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Poverty in India: Regional Estimates, 1987-8

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### **POVERTY IN INDIA: REGIONAL ESTIMATES, 1987-8**

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and

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#### ABSTRACT

This paper presents estimates of rural and urban poverty and inequality for the 61 constituent "regions" of India's 16 major states in 1987-88, based on National Sample Survey data. The estimates are also used for preliminary investigation of selected issues, including the regional patterns of poverty decline since 1972-3, the hypothesis of interregional "convergence" in poverty levels, the evolution of intra-regional and inter-regional inequality in consumer expenditure, and the relationship between poverty decline and regional characteristics.

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### 1. INTRODUCTION

The literature on poverty in India has made extensive use of estimates of various "poverty indices" (usually the head-count ratio) derived from the National Sample Survey. These estimates are typically presented separately for the rural and urban areas of different states, as well as for the country as a whole. The design of NSS surveys, however, makes it possible to estimate poverty indices at a lower level of disaggregation — that of NSS "regions". The NSS region is essentially an intermediate unit between the state and the district, defined primarily on the basis of agro-climatic criteria. Each region consists of several districts within the borders of one particular state, and each of the major states is divided into several regions.

Region-specific poverty estimates are potentially useful in at least two ways. First, given that the incidence of poverty is often far from uniform within a particular state (as will be seen further on), the identification of intra-state regional patterns can be important for development planning. Efforts to focus public intervention on particularly deprived regions, for instance, require this type of information. Second, the availability of region-specific poverty estimates substantially extends the scope for statistical analyses of empirical relationships in which poverty plays an important role. Examples of such analyses include studies of the determinants of poverty itself, of the relationship between poverty and demographic outcomes (e.g. mortality or fertility), and of the effect of agricultural growth on rural poverty.<sup>1</sup>

Unfortunately, region-specific poverty estimates have rarely been used in the literature on poverty in India. In fact, the only year for which such estimates are available, as things stand, is 1972-3 (see Jain <u>et al</u>, 1988). In this paper, we present region-specific poverty estimates for 1987-8, based on special tabulations of the 43rd round of the National Sample

<sup>1</sup>For an example of use of region-specific poverty estimates in regression analysis, see Murthi, Guio and Drèze (1995).

Survey.<sup>2</sup> We also present some preliminary observations based on these estimates, including a brief comparison with the 1972-3 estimates.

# 2. • DATA AND METHOD

All the computations reported in this paper are based on consumer expenditure data derived from the 43rd round of the National Sample Survey, with 1987-8 as the reference year. The available data cover India's 16 "major states", which accounted for 98 per cent of the population in 1991. Standard indicators of poverty and inequality have been computed for each of the 61 regions that make up these 16 states.

Similar indicators are available for 1972-3 from Jain <u>et al</u> (1988). The authors used a rural poverty line of Rs 15 per capita per month at 1960-1 prices, and, to facilitate comparison between 1972-3 and 1987-8, the same poverty line is used in this study.<sup>3</sup> Following Jain <u>et al</u> (1988), we have deflated nominal expenditure figures by state-specific price indices that take into account inter-state price differentials; these price indices are based on Minhas <u>et al</u> (1991). While computing poverty and inequality indices, per-capita expenditure figures were suitably weighted by the inverse sampling probabilities.

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At the time of the 1972-3 survey, the 16 states covered in this study were made up of only 56 regions. These are the 56 regions considered by Jain <u>et al</u> (1988). Between 1972-3 and 1987-8, some of the original regions were subdivided. For instance, "Assam plains" has been further divided into "eastern plains" and "western plains". In the case of Madhya Pradesh and Tamil Nadu, some of the 1987-8 regions <u>overlap</u> two or more of the initial 1972-3 regions. This makes it impossible to establish a one-to-one correspondence between the 1972-3 and 1987-8 regional data by simple aggregation of the 1987-8 data. To deal with this problem, comparisons between the two survey years will be based on 50 regions only; these 50 regions

<sup>&</sup>lt;sup>2</sup>Our region-specific estimates for 1987-8 are consistent with the state-specific estimates of Minhas <u>et al</u> (1991) for the same year, based on the same source and a similar methodology; note, however, that different poverty lines are used in the two studies.

<sup>&</sup>lt;sup>3</sup>This widely-used poverty line was originally proposed by Dandekar and Rath (1971). The corresponding figure for urban areas is Rs 22.5 per capita per month at 1960-1 prices.

are obtained by excluding the "problem" districts of Madhya Pradesh and Tamil Nadu from the original list of 56 regions.<sup>4</sup>

#### 3. RURAL POVERTY IN 1972-3 AND 1987-8

Region-specific indices of poverty and inequality in 1972-3 and 1987-8 are presented in Tables 1 and 2 for rural areas, and in the Appendix for urban areas. Table 3 gives some summary statistics based on region-specific figures for 1987-8 (rural areas); the corresponding figures for 1972-3 are given in brackets for purposes of comparison. Figure 1 plots each region's head-count index of rural poverty in 1987-8 against the corresponding index for 1972-3, and similarly with the Gini coefficient in Figure 2. Since the Jain <u>et al</u> (1988) study does not give any information for urban areas, the remainder of this paper focuses specifically on rural areas.

As Tables 2 and 3 indicate, average per-capita expenditure (APCE) has increased in a large majority of regions between 1972-3 and 1987-8, with an average increase of about 12 per cent.<sup>5</sup> Similarly, the head-count index of rural poverty has declined in all but four regions (eastern Haryana, eastern and southern Uttar Pradesh, and the Jhelum Valley of Jammu and Kashmir), with an average decline of 28 per cent. The Gini coefficient, on the other hand, has increased in half of the regions and decreased in the other half, with no change on average. The broad-based decline of poverty between 1972-3 and 1987-8 is primarily driven by the expansion of APCE, with no systematic increase or decrease in inequality; this is a typical feature of recent changes in poverty and inequality in rural India (Ravallion and Datt, 1994).

