Studies: Abstracts, published by the AKG Centre for Research and Studies, Thiruvananthapuram in 1994. A good work, which gives a relatively fine picture of the different dimensions of the development achievements of Kerala, together with a comprehensive bibliography, is Ramachandran (1996).

1975.<sup>5</sup> Kerala's development experience, thereafter referred to as the 'Kerala model' of development, earned much appreciation during the 1980s. However, during the 1990s, in the light of severe economic crisis faced by the Nation as a whole and Kerala in particular, the 'Kerala model' had been subjected to serious review and many have started looking at it with apprehension. The two sources to which the coinage of the term 'Kerala model' has been attributed so far—the CDS and the Nobel Laureate Amartya Sen—have both declined its parentage.<sup>6</sup>

There have been a number of studies relating to interstate variations in human development in India, since the publication of the first HDR in 1990. Shivakumar (1991) had made the first significant attempt in which he computed and compared the HDIs for 17 Indian States using 1987 data. He had strictly adhered to the UNDP methodology for the computation and found that Kerala ranked first with an HDI value of 0.651, followed by Punjab, Maharashtra and Haryana, in the medium human development category. All the other thirteen States were in the low human development class with Uttar Pradesh at the far end with an HDI of 0.292. Interestingly, there were as many as eleven States with higher State Domestic Product per capita (SDP/c) than Kerala and her SDP/c was just 39% of Punjab—the top ranking State in SDP/c. Kerala has been succeeded in outperforming all other States in human development solely because of her spectacular achievements in the fields of education and health.<sup>7</sup> By comparing the HDIs of Indian States with those of the countries of the world, Shivakumar has

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<sup>5</sup> Centre for Development Studies (1975)

<sup>6</sup> See K. N. Raj (1994) for the relation between the CDS and the 'Kerala model' and Sen (2001, 2) for his relation with the 'Kerala model'. Sen suggests that it is more appropriate to use the term 'Kerala experience' rather than to use the term 'Kerala model'.

<sup>7</sup> See Table 3 in op cit. Shivakumar, 1991 for details

found that there were as many as fifty-nine countries with lower HDI values than Kerala where as just thirty-six had lower values than India as a whole and only nineteen countries below Uttar Pradesh.<sup>8</sup>

**Table – 3.1: HDI Ranks of Major Indian States in Different Studies**

States	Ranking by						
	AKS	IDF	Dutta	UNFPA	Haq	Guha	PCI
Kerala	1	1	3	1	1	1	1
Punjab	2	2	1	3	2	4	2
Maharashtra	3	3	2	2	3	2	4
Haryana	4	4	6	5	4	5	5
Tamil Nadu	5	8	4	4	8	3	3
Karnataka	6	7	7	7	7	7	7
West Bengal	7	6	8	8	6	8	8
Gujarat	8	5	5	6	5	6	6
Andhra Pradesh	9	9	9	9	9	9	9
Assam	10	10	10	10	10	10	10
Orissa	11	11	14	11	11	11	12
Rajasthan	12	12	11	12	13	12	11
Madhya Pradesh	13	14	12	13	15	14	13
Bihar	14	13	15	15	12	13	15
Uttar Pradesh	15	15	13	14	14	15	14

Note:

*As the number of States included in the studies of different authors was different, the author considered only those States, which appear in all the seven studies. Hence, a recalculation of ranks became necessary in the case of some studies, as some States have been left out.*

Sources:

1. AKS – A. K. Shivakumar, 1991
2. IDF – ‘Human Development in India: Statistical Profile’, UNDP India Development Forum, <<http://hdrc.undp.org.in>>
3. Dutta – Dutta, et al., 1997
4. UNFPA – United Nations Fund for Population Activities, 1997
5. Haq – Mahbub ul Haq, 1997
6. Guha – Biswajit Guha, 1998
7. PCI – Government of India, Planning Commission, 2002

A number of similar studies on the disparities in human development among Indian States have been taken place during the 1990s. Although the UNDP

<sup>8</sup> Ibid Table 5

methodology has served as the broad basis of all of them, some have attempted slight variations too, either in the selection of indicators or in the method of computation of indices or both. The results obtained and the conclusions arrived, however, have not shown significant variations either in values of indices or in ranks of the States. Kerala maintained her topmost position in most of them and even when she failed to keep the first rank, she has managed to remain at the second or third position. Table – 3.1 shows a comparison of the HDI ranks of fifteen major Indian States, compiled from seven studies by different authors relating to the period covering the last few years of 1980s and earlier years of 1990s. Kerala holds the first rank in all but one by Dutta, et al., where she ranks third behind Punjab and Maharashtra. Moreover, she is the only State, whose HDI value falls in the medium human development category, as per all these seven studies. Irrespective of the slight variations in methodology and data used, the ranks remain relatively stable among the studies.<sup>9</sup> The highest variation is observed in the case of Tamil Nadu, whose rank varies between three and eight across the studies.

Having established that Kerala stands ahead of rest of India in terms of overall HDI, it will be more educative to look into her performance vis-à-vis other Indian States, in various component dimensions of human development. We begin this with a discussion of the basic demographic features of the States and proceed to a study of a few important indicators of human development—both conventional and non-conventional. A lot of information in these regards are available in the HDRs published by several State Governments in India in recent

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<sup>9</sup> For a similar comparison of the HDI values of Indian States from four different studies, see Table – 6 of op cit. Akder, which also arrives at the same conclusion.

years. Most of them are referring Kerala as a benchmark for comparing their own performance in various dimensions of human development, particularly those relating to demographic, health, and educational development.<sup>10</sup> The basic demographic features are examined for all the thirty-five States and Union Territories in the Country<sup>11</sup> as per Census 2001. Thereafter, the study will be confined to the fifteen major States, which appear in Table – 3.1 above. All these States hold more than one percent of the national population and sufficient data and literature on them are available. States like Jammu and Kashmir have been dropped due to the non-availability of data on some variables for certain years. Newly formed States like Jharkhand and Chhatisgarh also have been dropped due to the same reason. States with less than one percent of National population are also not considered. Similarly, all the Union Territories and the National Capital Territory—Delhi—are also excluded.

The fifteen selected States will be ranked on the basis of each one of the important human development indicators we consider, so that they can be ultimately ranked with the Borda count.<sup>12</sup> However, the author used this technique with a slight variation, as the variables considered belong to two distinct categories—some indicating positive achievements and the others showing human deprivations. Indicators like life expectancy and literacy belong to the former category, for which a higher indicator value means better performance. Indicators relating to mortality rates and incidence of crime fit in the latter category, where

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<sup>10</sup> See, for instance, the State HDRs of Maharashtra (2002), Rajasthan (2002) and Tamil Nadu (2003)

<sup>11</sup> Twenty-eight States, six Union Territories and one National Capital Territory (Delhi), precisely.

<sup>12</sup> Borda count is a system of collective choice proposed by J. C. de Borda in 1781. According to this technique, each voter ranks each of a set of, say,  $n$  alternatives, giving  $n$  points to the best down to 1 point for the last. The points awarded to each alternative by each voter are summed and the alternative with the highest total score gets the highest priority.

lower indicator value implies better performance. In this analysis, we assign rank number one to the best performing State and rank number fifteen to the least performing State. Therefore, in the case of life expectancy the State with the highest value gets first rank where as in the case of IMR the State with the lowest value gets that rank.<sup>13</sup> That the State with the lowest Borda count (total rank score) will be considered as the best performer in overall human development. In the forthcoming part of this Chapter, we compute separate Borda scores of States for gender disparity and rural-urban disparity in development and rank the States on the basis of the total rank scores there. These ranks also will be counted in arriving at the final Borda count. All tables in this Chapter, except Table – 3.2, present the State names in the same order in which they are entered in Table – 3.1 above.

### **3.2 The Demographic Dimension**

It is widely accepted that the demographic development of a society is characterised by decline in birth and mortality rates and reduction in the growth rate of population. In addition, if the society does not show any gender discrimination, the females outnumber the males. The basic demographic features of Kerala as per 2001 Census are compared with those of other States and Union Territories as well as the country as a whole, in Table – 3.2. All the thirty-five States and Union Territories are ranked on the basis of each one of the variables considered, in the descending order of the magnitude of the variable. To begin with, the growth rate of population was the lowest in Kerala, among all States and Union Territories in India, during the decade 1991-2001. Only Tamil Nadu and

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<sup>13</sup> Please note that this rule is not observed in the case of Table – 3.2, in which the State with the highest value is assigned the first rank, irrespective of the nature of the indicator considered.



Andhra Pradesh—two other South Indian States—alone have been able to turn up with a somewhat closer performance. Chart – 3.1 makes a comparison of Kerala’s performance in this area during the entire period of the twentieth century, with that of the Country as a whole and one typical North Indian State—Bihar. Even in the 1990s India as a whole was passing through the phase of population growth that Kerala had experienced way back in the 1970s. Bihar, on the other hand, is still passing through the phase that Kerala had gone through before the 70s. If the present trend continues, Kerala’s population will stop growing within a few years from now.

Although, Kerala has the lowest rank in population growth, her rank is quite high in terms of population density. She ranks third—just behind West Bengal and Bihar—among the States and eighth among all States and Union Territories. However, the increase in the number of persons per square kilometre was relatively low in Kerala—just seventy—during the decade 1991-2001 owing to her extremely low population growth, where as it was as high as 195 in Bihar during the same period.

One of the most impressive features of Kerala in the demographic front is the favourable female to male ratio (sex ratio).<sup>14</sup> Kerala is the only State in India with a 1000 plus sex ratio since 1971 Census.<sup>15</sup> She also has the unbroken record of not only keeping the favourable sex ratio, but also steadily improving it, during the entire period of the twentieth century, as can be seen in Chart – 3.2. The chart

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<sup>14</sup> It is an accepted fact that females have a natural survival advantage over men and hence the sex ratio—expressed as the number of females per 1000 males—will be greater than 1000 in any society, which shows no gender discrimination. The term favourable sex ratio indicates such a situation.

<sup>15</sup> Census of India 2001 Tables (India & States), ppt\_t10.xls, Office of the Registrar General of India, New Delhi, downloaded from <<http://www.censusindia.net/>>

**Table – 3.2: General Demographic Features of Indian States (2001)**

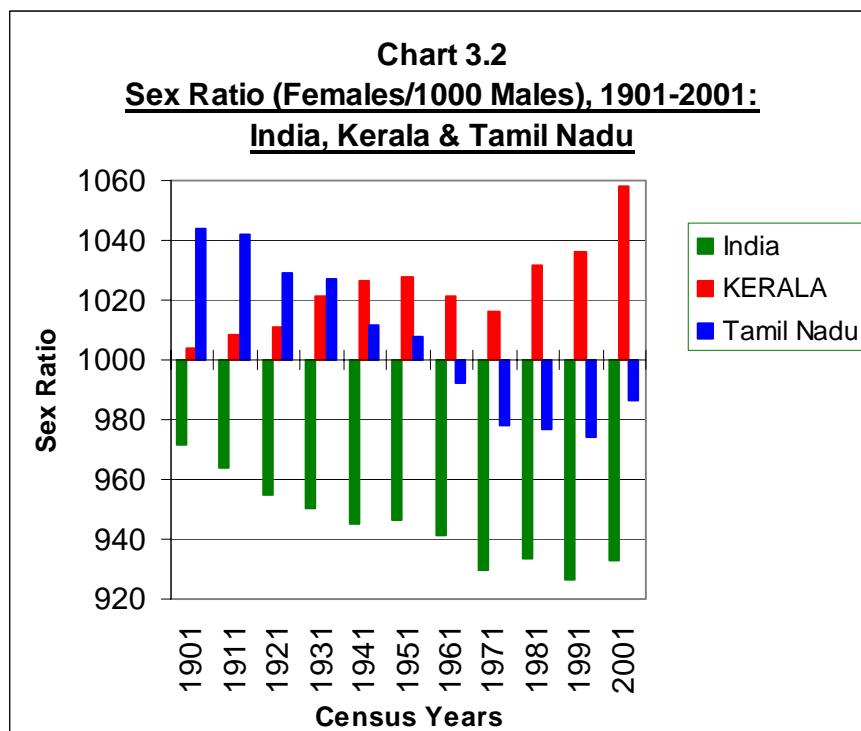
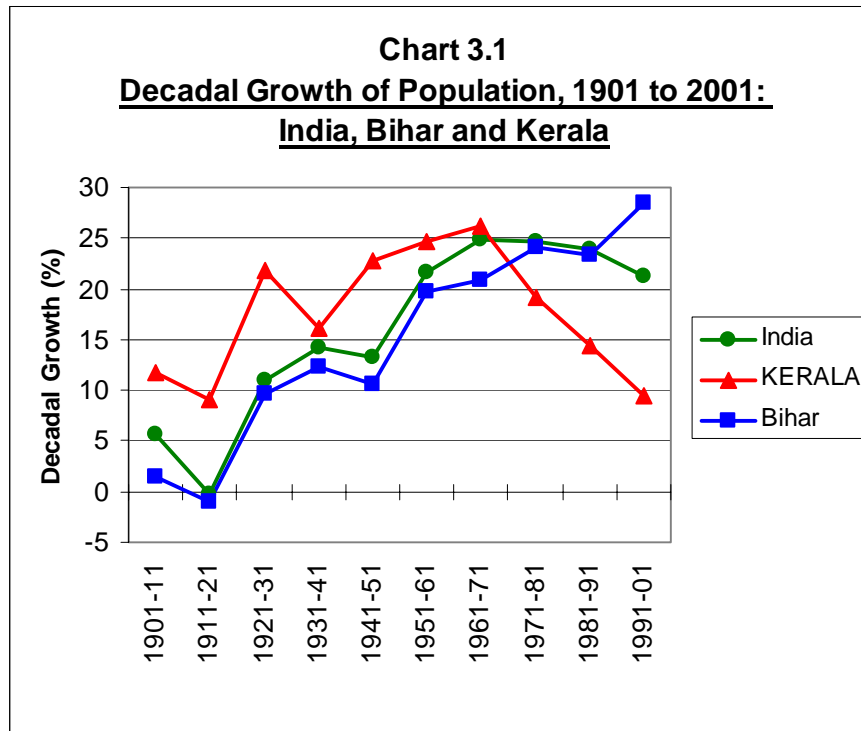
State/ UT Code	India/ State/ Union Territory	Decadal Growth (1991-01)	Rank	Density <sub>2</sub> (per km <sup>2</sup> )	Rank	% of National Population	Rank	Sex Ratio	Rank	Urban Population (%)	Rank	Villages / Town	Rank
1	Jammu & Kashmir	29.04	10	99	31	0.98	19	900	26	24.88	20	88.7	19
2	Himachal Pradesh	17.53	27	109	28	0.59	21	970	9	9.79	35	352.9	3
3	Punjab	19.76	22	482	10	2.37	15	874	29	33.95	12	81.1	20
4	Chandigarh <sup>UT</sup>	40.33	5	7902	2	0.09	29	773	34	89.78	2	24.0	28
5	Uttaranchal	19.20	23	159	25	0.83	20	964	10	25.59	19	195.6	9
6	Haryana	28.06	13	477	12	2.05	16	861	30	29.00	14	65.6	23
7	Delhi <sup>NCT</sup>	46.31	4	9294	1	1.34	18	821	32	93.01	1	2.7	35
8	Rajasthan	28.33	12	165	24	5.50	8	922	20	23.38	22	186.3	10
9	Uttar Pradesh	25.80	16	689	9	16.17	1	898	27	20.78	25	152.6	12
10	Bihar	28.43	11	880	7	8.07	3	921	22	10.47	34	347.0	4
11	Sikkim	32.98	6	76	32	0.05	31	875	28	11.10	33	50.2	24
12	Arunachal Pradesh	26.21	15	13	35	0.11	27	901	25	20.41	26	239.1	5
13	Nagaland	64.41	1	120	27	0.19	25	909	24	17.74	29	146.3	13
14	Manipur	30.02	7	107	29	0.23	23	978	5	23.88	21	72.5	22
15	Mizoram	29.18	9	42	34	0.09	30	938	16	49.50	5	37.1	26
16	Tripura	15.74	31	304	18	0.31	22	950	13	17.02	30	37.8	25
17	Meghalaya	29.94	8	103	30	0.22	24	975	7	19.63	28	376.4	1
18	Assam	18.85	24	340	15	2.59	14	932	18	12.72	32	210.0	7
19	West Bengal	17.84	26	904	6	7.81	4	934	17	28.03	15	108.8	18
20	Jharkhand	23.19	18	338	16	2.62	13	941	15	22.25	24	214.6	6
21	Orissa	15.94	30	236	22	3.57	11	972	8	14.97	31	372.1	2