<sup>4</sup>For the geographical boundaries of the different regions, and a list of the constituent districts, see Jain <u>et al</u> (1988) for 1972-3, and <u>Sarvekshana</u> for 1987-8.

<sup>5</sup>The "averages" mentioned in this paragraph are unweighted averages of the regionspecific values. Similar statements apply to the population-weighted averages.

Fable 1: Regional indicators of rural poverty an	i inequality,	1987-8
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eve veren all approximations	Region	APCE	HCR	GINI	***
incorrect cases of the second	Andhra Pradesh Constal		17.0	0.291	-
2.	Andhra Pradesh Inland Northern	1.74	21.5	0.319	
3.	Andhra Pradesh South Western	1.80	18.9	0.309	
4,	Andhra Pradesh Inland Southern	1.42	40.8	0.340	Constant of the second s
5.	Assam Plains Eastern	1.38	29.5	0.236	1000
6.	Assam Plains Western	1.25	39.1	0.221	•
7.	Assam Hills	1.42	24.7	0.233	
8.	Bihar Southern	1.15	51.4	0.269	-
9.	Bihar Northern	1.15	53.0	0.262	
10.	Bihar Central	1.11	51.9	0,240	and the second se
11,	Gujarat Eastern	1.50	33.4	0.322	CON NO.
12.	Gujarat Plains Northern	1,48	24.5	0.242	
13.	Gujarat Plains Southern	1.55	22.3	0.264	
14.	Gujarat Dry Areas	1.24	45.9	0.254	
15.	Gujarat Saurashtra	1,50	16.8	0.214	
16.	Haryana Eastern	1.83	18.7	0.312	
17.	Haryana Western	2,02	8.7	0.268	Witten
18.	J and K Mountains	1.86	16.9	0.323	
19.	J and K Outer Hills	1.56	27.2	0.295	
20.	J and K Jhelum Valley	1.75	13.4	0.280	1
21.	Karnataka Coastal and Ghats	1.72	10.7	0.235	20yete
22.	Karnataka Inland Eastern	1.56	19.9	0.272	
23.	Karnataka Inland Southern	1.51	31.9	0.319	
24.	Karnataka Inland Northern	1.42	35.2	0.302	1000
25.	Kerala Northern	1.36	40.5	0.296	
26.	Kerala Southern	1.69	26.6	0.328	
27.	Madhya Pradesh Chattisgarh	1.23	41.5	0.244	
28.	Madhya Pradesh Vindhya	1.43	32.9	0.280	
29.	Madhya Pradesh Central	1.22	41.2	0.234	
30.	Madhya Pradesh Malwa Plateau	1.51	34.2	0.337	
31.	Madhya Pradesh South Central	1.23	48.3	0.306	
32.	Madhya Pradesh South Western	1.24	47.7	0,311	Store and
33.	Madhya Pradesh Northern	1.67	20.1	0.296	
34.	Maharashtra Coastal	1.43	29.2	0.263	1
35.	Maharashtra Inland Western	1.61	30.2	0.353	
30. 27	Manarashira inland Northern	1.30	44.2	0.298	
37.	Manarashira Inland Central	1.31	47.5	0,343	
38.	Maharashtra Inland Eastern	1.19	40.0	0.204	
39. 40	Manarashira Eastern	1.24	43.7	0.232	
40.	Orissa Coastai	1.22	42.0	0.242	
41.	Orissa Southern	0.85	52.7	0.231	1
4 <u>2</u> . 12	Orissa Northern	1.10	33.7	0.200	
+3. 4.4	Punjab Normetn Bunish Southern	2.00	9.5	0.297	
<del>14</del> . 15	Punjab Soudiem	1.94	13.4	0.304	
+J. 16	Rajasthan Western	1.00	20.3	0.307	
<del>1</del> 0. 17	Rajasinan Nonn Eastern	1.38	61.1	0.303	
*/.	Rajasthan South Fastern	1.00	215	0.327	1
ю, IG	Tamil Nadu Coastal Northarn	1.16	57 0	0.295	
69. SA	Tamil Nadu Coastal Northern	1.10	32.5	0.281	
iu. 1	Tamil Nadu Coastai	1.44	15.6	0.201	
'l. 'n	Tamii Nadu Johnd	1.29	45.0	0.368	
 1	Littar Pradash Limalayan	1.00	84	0.300	
ی. م	Uttar Pradech Western	1.70	26.2	0.200	
7. 5	Uttor Dendach Control	1.01	36.1	0.000	
<i></i> 6	Ultar Pendash Fastarn	1.55	42.7	0.271	
0. 7	Uttor Prodech Southarn	1.47	50 1	0.255	
<i>i.</i> 8	Wast Bangal Unvelouen	1.10	26.5	0.150	
0. 0	West Bengal Hosters Plains	1.27	54.2	0.247	
<i>.</i>	west bengai Eastern Flains	1.10	20.5	0.001	
)	WAR RANGEL ANICE VISION	1 (4	19 1	U 291	2

Note: APCE denotes the average per-capita expenditure (as a ratio of the poverty-line expenditure level of Rs. 15 per month at 1960-61 all-India prices), HCR the head-count ratio (proportion of the rural population below the poverty line), and GINI the Gini coefficient of percapita expenditure.