State/ UT Code	India/ State/ Union Territory	Decadal Growth (1991-01)	Rank	Density (per km <sup>2</sup> )	Rank	% of National Population	Rank	Sex Ratio	Rank	Urban Population (%)	Rank	Villages / Town	Rank
22	Chhatisgarh	18.06	25	154	26	2.02	17	990	3	20.08	27	209.4	8
23	Madhya Pradesh	24.34	17	196	23	5.88	7	920	23	26.67	17	140.6	14
24	Gujarat	22.48	20	258	21	4.93	10	921	21	37.35	9	76.6	21
25	Daman & Diu <sup>UT</sup>	55.59	3	1411	5	0.02	34	709	35	36.26	10	11.5	31
26	Dadra & Nagar Haveli <sup>UT</sup>	59.20	2	449	13	0.02	33	811	33	22.89	23	35.0	27
27	Maharashtra	22.57	19	314	17	9.42	2	922	19	42.40	8	115.7	16
28	Andhra Pradesh	13.86	33	275	19	7.37	5	978	6	27.08	16	133.9	15
29	Karnataka	17.25	28	275	20	5.13	9	964	11	33.98	11	109.2	17
30	Goa	14.89	32	363	14	0.13	26	960	12	49.77	4	8.2	33
31	Lakshadweep <sup>UT</sup>	17.19	29	1894	4	0.01	35	947	14	44.47	6	8.0	34
<b>32</b>	<b>Kerala</b>	<b>9.42</b>	<b>35</b>	<b>819</b>	<b>8</b>	<b>3.10</b>	<b>12</b>	<b>1058</b>	<b>1</b>	<b>25.97</b>	<b>18</b>	<b>8.6</b>	<b>32</b>
33	Tamil Nadu	11.19	34	478	11	6.05	6	986	4	43.86	7	19.6	29
34	Pondicherry <sup>UT</sup>	20.56	21	2029	3	0.09	28	1001	2	66.57	3	15.3	30
35	Andaman & Nicobar Islands <sup>UT</sup>	26.94	14	43	33	0.03	32	846	31	32.67	13	182.3	11
	<b>INDIA</b>	<b>21.34</b>		<b>324</b>		<b>100.00</b>		<b>933</b>		<b>27.78</b>		<b>123.8</b>	

Notes:

- 1) State/UT Codes refer to the code numbers given to the various States/Union Territories of India by the RG's office for Census 2001
- 2) <sup>UT</sup> - Union Territory
- 3) <sup>NCT</sup> - National Capital Territory

Source: Census of India, 2001.



makes a comparison of Kerala's sex ratios with the figures for the Country as a whole and those of the State of Tamil Nadu, for all the Census years from 1901.

During the entire period, India experienced an unfavourable and steadily deteriorating sex ratio, indicating severe gender discrimination. Tamil Nadu, on the other hand, started with a very favourable sex ratio, which steadily deteriorated over the years, went below 1000 by 1961 and reached the lowest level in 1991. She had shown a marginal improvement during the decade 1991-2001. Thus, as Basu (1999: 261) puts it, unlike the rest of Indian States, fertility has drastically come down in Kerala without an adverse change in sex ratio of the population.

However, some recent studies question the validity of the argument that Kerala is an exception to the general trend of increasing son preference in India. For instance, Irudaya Rajan, Sudha and Mohanachandran (2000), raise such a doubt by comparing 1981 and 1991 data for Kerala Districts on infant and child sex ratios and child mortality rates. The author's own study in this area using 2001 Census data provides further support to this doubt. It is found that the sex ratio of the 0 to 6 year age group in Kerala was just 963 and there were as many as ten States and three Union Territories with better child sex ratios in India in 2001. Further, the sex ratios for the zero to four and the five to nine age groups in all fourteen Districts of Kerala indicated female disadvantage with relatively larger disadvantage for girls of the former category in several Districts. The details of Kerala's District-level child sex ratios are presented elsewhere in this Thesis. Further, there are scholars who argue that the female-friendly sex ratio in the State is more a result of the increased migration of male members of the population to other parts of the Country and abroad in search of employment than the absence of gender discrimination.<sup>16</sup>

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<sup>16</sup> Zachariah, Mathew, and Irudaya Rajan (2000:7), for instance.

Urbanisation is yet another conventional indicator of development. As per 2001 Census, just one fourth of Kerala's population live in urban areas. This, of course, is lower than the all India average and the lowest among the South Indian States. In all, eleven States and six Union Territories have larger urban population percentage than Kerala. Interestingly, there has been a marginal decline in the proportion of urban population in Kerala during the period 1991-2001 from 26.39% to 25.97%. This, however, has not been due to any absolute fall in the urban population, but due to a relatively lower growth of urban population than the rural population over the last Census decade. Further, there are just 8.6 villages per town in Kerala. Only one State (Goa) and two Union Territories (Delhi and Lakshadweep) have lower ratios than this. All the seventeen States and Union Territories, which rank above Kerala in terms of the proportion of urban population in total population, excepting these three, have larger village-town ratios. Although this seems to be a minor thing, considering Kerala's relatively smaller geographical size, it indicates a wider spread of towns among villages. The result is better spread of public utilities and social overheads like education, health, transport and communication facilities, throughout the State. The analysis of Kerala's development in terms of the proportions of rural and urban populations need not yield fruitful results as the State has the unique characteristic of 'rural-urban continuum'. This is the reason why Sreekumar (1990) coined the term 'rurban', meaning neither rural nor urban, to address the Kerala situation.

### **3.3 The Health Dimension**

The close linkage between the demographic and health dimensions of development cannot be ignored. In fact, the achievements in the sphere of public

health, such as increase in the expectation in life, reduction in infant, child and maternal mortality, reduction in fertility rate etc., have important connotations in the demographic development of the society. Let us consider these different indicators one-by-one to understand the extent of disparity across States in the domain of public health.

Expectation of life at birth is the most widely used single indicator of health attainment of a society. Although, the life expectancy at birth for an average Indian has more than doubled since independence, its pace of improvement is not only inadequate to compare favourably with many other nations of the developing world, but also affected by wide interstate and intrastate disparities.<sup>17</sup> The same is the case with other major health indicators like IMR, U5MR and MMR. Table - 3.3 makes a comparison of the performance of major Indian States in these indicators.

It is an established fact that an infant born in Kerala—no matter whether it is male or female—can be expected to outlive its counterpart elsewhere in India, by a significantly good margin. The author considered rural female life expectancy at birth as the indicator of longevity as the rural people in general, and females in particular, may be expected live longer than her counterpart in Madhya Pradesh—the worst performing State in this indicator—by more than twenty one years. Even Punjab—the second best performer—lags behind Kerala by a margin of over seven years. The rural-urban difference is relatively insignificant and the female-male gap is positive and significant in Kerala, as far as expectation of life is concerned.

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<sup>17</sup> Op. cit. Planning Commission, Government of India, 68

**Table – 3.3: Comparison of Important Health Indicators of Major Indian States**

State	Rural Female Life Expectancy, 1992-96	Rank	Rural IMR, 1999	Rank	MMR, 1998	Rank	Deliveries assisted by a health professional (%), 1998-99	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Kerala</b>	<b>74.9</b>	<b>1</b>	<b>14</b>	<b>1</b>	<b>198</b>	<b>7</b>	<b>94</b>	<b>1</b>
Punjab	67.5	2	57	3	199	8	62.6	4
Maharashtra	63.9	3	58	4	135	4	59.4	5
Haryana	63.1	4	70	8	103	3	42.0	9
Tamil Nadu	62.8	6	58	4	79	2	83.8	2
Karnataka	63.0	5	69	7	195	6	59.1	6
West Bengal	61.5	8	55	2	266	9	44.2	8
Gujarat	61.1	9	70	8	28	1	53.5	7
Andhra Pradesh	61.9	7	75	10	159	5	65.2	3
Assam	55.9	12	79	11	409	11	21.4	15
Orissa	55.8	13	100	15	367	10	33.4	11
Rajasthan	57.5	10	85	12	670	14	35.8	10
Madhya Pradesh	53.4	15	96	14	498	13	29.7	12
Bihar	57.5	10	64	6	452	12	23.4	13
Uttar Pradesh	55.4	14	88	13	707	15	22.4	14
<b>INDIA</b>	<b>59.8</b>		<b>75</b>		<b>407</b>		<b>42.3</b>	

*Sources:*

Col. (2) and (6) – National Human Development Report 2001, Table 5.2 and Table 5.22 respectively

Col. (4) - Registrar General of India, 2003, SRS Bulletin, 37(2)

Col. (8) – Table 8.13, NFHS-2 India: National Final Report (Web edition),  
<<http://www.nfhsindia.org/data/india/indch8.pdf>>

There are significant differences in life expectancy at birth across States. In Kerala, a person at birth is expected to live for over 73 years (70 years for males and 76 years for females), followed by Punjab at 67.4 years (66.4 years for males and 68.4 years for the females). On the other hand, life expectancy at birth in Assam, Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh has been in the range of 55-60 years. Among the larger States, males are still expected to outlive the females in Bihar, Madhya Pradesh, Orissa and Uttar Pradesh. The rural-urban difference in life expectancy at birth is less than a year in Kerala



whereas, in Assam, Bihar, Madhya Pradesh and Orissa this difference is around 8-10 years. (Planning Commission, 69)<sup>18</sup>

The IMR, which is yet another important vital rate and health indicator, also shows significant divergence across States in India. Here also, data relating to rural population is considered owing to their increased vulnerability to health related problems and poor health facilities available. Kerala leads in this aspect also with an IMR of fourteen where as Orissa at the other end has as many as 100 infant deaths per 1000 live births. Comparing this with international figures for 1999, one could see that Kerala's IMR was equal to that of Barbados, which held the thirty-first rank in HDI, while Orissa stood much behind with Equatorial Guinea, whose HDI rank was 110.<sup>19</sup> Even the second best performer West Bengal's IMR in 1999 was as high as that of Kerala in 1981—some two decades back.<sup>20</sup> Further, as in the case of expectation of life, there is no pronounced rural-urban disparity or no female disadvantage in Kerala as far as IMR is concerned.<sup>21</sup>

“Of particular interest among these indicators is the maternal mortality rate, which like the infant mortality rate, continues to be high even while the death rate for the population, on the whole, is showing a steady decline over most of the last century.”<sup>22</sup> The situation in Kerala, however, is slightly different. Here, not only the death rate, but also the infant mortality rate is well in line with that of industrialised nations of the West. In 1998, the MMR was the lowest in the case of Gujarat and the highest in the case of Uttar Pradesh. As many as six States had

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<sup>18</sup> Op. cit. Planning Commission, 69

<sup>19</sup> Data for comparison has been taken from UNDP, 2001, 168

<sup>20</sup> See op. cit. Planning Commission, 227, Table 5.10 for details

<sup>21</sup> See *ibid.* and op. cit. Registrar General, 2003 for details

<sup>22</sup> Op. cit. Planning Commission, 71

lower maternal mortality rates than Kerala. All her South Indian counterparts had lower MMR than Kerala. Although, the MMR in Kerala is less than half of the National average and well below one third of that of States like Rajasthan and Uttar Pradesh, it remains to be an area where she failed to replicate her achievements elsewhere in the domain of demographic and health development.

In this connection, it may be interesting to note some of the findings of a field investigation of deaths among women of reproductive ages, conducted in Anantpur District of Andhra Pradesh during 1984-85, reported in Bhatia (1988). According to this study, over eighty per cent of maternal deaths in rural areas of Anantpur were of those women who had not made even a single visit for antenatal check-up. In contrast, none of the women who had made five or more visits for antenatal check-up died. The study found that forty-one per cent of deaths were definitely preventable, thirty-seven per cent possibly preventable and just twenty-two per cent were unavoidable. Surprisingly, as much as ninety four per cent of total deliveries in Kerala in 1998-99 were assisted by health professionals and ninety three per cent were in medical institutions. The respective figures for other States were significantly lower. The figures for Gujarat, for instance, were 53.5 per cent and 46.3 per cent respectively. Further, 98.3 per cent had received at least three antenatal check-ups where as the corresponding figure was 60.2 per cent in Gujarat.<sup>23</sup> The impression one gets from this is that we need some alternative explanation to deal with the relatively high MMR in Kerala.<sup>24</sup> It may also be

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<sup>23</sup> Table 8.7, Chapter 8 of NFHS-2 India: Final National Report (Web edition), URL: <<http://www.nfhsindia.org/data/india/indch8.pdf>>

<sup>24</sup> One possible explanation given by Mari Bhat (2000, 1) points to the distortions in State-level maternal mortality data from sampling and non-sampling errors due to the incapability of the principal data source—the SRS

noted that the maternal mortality figures of Kerala supplied by the State Directorate of Health Services, present an entirely different picture of low MMR in Kerala.<sup>25</sup> However, the high proportion of institutional deliveries might have a positive role in lowering the IMR and raising the vaccination rate in Kerala.

### **3.4 The Knowledge Dimension**

The knowledge dimension of human development is generally captured in terms of indicators like the literacy rate, average years of schooling, enrolment rates and proportion of professionally and technically qualified persons, of which the last one is rather a means than an end in itself. Table – 3.4 attempts to make a comparison among the major States with respect to the first three of these indicators. Considering the relatively larger deprivation suffered by females, particularly in rural areas, the States are ranked principally on the basis of the educational attainments of their rural women. The exception is the average years of schooling, in the case of which median years of schooling of all females in the seven plus age are considered, owing to data limitations.

As per Census 2001, Kerala stand way ahead of other States in the matter of rural female literacy. As in the case of the indicators of health, the rural-urban and male-female disparities in literacy rates are relatively small in Kerala. For instance, the literacy rate of urban females in Kerala is just four per cent higher than rural female literacy in the state. Similarly, the literacy advantage of rural males over rural females is 6.75 per cent and the gender disparity in rural Kerala is greater than that in urban Kerala by 1.6 per cent. This, of course, is a rare situation in the entire country, where the rural-urban and the male-female

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<sup>25</sup> See for instance, Tables 10-1 and 10-2 of Family Welfare Programme Monthly Bulletin: March 2001, Directorate of Health Services, government of Kerala, Thiruvananthapuram.

divergences in the attainment of literacy are quite pronounced. For the Country as a whole, rural-urban disparity in literacy is as high as 26.4 per cent, rural gender disparity is 24.6 per cent and the divergence between rural-urban gender disparities is 11.2 per cent.