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$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	APCE	ana an ann an an an ann an an an an an a	HCR	nen en en en anna anna anna anna anna a	GINI	an a
An and an	na nandalakan kata kata kata kata kata kata kata	angen par 1965 international and a state of the second state of the se	a ya a sa	4 0.0 I)	0 260	(107)
Uttar Pradesh Himalayan (U1)	1.24	( 59.3)	42.1	(=80.1)	0.271	(-130)
Kamataka Coastal & Ghats (KNI)	1.30	(32.5)	39.0	(-13.11	0.258	(12.9)
Andhra Pradesh Coastal (API)	1.13	( 58.2)	39.8	(*31.4) 1 86.5)	0.234	(-31.5)
West Bengal Himalayan (W1)	1,11	(14.1)	61.0	(-20:2)	0.272	(17.3)
AP Inland Northern (AP2)	1.10	( 57.9)	46.9	(*34.4)	0.275	(17.0)
Gujarat Eastern (G1)	1.04	(44.3)	71.5	(*33.3) ( 53.6)	0.293	(-10.0)
Maharashtra Coastal (MA1)	1.16	(23.1)	61.6	(-32.0)	0.331	(-0.8)
Kerala Southern (KE2)	1.33	(27.2)	48.9	(-45,5)	0.258	(36.5)
Maharashtra Inland Western (MA2)	1.25	(29.6)	54.3	(-44.3)	0.208	(2.9)
Gujarat Saurashtra (G5)	1,45	(-3.4)	30.2	(-44.2)	0.288	(-5.4)
Karnataka Inland Eastern (KN2)	1.33	(17.2)	35.5	(-4.3.9)	0 223	(32.2)
J and K Outer hills (JK2)	1.07	( 46.3)	47.3	(~42,4)	0.320	(-24.4)
West Bengal Western Plains (W4)	1.05	(17.4)	69.1	(-41.1)	0318	(-8.0)
Rajasthan South Eastern (R4)	1.33	(14.1)	50.0	(-37.1)	0.386	(-31.6)
Guiarat Plains Southern (G3)	1.93	(-19.8)	35.2	(-36.7)	0.255	(-5.2)
Gujarat Plains Northern (G2)	1.46	(1.4)	38.3	(-36.1)	0.255	(-1.6)
Madhya Pradesh Eastern (MP1)	0.98	(24.6)	64.2	(-35.3)	0.240	( 4.0)
Uttar Pradesh Western (U2)	1.32	( 21.7)	40.6	(-35.2)	0.202	(15.6)
Assam Hills (AS3)	1.24	(14.6)	37.8	(-34.7)	0.301	(-1.5)
Punjab Northern (P1)	2.10	(-1.7)	14.2	(-,34,1)	0.300	(-4.7)
Orissa Northern (O3)	0.85	(35.5)	78.7	(-31.8)	0315	(-7.8)
West Bengal Central Plains (W3)	1.20	(11.7)	57.1	(-30.8)	0311	(-18.7)
Maharashtra Eastern (MA6)	1.22	(2.3)	65.3	(-30.0)	0313	(37)
AP Inland Southern (AP4)	1.25	(29.5)	40.4	(-28.0)	0.295	(0.4)
Kerala Northern (KE1)	1.15	(18.3)	56.1	(-27.9)	0.276	(7.9)
Maharashtra Inland Northern(MA3)	1.20	( 8.7)	59.4	(-25.3)	0.320	(2.2)
Rajasthan Southern (R3)	0.95	(1.8)	82.0	(-23.3)	0.328	(-19.3)
Maharashtra Inland Eastern (MA5)	1.18	( 1.0)	65.2	(-23.2)	0.279	( 8.2)
Karnataka Inland Northern (KN4)	1.17	(21.0)	40.5	(-24.1)	0.295	(-8.7)
Bihar Southern (B11)	1.06	(7.8)	67.0	(-23.3)	0.270	(-0.7)
Haryana Western (HA2)	2.06	(-1.7)	11.0	(-21.5)	0.293	(-15.7)
West Bengal Eastern Plains (W2)	1.01	( 8.2)	69.1	(-21.5)	0.297	(-18.5)
Orissa Coastal (O1)	1.21	( 0.8)	52.1	(-19.4)	0.383	(-10.6)
Maharashtra Inland Central (MA4)	1.37	(-4.0)	J0.9 20.5	(-17.4)	0.193	(67.1)
J and K Mountains (JK1)	1.30	(43.2)	20.5	(-173)	0.300	(-9.3)
Uttar Pradesh Central (U3)	1.29	(4.8)	45.0	(-15.2)	0.331	(-8.3)
Punjab Southern (P2)	2.18	(-11.1)	13.6	(-13.7)	0,186	(22.5)
Assam Plains (AS2)	1.19	(9.4)	40.0 85 D	(-9.5)	0.282	(-10.9 <b>)</b>
Orissa Southern (O2)	0.81	(4.9)	50.4	(-8.8)	0.232	( 9.2)
Gujarat Dry Areas (G4)	1,26	(-1.3)	56 3	(-6.0)	0.286	( 0.4)
Tamil Nadu Coastal Northern (T1)	1.03	(12.9)	56.3	(-59)	0.283	( -7.3)
Bihar Northern (BI2)	1.20	(-4.0)	33.5	(-4.8)	0.267	( 19.4)
Kamataka Inland Southern (KN3)	1,38	(9.9)	30.1	(-31)	0.304	( 0.5)
Rajasthan North Eastern (R2)	1.63	(-3.3)	20.1	(-2.6)	0.287	( 7.1)
Rajasthan Western (R1)	1.60	(-2.5)	52.0	(-1.9)	0.296	(-18.8)
Bihar Central (B13)	1.24	(-10.7)	13.1	(2.4)	0.256	( 9.5)
J and K Jhelum Valley (JK3)	1.60	(8.8)	41.6	(26)	0.254	( 6.8)
Uttar Pradesh Eastern (U4)	1.29	(-1.4)	41.0	(12.0)	0.278	( -8.3)
Uttar Pradesh Southern (U5)	1.26	(-8.1)	16.0	(16.5)	0.292	( 6.8)
Haryana Eastern (HA1)	1.97	(-/.1)	62.0	n/a	. 0.267	n/a
Madhya Pradesh Inland Eastern	1.01	n/a	02.9 40 N	n/a	0.344	n/a
Madhya Pradesh Inland Western	1.34	n/a	47.0	n/a	0.321	n/a
Madhya Pradesh Western	1.34	n/a ·	<del>५,</del> ,, २५ ४	n/a	0.343	n/a
Madhya Pradesh Northern	1.59	n/a (	56 3	n/a	0.286	n/a
Tamil Nadu Coastal Northern	1.03	n/a	AS 4	n/a	0.248	n/a
Tamil Nadu Coastal Southern	1.10	n/a	40.4			-

Table 2: Rural Poverty and inequality: initial levels (1972-3) and proportionale change (1972-3 to 1987-8)

<u>Note</u>: The figures in parentheses indicate the <u>percentage change</u> between 1972-3 and 1987-8, e.g. (APCE<sub>1</sub> - APCE<sub>0</sub>)/APCE<sub>0</sub> in the case of second column. The regions are listed in decreasing order of the percentage decline in head-count ratio.

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	Minimum	Maximum	Mean	CV
Average per-capita	.84	2.06	1.45	18.53
expenditure (APCE)	( .81)	(2.18)	( 1.29)	(22.53)
Head-count ratio (HCR)	8.37	76.96	34.07	42.27
	(11.04)	(85.02)	(47.33)	(36.23)
Gini coefficient (GINI)	.1600	.3682	.2822	13.41
	(.1864)	(.3855)	(.2839)	(14.30)

Table 3: Summary statistics (rural areas, 1987-8)

Notes:

- (1) The mean value is an unweighted average of the 61 region-specific figures; CV gives the unweighted coefficient of variation across regions with respect to the unweighted mean.
- (2) Figures in parentheses are for the year 1972-3, as given in Jain <u>et al</u> (1988).





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<u>ρ</u> Q While the head-count index of rural poverty declined in all but four regions between 1972-3 and 1987-8, there are large inter-regional differences in the extent of poverty decline over that period (see Table 2). The percentage reduction in the head-count ratio between the two reference years, for instance, ranges from negative values for four regions to 80 per cent for the Himalayan region of Uttar Pradesh. Another noteworthy pattern is the frequent existence of sharp contrasts in poverty decline between different regions <u>within</u> a particular state. For instance, the percentage reduction in head-count ratio ranges from -12.7 per cent to 80.1 per cent within Uttar Pradesh and from 4.8 to 57.2 per cent within Andhra Pradesh. These intrastate contrasts are likely to reflect a combination of (1) genuine inter-regional differences in poverty trends within individual states, and (2) transient differences attributable to short-term fluctuations in economic conditions, measurement errors, and related factors.

#### 4. INEQUALITY

Figure 2

As was mentioned earlier, the Gini coefficient of per-capita expenditure has increased in just about half of the regions, and declined in the other half, with no change on average. Interestingly, the correlation between the 1972-3 Gini coefficients and the 1987-8 Gini coefficients is quite weak (see Figure 2), though statistically significant. The considerable divergence between 1972-3 and 1987-8 Gini coefficients in many regions stands in sharp contrast with the stability of the "average" Gini coefficient.

Another issue of interest is that of inter-regional inequality. The relevant Lorenz curves can readily be constructed from region-specific APCE figures, and are displayed in Figure 3.<sup>6</sup> Inter-regional inequality patterns, like the average Gini coefficient, are remarkably stable: the Lorenz curves for 1972-3 and 1987-8 are almost indistinguishable. Of course, the ranking of different regions along the Lorenz curve is not the same in both years. In other words, stable levels of inter-regional inequality are consistent with a good deal of inter-regional

<sup>&</sup>lt;sup>6</sup>The Lorenz curves appearing in Figure 3 are constructed by treating each region as one observation, irrespective of population size. It is unlikely that population-weighting would make much difference to the shape of these curves, since there is no inter-regional correlation between population size and average per-capita expenditure.





mobility. Figure 1 gives an idea of the extent of inter-regional mobility in terms of the headcount ratio (see also the transition matrix in Table 4).

### 5. CONVERGENCE

Figure 3

The question as to whether poor countries or regions grow faster than the richer ones has received a good deal of attention in the recent literature on economic development.<sup>7</sup> Standard neoclassical growth models suggest that richer regions have lower rates of return to capital (due to diminishing returns), implying that the gap between rich and poor regions would normally narrow over time. This hypothesis of "convergence" can be tested for the Indian regions, based on 1972-3 and 1987-8 APCE data.

If we regress the difference in average per-capita expenditure between 1987-8 and 1972-3 on the initial level of per-capita expenditure (APCE<sub>0</sub>), we find that the coefficient of APCE<sub>0</sub> is negative and statistically significant, i.e. the lower the initial level of APCE the larger the increase between 1972-3 and 1987-8 (see Figure 4). This result, however, is not a reliable test of convergence. To see this, consider the case where APCE in a particular year and for a particular region consists of the sum of two components, a "trend" component, and a "transient component", with the latter being randomly distributed with mean zero. If the trend component changes at the same rate for all regions, i.e. there is no "convergence", a regression of the growth of APCE between two periods on the initial APCE level would nevertheless indicate that regions with lower initial APCE tend to experience faster APCE growth.<sup>8</sup> In the absence of any useful information on the importance of transient

<sup>7</sup>See e.g. Barro and Sala-i-Martin (1992) and Mankiw (1995) and the literature cited there.