**Table – 3.4: Comparison of Educational Performance of Major Indian States**

State	Rural Female Literacy (2001)	Rank	6-14 Age Rural Female School Attendance (1998-99)	Rank	Median Years of Female Schooling (1990-99)	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Kerala</b>	<b>86.8</b>	<b>1</b>	<b>97.0</b>	<b>1</b>	<b>7.6</b>	<b>1</b>
Punjab	57.9	3	87.0	2	5.0	2
Maharashtra	59.1	2	83.9	5	4.1	4
Haryana	49.8	7	84.1	4	2.4	8
Tamil Nadu	55.8	4	86.3	3	4.5	3
Karnataka	48.5	8	72.8	9	3.2	5
West Bengal	53.8	5	75.3	6	2.1	9
Gujarat	45.7	10	66.3	11	3.2	5
Andhra Pradesh	44.4	11	65.4	13	0.0	11
Assam	52.2	6	74.3	8	2.5	7
Orissa	47.2	9	74.5	7	1.2	10
Rajasthan	37.7	14	58.2	14	0.0	11
Madhya Pradesh	43.0	12	66.6	10	0.0	11
Bihar	30.0	15	51.3	15	0.0	11
Uttar Pradesh	37.7	13	66.2	12	0.0	11
<b>INDIA</b>	<b>46.6</b>		<b>69.7</b>		<b>1.6</b>	

Sources:

Col. (2) – Census of India 2001

Col. (4) – Compiled from Table 2.9 of the National Report and Table 2.7 of the respective State Reports of NFHS-2

Col. (6) – Table 2.8, National Report, NFHS-2

The school attendance rate of rural females in the 6-14 age group is the highest in Kerala and the rural-urban disparity here is almost negligible. In 1998-99, the rural female school attendance rate was ninety-seven per cent in Kerala

while it was ten per cent lower in Punjab—the second ranking State—and more than twenty-seven per cent lower in the Country as a whole. Kerala was the only State in the entire Rural India with larger school attendance rate among girls than boys in the school-age population.<sup>26</sup>

The average number of years of schooling is a widely used indicator of educational performance of a society. Median being an average free from the influence of extreme values, the author selected median years of female schooling computed by NFHS-2 as the indicator here. Kerala ranks first in this count too, with an average female schooling of 7.6 years followed by Punjab with five years. The National average is only 1.6 years. The average woman in as many as five states in the list, including the South Indian State Andhra Pradesh, has no schooling at all.

### **3.5 The Standard of Living Dimension**

Maintaining a decent standard of living is an essential ingredient of human development. Income is the most commonly used indicator of standard of living. Nevertheless, the mere receipt of income does not imply improvement in human standard of living, although it provides the potentiality for that. Therefore, assets, amenities and consumption also have to be assessed, in addition to income, to get a reasonable idea about the standard of living dimension of human development. The list of indicators that can be employed here is almost endless and a number of research papers, like the India Development Reports of the IGIDR, the reports relating to the Programme of Research on Human Development in India by the NCAER and the National Human Development Report 2001 of the Planning

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<sup>26</sup> From Table 2.7 of various State Reports of NFHS-2

Commission, thoroughly handled this aspect of development of Indian States. Hence, we confine ourselves to a few basic indicators relating to income, consumption, employment and amenities, which are shown in Table – 3.5.

Kerala ranked seventh in NSDP/c at 1993-94 prices. Her NSDP/c in 1999-2000 was just one per cent above the NNP/c of the Country, while it was fifty per cent larger in the case of the top ranking State Maharashtra and forty-seven per cent higher in Punjab—the second ranking State. Although relatively poor, Kerala's position is somewhat better when compare it with States like Bihar, Uttar Pradesh, Orissa and Assam. The NSDP/c of Bihar in 1999-2000 was just thirty-three per cent of NNP/c and that of the other three were slightly above half of the national average. An interesting observation here is that the four South Indian States form a group here, holding the four successive ranks from five to eight, although the fifth ranking Tamil Nadu's per capita income was about thirty per cent higher than the eighth ranking Andhra Pradesh.

The position of Kerala with respect to work participation rate is still worse and the lowest among the major States. As per Census 2001 data, less than one third of Kerala's population is economically active [see Col. (6) of the table]. This, together with the highest unemployment rate in the country [see Col. (8)], creates heavy dependency burden in the State. It may be interesting to note that all the other three South Indian States hold the first three ranks in work participation and their unemployment rates are very much lower than that in Kerala. Further, Kerala's closest associates in work participation rate are Uttar Pradesh and Bihar, the two least developed States in the Country.

**Table – 3.5: Performance of Major States in Selected Standard of Living Indicators**

State	NSDP/c* at constant prices, 1999-2000 (Rs.)	Rank	MPCPE <sup>#</sup> , 1999-2000 (Rs.)	Rank	Work Participation Rate, 2001 (%)	Rank	Rate of Unemployment, 1999-2000 (%)	Rank	% of BPL Persons, 1999-2000	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Kerala	10178	7	152.7	1	32.3	15	8.6	15	12.72	3
Punjab	14809	2	147.1	2	37.6	10	2.1	8	6.16	1
Maharashtra	15178	1	122.0	6	43.5	4	2.9	12	25.02	9
Haryana	13308	3	140.2	3	39.8	8	1.2	4	8.74	2
Tamil Nadu	12181	5	127.5	5	44.8	2	2.6	10	21.12	8
Karnataka	10912	6	116.7	8	44.6	3	1.4	5	20.04	7
West Bengal	9320	9	119.0	7	36.8	11	4.0	13	27.02	10
Gujarat	13298	4	130.8	4	42.1	6	0.8	1	14.07	4
Andhra Pradesh	9445	8	104.2	10	45.8	1	1.4	5	15.77	6
Assam	5785	12	99.8	11	35.9	12	4.6	14	36.09	12
Orissa	5735	13	96.5	12	38.9	9	2.6	10	47.15	15
Rajasthan	8555	10	110.9	9	42.1	6	0.8	1	15.28	5
Madhya Pradesh	8248	11	92.4	15	42.7	5	1.1	3	37.43	13
Bihar	3281	15	93.9	14	33.9	13	2.4	9	42.6	14
Uttar Pradesh	5675	14	95.6	13	32.6	14	1.4	5	31.15	11
INDIA	10071		111.3		39.3		2.3		26.1	

*Notes:* \* At 1993-94 prices. Value given for India is NNP/c at 1993-94 prices.

<sup>#</sup> Values in Col. (4) represent inequality and inflation adjusted monthly per capita consumption expenditure values.

*Sources:* Col. (2) – CSO data downloaded from <[http://mospi.nic.in/11\\_percapnsdp\\_const\\_9394ser.htm](http://mospi.nic.in/11_percapnsdp_const_9394ser.htm)>

Col. (4), (8) and (10) – NHDR 2001, Tables 2.5, 2.16 and 2.21 respectively

Col. (6) – Compiled with CensusInfo India 2001, Ver. 1.0 data base software from Registrar General of India

**Table – 3.5: Performance of Major States in Selected Standard of Living Indicators (Contd.)**

State	Households living in Permanent House, 2001 (%)	Rank	Households having Drinking Water Source within premises, 2001 (%)	Rank	Households using Water Closet, 2001 (%)	Rank	Households using Electricity for Lighting, 2001 (%)	Rank	Per Capita Electricity Consumption, 1999-2000 (kw/h)	Rank
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Kerala	68.1	2	71.6	2	65.19	1	70.2	7	261.8	11
Punjab	86.1	1	85.5	1	20.40	6	91.9	1	921.14	1
Maharashtra	57.8	7	53.4	3	21.85	4	77.5	6	520.49	4
Haryana	65.8	3	44.5	6	10.91	12	82.9	2	530.82	3
Tamil Nadu	58.5	6	27.1	13	23.22	3	78.2	5	484.11	5
Karnataka	54.9	8	31.7	11	18.64	7	78.5	4	387.09	7
West Bengal	40.4	13	32.1	10	20.95	5	37.5	11	204.41	12
Gujarat	65.3	4	46.5	4	31.09	2	80.4	3	834.66	2
Andhra Pradesh	54.7	9	31.3	12	18.12	8	67.2	9	391	6
Assam	19.7	15	37.9	8	15.90	9	24.9	14	95.46	15
Orissa	27.6	14	19.0	15	8.79	13	26.9	13	354.6	8
Rajasthan	64.9	5	32.9	9	11.93	11	54.7	10	334.5	10
Madhya Pradesh	41.5	11	24.6	14	12.47	10	70.0	8	351.73	9
Bihar	40.7	12	39.6	7	7.87	15	31.9	12	140.77	14
Uttar Pradesh	53.4	10	46.0	5	7.98	14	10.3	15	175.8	13
INDIA	51.8		39.0		18.02		55.8		354.75	

*Sources:* Col (12) to (18) – Census 2001 data downloaded from <<http://www.censusindia.net/2001housing/rank.html>>

Col (20) - Annual Report on The Working of State Electricity Boards and Electricity Departments, 2001-02 (Web Edition)



Based on Planning Commission's estimates, NHDR 2001 gives the percentage of population below the poverty line (BPL) in 1999-2000 as 12.72, which was the third lowest BPL rate among the major States in that year [see Col. (10)]. The BPL percentage of Punjab—the best performer—was just half of that and that of Orissa—the worst performer—was three times larger than Kerala's.

Not hindered by the relatively moderate rank in per capita income, Kerala ranks first, as far as monthly per capita consumption expenditure (MPCE) is concerned. In 1999-2000 inflation and inequality adjusted MPCE of Kerala was thirty seven per cent larger than that of the national average, where as it was seventeen per cent lower than the National average in Madhya Pradesh—the State with the lowest MPCE. Authors like Pushpangadan (2003) argue that high proportion of foreign remittances in income is the main reason for high consumption expenditure in Kerala. The rural-urban disparity in MPCE was the lowest in Kerala (less than ten per cent) where as it was the highest in Assam (about forty-two per cent).

Considering the availability of basic amenities, Kerala's position is much favourable in relation to most other States. As per Census 2001 data, 68.1 per cent of Kerala households were living in pucca (permanent) houses and 71.6 per cent had drinking water source within premises. Only Punjab had better rank in both cases. On the sanitation front, Kerala topped the list with 65.2 per cent households having water closets for excreta disposal, were as the second rank holder Gujarat State had just thirty one per cent and at the National level only eighteen per cent households had that facility.

Per capita consumption of electricity is considered as a prominent indicator of quality of life, even by advanced societies, while the use of electricity for lighting is treated as a basic amenity. Although, slightly over seventy per cent households in Kerala uses electricity for lighting, six other States have better percentages than that. Punjab at the top position has about ninety-two per cent households using electricity. Kerala's position is still weaker in the matter of annual per capita consumption of electricity. In 1999-2000, it was just 261.8-kilowatt hour (eleventh rank) while the top ranking Punjab's per capita consumption was 921.14-kilowatt hour (3.5 times larger).

### **3.6 The Gender Dimension**

'As has been said by Mahbub-ul Haq, "Development if not engendered is endangered". No society can be called developed if one half of humanity remains voiceless, invisible and undervalued' (Seeta Prabhu, 2003). But discrimination against the female gender is a universal phenomenon in human development, though the extent of disparity varies from country to country. The gender-disparity adjusted human development performance of a country is measured mainly in terms of the GDI. The GDI is based on the same indicators on which the HDI is based, except that the indicators are adjusted for gender disparity, before computing the GDI. In this Chapter, instead of computing the State GDIs, we concentrate on the inter-state variations in the achievements of males and females on four basic indicators of human development, rank the States on the basis gender disparity in each indicator and compute the Borda count for each State. The State with the lowest Borda score will be the one with the lowest overall gender disparity and vice versa.

The four indicators considered are life expectancy at birth, literacy rate of seven plus age group, school attendance rate of 6-14 age group and the work participation rate. In Table – 3.6, these indicators for each State are presented as female value as percentage of the male value. If male and female achievements are equal, the corresponding percentage will be 100, if female achievement is greater than male achievement the percentage will be greater than 100 and if female achievement is lower than male achievement the percentage will be less than 100.<sup>27</sup> The difference of the calculated percentage from 100 indicates the gender disparity in that indicator of development.

Kerala has the lowest gender disparity among the States in three out of the four indicators. The female life expectancy in Kerala is 107.8 per cent of male life expectancy, which is even better than many highly developed nations in the world.<sup>28</sup> Bihar, on the other extreme, has female life expectancy lower than that of males by more than three per cent. Three other States—Madhya Pradesh, Uttar Pradesh and Orissa—have lower life expectancy for women than men. On the education front, Kerala is the only State where girls outperform boys in the school attendance rate of children in the 6-14 age group. The worst performance here is by Rajasthan where girls' school attendance rate is just 73.15 % of that of boys'—more than twenty-six per cent divergence! In the case of literacy rate also, gender disparity is the lowest in Kerala, just 6.7 per cent, where as the divergence is more than forty four per cent in Bihar—the lowest ranking State. However, the

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<sup>27</sup> A note of caution is in order here. In the case of life expectancy, a value equal to 100 still represent female disadvantage, as females have the natural capacity to outlive their male counter parts, if there is no gender disparity.

<sup>28</sup> For instance, as per Human Development Report 1999 (p.138), the male and female life expectancies at birth in Canada—the top ranking country in HDI and GDI—in 1997 were 76.1 and 81.8 respectively, which means the female life expectancy was 107.5 per cent of male life expectancy.

**Table – 3.6: Gender Differences in Basic Human Development Indicators of Major States**

State	Female Rate as Percentage of Male Rate in								Borda		GDI Rank	
	Life Expectancy 1992-96	Rank	Literacy 2001	Rank	6-14 Age School Attendance 1998-99	Rank	Work Participation 2001	Rank	Score	Rank	NHDR 1991	AKS 1991-92
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Kerala	107.82	1	93.26	1	100.41	1	30.36	15	18	1	1	1
Punjab	104.34	3	84.02	2	97.93	2	34.57	12	19	4	8	4
Maharashtra	103.14	6	78.26	4	96.34	4	60.93	4	18	1	4	2
Haryana	102.24	8	71.05	10	93.85	7	54.06	6	31	7	6	9
Tamil Nadu	103.38	5	78.41	3	97.36	3	53.87	7	18	1	2	6
Karnataka	104.93	2	75.31	7	94.40	6	56.06	5	20	5	5	5
West Bengal	101.84	10	77.63	6	95.64	5	33.39	14	35	10	12	7
Gujarat	103.76	4	72.73	8	87.08	10	50.91	8	30	6	6	3
Andhra Pradesh	102.49	7	72.22	9	86.93	12	61.88	3	31	7	3	8
Assam	100.66	11	77.89	5	93.34	8	41.68	10	34	9	13	10
Orissa	99.36	12	67.11	11	90.48	9	46.59	9	41	13	11	11
Rajasthan	101.88	9	57.99	14	73.15	15	66.87	1	39	11	9	13
Madhya Pradesh	98.37	14	66.08	12	86.98	11	64.15	2	39	11	10	12
Bihar	96.88	15	55.65	15	76.74	14	39.41	11	55	15	15	14
Uttar Pradesh	98.56	13	61.19	13	84.12	13	34.46	13	52	14	14	15
INDIA	102.02		71.43		88.69		49.52					

*Source:*

*Col. (2) – NHDR 2001, Table 5.4, Col (4) – Census of India 2001*

*Col. (6) – Compiled from Table 2.9 of the National Report and Table 2.7 of the respective State Reports of NFHS-2*

*Col (8) – Computed with data obtained from CensusInfo 2001 database software from the Registrar General*

*Col. (12) – Recalculated from Table 1.2 of NHDR 2001, Col (13) – Recalculated from Table 5 of Shivakumar (1996a)*

situation turns totally against Kerala, when economic participation is concerned. Not only the overall work participation in the State, but the ratio of female work participation to male work participation also is the lowest in the country. Female work participation rate in Kerala is slightly above fifteen per cent<sup>29</sup> and the male-female disparity is about seventy per cent. It is true that this gap is generally high everywhere in India. Even in Rajasthan, where the gap is the lowest, it is about thirty-three per cent and in the Country as a whole, it is slightly over fifty per cent.

Column ten of Table – 3.6 gives the Borda score of each State for gender disparity, which is the sum of the rank numbers for the four indicators considered. In column eleven, we rank the States again in the ascending order of their Borda scores, that is, the State with the lowest Borda count gets the first rank and that with the highest Borda count gets the last rank. Three States—Kerala, Maharashtra and Tamil Nadu—share the top rank with eighteen points, closely followed by Punjab (nineteen points) and Karnataka (twenty points). Overall gender disparity in human development is the lowest in these five States. Kerala and Punjab need special mention here. But for their poor performance in the work participation side, their Borda scores would be much lower. It is an area to which these States have to turn their immediate attention. The highest overall gender discrimination is seen in Bihar (fifty-five points) and then in Uttar Pradesh (fifty-two points).