<sup>8</sup>This is a simple illustration of "Galton's fallacy"; for further discussion in relation to the issue of convergence, see Friedman (1992). The basic problem is that regions with low initial APCE are likely to have a <u>negative</u> transient component; since the transient component in the next period is <u>zero</u> on average, and the trend component is the same for all regions by assumption, these regions are likely to experience higher-than-average APCE growth, and vice-versa for regions starting with a high initial APCE.

# TABLE 4

# Distribution of Regions in Terms of their Position in the 1972-3 and 1987-8 Scales of Head-count Ratios

Position in the scale of	Position in	the scale of	1987-8 hea	d-count ratio	s (quintile)
1972-3 head-count ratios (quintile)	Ι	И	III	IV	v
I (lowest HCR)	7	1	2	0	0
II	2	5	2	1	0
III	1	3	3	2	1
IV	0	1	2	4	3
V (highest HCR)	0	0	1	3	6

<u>Note</u>: Each entry of this "transition matrix" indicates the number of regions that have moved from the row quintile to the column quintile between 1972-3 and 1987-8. The quintiles are arranged in ascending order of the head-count ratio in the relevant year. There are 10 regions in each row and column.

expenditure fluctuations, it is difficult to accept the pattern observed in Figure 4 as a solid indication of convergence.

An alternative test of convergence, which avoids Galton's fallacy, consists of checking whether the coefficient of variation of APCE is declining over time.<sup>9</sup> As Table 3 indicates, this is indeed the case, although the decline is quite small. Interestingly, however, the coefficient of variation of head-count ratios has <u>increased</u> between 1972-3 and 1987-8. This "divergence" of poverty indices is an important qualification to the apparent convergence of average per-capita expenditure.

#### 6. POVERTY DECLINE AND INITIAL CONDITIONS

Given the existence of wide inter-regional variations in the extent of poverty decline between 1972-3 and 1987-8, a natural question to ask is whether the magnitude of poverty decline in particular regions can be related to specific initial features of those regions. This issue can be investigated by regressing the percentage change in the head-count index (or in APCE) between 1987-8 and 1972-3 on a range of relevant regional characteristics. An illustration is given in Table 5, based on an elementary set of initial characteristics that are readily available from census data.<sup>10</sup> These include indicators of agricultural productivity, population density, literacy, female labour force participation, and urbanization.

Somewhat surprisingly, only two of the variables included in Table 5 are statistically significant. First, there is a statistically significant association between the growth of APCE and the initial level of APCE. This association, however, should be interpreted in the light of our earlier comments on convergence. Second, regions with higher initial levels of female

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<sup>&</sup>lt;sup>9</sup>This "test" assumes that the distribution of the transient components does not change over time. If, say, the variance of the transient components declines over time (e.g. due to improved measurement of per-capita expenditure), this test would lead to a spurious impression of convergence.

<sup>&</sup>lt;sup>10</sup>Aside from 1971 census data, we have used figures on agricultural productivity and population density from Mahendra Dev (1985).



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Growth in APCE from 1972-3 to 1987-8 vs. APCE in 1972-3



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Figure 4

Independent variables <sup>a</sup>	Dependent variable			
	$(H_0 - H_1)/H_0$	$(X_1 - X_0)/X_0$	ln H <sub>0</sub> - ln H <sub>1</sub>	ln X <sub>0</sub> - ln X <sub>1</sub>
constant	-0.13	0.27	-2.26	-0.58
	(-1.0)	(2.1)	(-2.1)	(-1.4)
Agricultural output per hectare, 1970-73	0.0001	0.0001	0.27	0.09
	(1.6)	(1.7)	(1.9)	(1.4)
Index of population density, 1970-73 (inverse of "cultivated area per capita")	-0.006	0.004	-0.078	-0.005
	(-0.6)	(0.4)	(-0.7)	(-0.09)
Crude literacy rate, 1971 (proportion of literate persons in the population)	0.004	-0.003	0.123	-0.02
	(1.1)	(-0.7)	(0.87)	(-0.2)
Female labour force participation, 1971 (proportion of "main workers" in the female population)	0.009 <sup>*</sup>	0.007 <sup>•</sup>	0.18 <sup>•</sup>	0.034
	(3.2)	(2.4)	(3.1)	(1.3)
Urbanization, 1971 (proportion of the population living in urban areas)	-0.0007	(0.0003)	-0.01	0.05
	(-0.3)	(0.1)	(-0.1)	(1.2)
X <sub>0</sub> (initial level of average per-capita expenditure)	-	-0.25* (-2.9)	-	-0.36 <sup>•</sup> (-3.1)
H <sub>0</sub> (initial level of head-count ratio)	0.0014 (0.9)	-	0.03 (0.2)	-
$\mathbf{\bar{R}}^{2}$	0.25	0.26	0.23	0.24

<sup>a</sup> In the last two columns (logarithmic regressions), we have used the logarithmic values of the independent variables as regressors.

\* Significant at 1% level.

Note: X denotes average per-capita expenditure, and H denotes the head-count index of poverty. The superscripts 0 and 1 refer to 1972-3 and 1987-8, respectively. Each entry gives the relevant regression coefficient, with t-ratio in brackets.

labour force participation have experienced larger growth of per-capita expenditure, and also faster poverty decline.<sup>11</sup>

The second observation is quite intriguing. It has to be considered as an indicative finding rather than as a firm result, given the rather limited list of variables that are included on the right-hand side, and we present it largely as a useful direction of further research. If real, the identified link can be explained in several ways. First, female labour force participation can be seen as having an important insurance role, in so far as a household with more earning members is less exposed (other things being equal) to downward income fluctuations resulting from illness and related events. It is possible that this insurance role has become more important over time, e.g. due to increased variability of employment and wages, leading to some economic advantage (or reduced economic disadvantage) for regions with high levels of female labour force participation. The role of female labour force participation as an insurance device may also facilitate risk-taking activities and investment.

Second, higher levels of female labour force participation lead to greater flexibility in occupational choices at the household level, and this too may improve the ability of a household to seize new economic opportunities. In particular, it may lead to greater flexibility in occupational choices for the household as a whole. One possible example of this concerns male migration from the U.P. hills. This region has had high rates of male outmigration in recent decades, as large numbers of men found employment in the formal sector (including particularly the army and other government institutions). Remittances from male migrants are a major source of income in the U.P. hills, and have been a major factor of accelerated poverty reduction (the U.P. hills have experienced the highest rate of poverty reduction among all regions between 1972-3 and 1987-8). The outstanding ability of adult males from the U.P. hills to seize employment opportunities elsewhere may have been substantially facilitated by high levels of female labour force participation at home. The region does have a long tradition of female involvement in a wide range of productive

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<sup>&</sup>lt;sup>11</sup>This relationship between initial female labour force participation and <u>change</u> in poverty (or per-capita expenditure) should not be confused with the well-known observation that, in rural India, female labour force participation tends to be higher in regions with a higher <u>level</u> of poverty.

activities, and the absence of adult males from a household may well be less problematic there than, say, in the U.P. plains. Even if this particular illustration does not apply, it is plausible that, in general, a less stringent gender division of labour makes it easier for a household to adopt new occupational patterns in response to economic change.

Third, female labour force participation can be interpreted as an indicator of the general involvement of women in economic, social and political matters, with faster poverty decline being more likely in a society which gives greater scope for women's agency in general.<sup>12</sup> In this perspective, the relevant links are not only those directly relating to women's productive activities, but may also include more indirect connections. For instance, the priorities of public policy may be positively influenced by women's active involvement in political matters. Similarly, the participation of women in the teaching and medical professions (not only as doctors and teachers, but also in more influential positions) can enhance the quality of educational and health services, which often play a crucial role in the process of economic development.<sup>13</sup>

Before concluding, it is worth pointing out that the coefficient of "literacy" is non-significant in all the regressions presented in Table 5. This may seem surprising in the light of rapidlyaccumulating evidence of the close links between widespread education and economic growth in many developing countries. For India itself, a recent study by Datt and Ravallion (1995) concludes that literacy plays an important role in explaining inter-state differences in poverty reduction over the 1957-1991 period. Our own results fail to corroborate these findings.

#### 7. CONCLUDING REMARKS

In this paper, we have presented estimates of rural and urban poverty and inequality for the

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<sup>&</sup>lt;sup>12</sup>On the role of women's agency in economic development, with special reference to India, see Drèze and Sen (1995), and the literature cited there.

<sup>&</sup>lt;sup>13</sup>This seems to be one feature of the development experience of Kerala, where, for instance, two thirds of primary-school teachers are women. Interestingly, Kerala has had the highest rate of poverty decline among all Indian states over the 1957-91 period (see Datt and Ravallion, 1995).

61 constituent "regions" of India's 16 major states in 1987-88, based on National Sample Survey data. These estimates pertain to a much lower level of disaggregation than the standard state-level estimates, and expand the scope for statistical analyses of poverty-related issues.

We have also presented brief comparisons of the rural estimates with similar estimates for 1972-3 calculated by Jain <u>et al</u> (1988). Between 1972-3 and 1987-8, the head-count index of rural poverty has declined in almost all regions, but there are large inter-regional differences in the extent of poverty decline. We find some evidence of "convergence" in average per-capita expenditure levels across different regions. But the convergence effect is small, and the Lorenz curves of inter-regional inequality for the two reference years are very close to each other. In terms of intra-regional inequality in consumer expenditure (for rural areas), there have been significant changes in region-specific Gini coefficients, with inequality rising in about half of the regions and declining in the other half. But the correlation between 1972-3 and 1987-8 region-specific Gini coefficients is quite weak, and the average Gini coefficient is virtually the same in both years.

A preliminary attempt was made at relating region-specific changes in poverty between 1972-3 and 1987-8 to a basic set of initial conditions, including agricultural productivity, population density, literacy, female labour force participation, and urbanization. Among these variables, only female labour force participation is statistically significant (with regions starting off with higher levels of female labour force participation having experienced higher growth of percapita expenditure and a faster rate of poverty decline in the reference period). Some tentative explanations were advanced for this unexpected finding.