A comparison of the Borda ranks calculated with the GDI ranks of the States from the NHDR 2001 and Sivakumar (1996) has shown in the last columns of Table – 3.6. The rank correlation coefficients also has been computed and presented in

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<sup>29</sup> CensusInfo India 2001, V.1.0, Registrar General of India, New Delhi

Table – 3.7. There has been high positive correlation between all three rank pairs. The highest correlation is between the Borda rank obtained from Table – 3.6 and the GDI rank computed by Sivakumar ( $GDI_{AKS}$ ) and the lowest correlation is between  $GDI_{NHDR}$  and  $GDI_{AKS}$ . It means that our Borda rank is a reasonable compromise between the other two.

**Table – 3.7: Rank Correlation Coefficients of Gender Disparity Ranks**

	Borda Rank	$GDI_{NHDR}$ Rank	$GDI_{AKS}$ Rank
Borda Rank	1.00		
$GDI_{NHDR}$ Rank	0.87	1.00	
$GDI_{AKS}$ Rank	0.89	0.76	1.00

One should not, however, be mistaken that the Borda score is a good substitute for the GDI. The Borda score is only a system of ordering. For actual quantification of gender based development progress, we have no option, but to use indices like the GDI.

### 3.7 The Rural-Urban Dimension

Rural-urban divergence is a pronounced feature of human development in India. There is a huge volume of literature on inter-state rural-urban disparities in the Country with respect to various indicators of development. With the help of Table – 3.8, we make a comparison of the inter-state variations in rural-urban disparities in six basic indicators of human development, viz., sex ratio, life expectancy, IMR, literacy, school attendance and work participation. In the case of each one of these indicators, the rural value is expressed as percentage of the urban value. The deviation of the calculated value from 100 indicates the rural-urban disparity in achievement.

**Table – 3.8: Rural-Urban Disparity in Basic Human Development Indicators of Major States**

State	Rural Rate as Percentage of Urban Rate in												Borda	
	Sex Ratio 2001	Rank	Life Expectancy 1992-96	Rank	IMR 1999	Rank	Literacy 2001	Rank	6-14 Age School Attendance 1998-99	Rank	Work Participation 2001	Rank	Score	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Kerala	100.09	1	98.91	1	87.50	1	96.43	1	97.87	1	103.16	1	6	1
Punjab	104.68	8	94.74	3	146.15	7	82.35	3	92.31	7	118.86	4	32	4
Maharashtra	109.80	14	90.49	9	187.10	12	82.60	2	93.61	5	148.24	12	54	8
Haryana	102.34	4	93.05	5	120.69	3	79.89	5	96.48	3	136.83	9	29	2
Tamil Nadu	101.19	2	92.15	6	148.72	8	81.22	4	95.04	4	134.04	7	31	3
Karnataka	103.84	7	91.36	8	287.50	15	73.64	10	86.18	10	137.82	10	60	10
West Bengal	106.45	10	89.54	10	137.50	5	78.47	6	93.37	6	112.13	2	39	6
Gujarat	107.53	13	94.98	2	155.56	10	73.86	9	84.00	12	143.81	11	57	9
Andhra Pradesh	101.84	3	93.13	4	202.70	13	72.42	13	83.31	13	158.07	15	61	11
Assam	107.06	12	86.07	14	219.44	14	71.04	14	87.96	9	113.75	3	66	14
Orissa	110.22	15	86.71	13	153.85	9	74.67	8	96.93	2	131.27	6	53	7
Rajasthan	104.73	9	89.29	11	144.07	6	72.74	12	85.93	11	155.07	14	63	12
Madhya Pradesh	103.21	6	85.24	15	174.55	11	72.93	11	82.97	14	153.92	13	70	15
Bihar	106.62	11	88.94	12	116.36	2	61.09	15	78.29	15	135.94	8	63	12
Uttar Pradesh	102.83	5	91.40	7	133.33	4	76.02	7	89.80	8	126.77	5	36	5
INDIA	105.02		89.59		170.45		73.95		86.42		130.43			

*Sources:*

*Col. (2) and (8) – Census of India 2001, Col. (4) – NHDR 2001, Table 5.2 and 5.3, Col. (6) – Registrar General of India, 2003, SRS Bulletin, 37(2), Col. (10) – Compiled from Table 2.9 of the National Report and Table 2.7 of the respective State Reports of NFHS-2, Col. (12) – Computed with data obtained from CensusInfo 2001 database software from the Registrar General*

Kerala ranks first in all the six indicators, indicating the lowest rural-urban divergence in all of them. Rural sex ratio is larger than urban sex ratio in all States including Kerala, but the difference in Kerala is so negligible—just one in 1000. Rural life expectancy in Kerala is about ninety-nine per cent of urban life expectancy where as it is just eighty-five per cent in Madhya Pradesh. In 1999 Kerala was the only State where rural IMR was lower than urban IMR (87.5 per cent). The corresponding figures were 287.5 per cent for Karnataka and 170.5 per cent for the Nation as a whole. On the education front, rural literacy was 96.4 per cent and rural school attendance rate was 97.9 % in Kerala, while the respective percentages for the lowest ranking Bihar were 6.1 and 78.3. Rural work participation in Kerala was higher than urban work participation by slightly over three per cent where as the difference was over fifty-eight per cent in Andhra Pradesh. The Borda score of rural urban disparity is the lowest in Kerala (six), indicating that she has the lowest overall rural urban disparity among the major States. Haryana stands second with twenty-nine points and Tamil Nadu follows with thirty-one points. On the lower end, Madhya Pradesh with seventy points has the maximum overall disparity, closely followed by Assam with sixty-six points. The analysis on rural-urban divergence further exposes the ‘rurban’ feature of Kerala, which we have discussed earlier in this Chapter.

### **3.8 The Non-Conventional Dimension**

The analysis so far in this Chapter has been based on some popular indicators of human development. However, we have seen in Chapter 2 that these conventional indicators can hide many things.<sup>30</sup> There are many indicators like

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<sup>30</sup> See, for instance, op. cit. Cobb, et. al. 1995 and 1999



environmental quality, psychological well-being, human rights etc., which are integral parts of human development, but rarely enter into quantification and indexing of human development progress. Although, the UNDP is regularly publishing data relating to some indicators belonging to these categories, they are not integrated with the conventional indicators so that a finer picture of the overall human development situation can be obtained. The author is making here a humble attempt to bring a few such non-conventional indicators into the inter-state human development structure we are analysing, without resorting to any complex indexing technique. Instead, we follow the same simple Borda count technique, although it contains an element of subjectivity.

We consider two major distress indicators—crimes per million population and morbidity per 100,000 people, which have both individual and social connotations and an indicator of child development—the CDI—that we have introduced in Chapter 2, in this part of our discussion. The selection of these indicators may be arbitrary, but the author feels that it is justifiable, as the purpose is to demonstrate the need and viability of integrating such indicators into the study of human development. The discussion is based on the data given in Table - 3.9.

In the matter of crimes, Kerala can be regarded as a ‘Distress State’ with 2850 crimes (all categories) per million people, the second highest among the major States. Only Rajasthan had a larger crimes rate. In fact, Mukherjee, Rustagi and Krishnaji (2001) included Kerala in the ‘high crimes rate’ group among the thirty two States and Union Territories they considered in their study, in which Kerala has the third largest number of crimes per million population.

The best performance among the major States has been that of Punjab with about 600 crimes, closely followed by West Bengal with 895 crimes. It may be alarming to note that a State like Kerala, which is known for her commendable achievements in education and social development, falls in the category of a State like Rajasthan, which ranks low in education and social development. One possible explanation is the relative underreporting of crimes in other States, owing to the lack of education, poor knowledge about legal rights and the prevalence of feudalistic relations.

Kerala is widely known as a State with high rate of (self-reported) morbidity and low rate of mortality, when compared with the rest of India (Sen, 1996, 17). Morbidity, of course, is a drag on human development. But, the relevant question here is, whether the actual health condition of Kerala people is poorer than that of people in States like Bihar, where the reported morbidity is lower and mortality is higher. The question is well addressed by a number of scholars but the opinions differ significantly.<sup>31</sup> One explanation is that the relatively low self-reporting of ailments in other States is due to poor health awareness and the lack of medical facilities there and there is no evidence to show that the actual morbidity in Kerala is higher than elsewhere in India (Ramachandran, 235).

The indicator of morbidity used in this study is based on the NFHS-2 data relating to 1998-99, on the prevalence of four diseases—Asthma, Tuberculosis, Jaundice during the past 12 months and Malaria during the past 3 months. The States are ranked on the basis of the incidence of each one of these diseases per

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<sup>31</sup> See for instance, Sen (*ibid*), Panikar and Soman (1984), Kannan et al. (1991) and Ramachandran (*op cit.*)

100,000 persons and the Borda scores are computed. These Borda scores and the ranks of the States with respect to the Borda scores are given in columns four and five of Table – 3.9. The advantage of the data we have used here is that it has been obtained from a relatively large sample survey and ailments considered and easily recognisable. Hence, the possibility of underreporting may be lower.

**Table – 3.9: Comparison of Selected Non-conventional Indicators across Major States**

States	Crimes per Million Population, 1996	Rank	Borda Score for Morbidity	Rank	CDI	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Kerala	2850.08	14	27	6	0.803	1
Punjab	600.68	1	10	2	0.712	4
Maharashtra	2137.12	9	33	8	0.701	5
Haryana	1784.25	8	19	3	0.714	3
Tamil Nadu	2224.07	10	19	3	0.745	2
Karnataka	2356.42	11	9	1	0.657	7
West Bengal	895.49	2	37	10	0.591	10
Gujarat	2635.19	12	30	7	0.663	6
Andhra Pradesh	1484.42	7	50	15	0.644	8
Assam	1463.32	5	48	12	0.561	12
Orissa	1470.25	6	49	14	0.597	9
Rajasthan	3182.49	15	33	8	0.569	11
Madhya Pradesh	2683.35	13	48	12	0.549	13
Bihar	1216.86	4	41	11	0.512	15
Uttar Pradesh	1077.85	3	26	5	0.520	14

Sources:

Col. (2) – Table 1 of Mukherjee, Rustagi and Krishnaji, 2001

Col (4) – Computed by the Author from Table 6.8 of NFHS-2 National Report

Col. (6) – Taken from Table 2.3 of this Thesis

The Borda score on morbidity suggests that Karnataka has the lowest morbidity rate, while Kerala ranks sixth. Taking individual ailments, Kerala has the lowest incidence rate in Malaria and second lowest in Jaundice. But in the incidence of TB her rank is ninth and in Asthma her rank is the lowest. As per the

Borda ranking, Andhra Pradesh turns out to be the State with the highest overall morbidity.

For the indicator of child development, we have copied the CDI values of the Major States from Table – 2.3 of this Thesis. Kerala with eighty per cent achievement comes first, followed by Tamil Nadu with 74.5 per cent achievement. Bihar with fifty one per cent achievement and Uttar Pradesh with fifty two per cent achievement take the fifteenth and fourteenth ranks respectively.

### **3.9 The Synthesis**

We conclude this Chapter with a synthesis of our results from the foregoing analysis. This has been done with the help of Table – 3.10, column two of which represents the total Borda scores of individual States by adding up their rank numbers with respect to all the twenty-six indicators considered. The States are then re-ranked in the ascending order of their Borda counts as shown in column three. These ranks indicate the overall human development ranks of the States. The mean and the standard deviation of the twenty-seven ranks of each State are given in columns four and five respectively. The ranking of States in the ascending order of the standard deviation values is given in column six. Column seven shows the 2001 HDI ranks of the major States obtained from the NHDR 2001.

It has been found that Punjab had the lowest Borda score (104) among the fifteen States and hence ranked first as the State with the best overall performance in the twenty-six human development indicators considered. Her mean rank was 4.00. The second position went to Tamil Nadu with a Borda count of 112 and a mean rank of 4.31. Kerala came to a very close third rank with a Borda count of

113 and mean rank 4.35. The other South Indian States, Karnataka and Andhra Pradesh, took the seventh and eighth ranks. The poorest performance had been that of Bihar with a Borda count of 319 and average rank 12.27. Uttar Pradesh and Madhya Pradesh closely followed with the fourteenth and thirteenth ranks respectively.

It had been found that the highest variation among individual indicator ranks was in the case of Kerala, whose standard deviation of ranks is 4.86. In fourteen indicators Kerala ranked first while in four her ranks were larger than ten—fifteen in one, fourteen in two and eleven in another one. Punjab's standard deviation of 3.25 was the tenth smallest among the States. The lowest variation of ranks was seen in the case of Karnataka with a standard deviation of 2.34.

As per the NHDR 2001 ranking of the major Indian States with respect to the HDI values of 2001, Kerala came first, followed by Punjab and Tamil Nadu respectively. The lowest rank goes to Bihar. It has been found that the rank correlation coefficient between the Borda ranks and the HDI ranks is 0.97, indicating very high degree positive correlation.

Kerala's top performance has been in indicators relating to demography, health, education, basic amenities and gender and rural-urban equity. Her performance has been miserable in indicators of income, economic participation and incidence of crimes. It may be worth considering, how the State's human development rank will change if we incorporate more distress related indicators like suicide rates, incidence of corruption, social unrest, mental derailment and environmental degradation in to the measurement of human development. However, non-availability of statistical data is a serious hurdle in that matter.

Even when data are available, they may not be reliable, as there is considerable underreporting of distress cases in many States.

**Table – 3.10: Borda Ranking of States with respect to 26 Human Development Indicators**

State	Borda Score	Borda Rank	Mean Rank	Standard Deviation of Ranks	Ranking in terms of Standard Deviation	HDI Rank 2001
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Kerala	113	3	4.35	4.86	15	1
Punjab	104	1	4.00	3.29	10	2
Maharashtra	142	4	5.46	2.87	3	4
Haryana	149	5	5.73	3.60	13	5
Tamil Nadu	112	2	4.31	3.03	7	3
Karnataka	167	7	6.42	2.34	1	7
West Bengal	211	9	8.12	2.96	4	8
Gujarat	151	6	5.81	3.16	8	6
Andhra Pradesh	205	8	7.88	3.35	11	10
Assam	285	12	10.96	3.03	5	14
Orissa	282	11	10.85	3.38	12	11
Rajasthan	264	10	10.15	3.22	9	9
Madhya Pradesh	292	13	11.23	2.86	2	12
Bihar	319	15	12.27	3.03	6	15
Uttar Pradesh	295	14	11.35	3.60	14	13
<b>Rank Correlation between Col. (3) and (7):</b>				<b>0.97</b>		

*Source: Col. (7): NHDR 2001, p.25*

We have seen that there is some uniqueness in the human development performance of Kerala with respect to the rest of India. Her achievements in demographic development, education, health, gender and child development are commendable indeed. At the same time, we have also noticed that all is not well with the pattern of development in the State. This is particularly true in the production and employment side. It is pointed out that “the paradoxical phenomenon of rapid social development unaccompanied by corresponding gains

in economic growth has been exhausting itself” (George, 1993, 133). In the light of severe resource stringency and slow economic growth, it is doubtful whether the state can continue a high level of social consumption, which in turn may jeopardised the sustainability of Kerala’s social development (Jeromi, 2003). The reservations of some demographers about the declining juvenile sex ratio in the State, about which we have discussed earlier in this Chapter, raises the doubt that Kerala ceases to be an exception in India in demographic development and gender equity. The high incidence of crimes and morbidity are also matters of concern. Hence, as quoted from Sen at the beginning of this Chapter, it is rather unscientific and counterproductive to consider Kerala as a unique model of human development. It is an experience, indeed a unique one, which needs thorough examination to understand its capacities and weakness, for the sustainable human development of humanity.