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Appendix: Regional indicators of urban poverty and inequality, 1987-8

1.         Andha Padash (basal)         1.733         27.83         0.3492           2.         Andha Padash (bank Northern         1.873         27.33         0.3946           3.         Andha Padash bank Northern         1.339         47.03         0.3129           4.         Anam Padash South Weitern         1.330         47.03         0.3137           5.         Anam Padas Baton         2.649         9.16         0.2733           7.         Asam Philas Weitern         2.649         4.62         0.3137           7.         Asam Philas Nothern         1.661         61.63         0.2745           9.         Bihar Nothern         1.137         0.12         0.2272           10.         Gignet Philas Nothern         1.275         10.12         0.2271           11.         Gignet Philas Nothern         1.275         40.93         0.2143           12.         Gignet Philas Nothern         1.275         40.93         0.2421           13.         Gignet Philas Nothern         1.276         40.93         0.2423           14.         Gignet Philas Nothern         1.276         40.93         0.2423           15.         Gignet Philas Nothern         1.277         1.93	na na magani mining sang sang sa	na n	APCE	HCR	
2.         Audhur Packes Iniand Northern         1.373         27.33         0.9946           3.         Audhur Packes Nouth Verstern         1.339         9.70         0.2926           4.         Audhur Packes Nouth Verstern         1.339         47.03         0.3129           5.         Assam Plains Western         2.401         3.78         0.3463           6.         Assam Plains Western         2.401         4.62         0.3137           7.         Assam Flains Western         1.661         6.63         0.27245           9.         Bither Southerbarn         1.661         6.63         0.27245           10.         Bither Fortherbarn         1.661         6.63         0.27272           12.         Gajarat Plains Northera         1.307         3.012         0.2272           12.         Gajarat Plains Southera         1.205         40.93         0.2431           15.         Gajarat Plains Southera         2.022         11.63         0.2795           13.         Hayrann Bactern         2.022         11.63         0.2795           13.         Hayran Newtern         2.022         1.63         0.2802           15.         Gajarat Plains Northera         1.316         4.615<	1	Andhea Pendesh Coastal	1.733	27.83	0.3492
A. Andhu Pradesh South Weatern         1.339         39.67         0.2926           4.         Andhu Pradesh Inland Southern         2.513         3.78         0.3132           5.         Assam Plaiss Eastern         2.513         3.78         0.3463           6.         Assam Plaiss Weatern         2.649         9.16         0.2733           7.         Assam Flaiss Weatern         1.667         2.99.3         0.3187           8.         Bither Northern         1.661         6.16.3         0.2745           10.         Bither Northern         1.601         2.13.7         0.2715           12.         Gujaran Plaiss Northern         1.601         2.13.7         0.2271           12.         Gujara Plaiss Southern         1.205         4.93.3         0.2143           15.         Gujara Stans Southern         2.002         1.60         0.2892           16.         Haryanu Kastern         2.032         1.60         0.2382           17.         Haryanu Weatern         2.032         1.63         0.2482           17.         Haryanu Weatern         2.332         6.65         0.23812           18.1         J ant K Mountains         2.342         6.60         0.2882	2.	Andhra Pradesh Inland Northern	1.873	27.33	0.3946
4.         Andhe Pradesh Inland Southern         1.30         47.03         0.3129           5.         Assam Plains Western         2.513         3.78         0.3463           6.         Assam Plains Western         2.605         4.62         0.3137           7.         Assam Hilts         2.605         4.62         0.3137           8.         Bitor Southers         1.661         61.63         0.2745           9.         Bitor Northern         1.601         61.63         0.2745           10.         Bitar Central         1.357         30.12         0.2272           11.         Gujarat Plains Northern         1.775         19.84         0.2971           13.         Gujarat Plains Northern         1.775         19.44         0.2371           14.6         Gujarat Djarns Northern         2.032         10.99         0.2862           15.         Gujarat Djarns Southern         2.042         1.63         0.2373           15.         Gujarat Djarns Mestern         2.042         1.63         0.2382           16.         Hayana Edstein         2.042         1.63         0.2383           17.         Hayana Edstein         2.043         3.81         0.2689	3.	Andhra Pradesh South Western	1.339	39.67	0.2926
5.       Assam Plains Eastern       2,513       3,78       0.4603         6.       Assam Plains Western       2,049       0.16       0.2733         7.       Assam Hills       2,605       4.62       0.3137         8.       Bihar Southern       1.667       29,93       0.3187         9.       Bihar Southern       1.661       61.63       0.2745         10.       Bihar Central       1.140       54.78       0.2271         12.       Gujarat Plains Northern       1.071       19.84       0.2271         13.       Gujarat Plains Southern       1.772       19.84       0.2271         14.       Gujarat Dry Areas       1.205       39.43       0.2629         15.       Gujarat Surasthra       2.126       6.50       0.2282         16.       Haryana Eastern       2.022       11.63       0.2795         17.       Haryan Western       2.132       6.50       0.212       0.2263         20.       J and K Mountains       2.342       6.50       0.2862         219.       J and K Mountains       2.342       6.50       0.2862         210.       Karnatoka Indiand Southern       1.1814       2.442       0.3510	4.	Andhra Pradesh Inland Southern	1.330	47.03	0.3129
6.         Assam Plains Western         2.049         9.16         0.2733           7.         Assam Plains Western         1.627         29.93         0.3137           8.         Bihar Southera         1.627         29.93         0.3137           9.         Bihar Northera         1.601         61.63         0.2744           10.         Bihar Control         1.130         54.78         0.2272           12.         Gujarat Plains Northera         1.205         40.99         0.2143           13.         Gujarat Plains Northera         1.205         40.99         0.2629           15.         Gujarat Saunshra         2.003         10.99         0.2862           16.         Haryana Eastern         2.023         16.30         0.2795           17.         Haryana Wastern         2.023         16.30         0.2362           17.         Haryana Wastern         2.033         18.73         0.3481           20.         J and K Maenraish         2.342         6.50         0.2812           17.         Haryana Wastern         2.355         6.21         0.3263           20.         J and K Heim Valky         2.161         4.431         0.3140	5.	Assam Plains Eastern	2.513	3.78	0.3463
7.       Assam Hills       2.605       4.62       0.3137         8.       Bihar Southern       1.661       61.63       0.2745         9.       Bihar Northern       1.061       61.63       0.2745         10.       Bihar Control       1.140       54.78       0.2271         11.       Gujarat Pians Northern       1.601       21.37       0.2715         12.       Gujarat Pians Northern       1.205       40.93       0.2143         13.       Gujarat Sunshtra       1.276       39.43       0.2629         15.       Gujarat Sunshtra       2.003       10.99       0.2482         15.       Jand K Mountains       2.342       6.50       0.2795         16.       Haryona Western       2.003       10.99       0.2262         17.       Haryan Western       2.042       6.30       0.2657         20.3       J and K Mountains       2.342       6.50       0.211       0.3263         21.       Kanaaka Castai and Ghats       1.401       46.05       0.2467         22.       Karnaaka Inland Southern       1.845       29.93       0.3613         23.       Karnaaka Castai and Ghats       1.401       46.15       0.3100 </td <td>6.</td> <td>Assam Plains Western</td> <td>2.049</td> <td>9,16</td> <td>0.2753</td>	6.	Assam Plains Western	2.049	9,16	0.2753
8.         Bihar Southern         1.627         29.93         0.316           9.         Bihar Northern         1.601         61.63         0.2745           10.         Bihar Central         1.140         54.78         0.2374           11.         Gujarat Plans Northern         1.601         21.37         0.2171           12.         Gujarat Plans Northern         1.772         19.44         0.2371           13.         Gujarat Plans Northern         1.772         19.44         0.2371           14.         Gujarat Dy Ateas         1.205         40.93         0.2462           15.         Gujarat Sumshtra         1.205         40.93         0.2623           15.         Gujarat Mainstra         2.202         11.63         0.2795           17.         Haryana Katern         2.305         6.21         0.2362           10.         J and K Outer Hills         2.365         6.21         0.2269           21.         Kamataka Indiad Exatern         1.533         18.73         0.2484           22.         Kamataka Indiad Southern         1.816         24.42         0.3510           23.         Kamataka Indiad Southern         1.816         9.993         0.3613 <td>7.</td> <td>Assam Hills</td> <td>2.605</td> <td>4.62</td> <td>0.3137</td>	7.	Assam Hills	2.605	4.62	0.3137
9.         Biblar Northern         1.661         61.63         0.743           10.         Biblar Central         1.137         30.12         0.2272           11.         Gujarat Bastern         1.357         30.12         0.2271           13.         Gujarat Baiss Northern         1.60         1.273         0.2271           13.         Gujarat Baiss Northern         1.205         40.93         0.2143           15.         Gujarat Sarashtra         1.206         49.93         0.2213           16.         Harynna Eastern         2.002         11.63         0.2262           17.         Haryna Western         2.022         11.63         0.2263           19.         J and K Meannais         2.325         6.21         0.2263           20.         J and K Meain Valley         2.193         3.89         0.2659           21.         Kannaika Inland Southern         1.814         2.44.24         0.3164           22.         Kannaika Inland Southern         1.816         4.615         0.3164           23.         Karanaka Inland Southern         1.845         2.993         0.3613           25.         Kerala Northern         1.416         4.909         0.3364 <td>8.</td> <td>Bihar Southern</td> <td>1.627</td> <td>29.93</td> <td>0.3167</td>	8.	Bihar Southern	1.627	29.93	0.3167
10.         Bihar Central         1.140         54.78         0.2272           11.         Gujarat Eastern         1.377         0.2113         0.2272           12.         Gujarat Plains Southern         1.77         19.84         0.2271           13.         Gujarat Plains Southern         1.77         19.84         0.2211           14.         Gujarat Sumshtra         1.276         39.43         0.2242           15.         Gujarat Sumshtra         2.003         10.99         0.2862           17.         Haryana Eastern         2.003         10.99         0.2862           18.         J and K Moutains         2.142         6.50         0.2812           19.         J and K Outer Hills         2.133         3.89         0.2659           21.         Kanataka Inhand Eastern         1.533         18.73         0.24867           22.         Kanataka Inhand Southern         1.814         24.42         0.3101           23.         Karantaka Inhand Northern         1.814         24.42         0.3101           24.         Karantaka Inhand Northern         1.416         45.15         0.3189           25.         Karantaka Inhand Northern         1.465         26.47 <t< td=""><td>9.</td><td>Bihar Northern</td><td>1.061</td><td>61.63</td><td>0,2745</td></t<>	9.	Bihar Northern	1.061	61.63	0,2745
11.       Gujarat Extern       1.357       30.12       0.2115         12.       Gujarat Plains Northern       1.601       2.137       0.2715         13.       Gujarat Plains Northern       1.772       19.84       0.2971         13.       Gujarat Dry Areas       1.205       40.93       0.2143         15.       Gujarat Saunshtra       1.206       39.43       0.2262         16.       Haryana Western       2.022       11.63       0.2795         17.       Haryana Western       2.042       6.50       0.2812         19.       J and K Mountains       2.342       6.50       0.2863         20.       J and K Jueter Hills       2.365       6.21       0.3263         21.       Karanatok Costal and Chuts       1.401       46.05       0.2867         22.       Karanatok Inland Southern       1.833       18.73       0.2484         23.       Karanatok Inland Southern       1.316       46.15       0.3394         25.       Kerala Northern       1.416       43.90       0.3613         26.       Kerala Southern       1.465       29.3       0.3613         27.       Madhya Pradesh Vindhya       1.195       54.55       0	10.	Bihar Central	1.140	54.78	0.2374
12.       Gujarat Plains Northern       1.701       21.37       0.2173         13.       Gujarat Dry Areas       1.205       40.93       0.2143         14.       Gujarat Dry Areas       1.205       40.93       0.22629         15.       Gujarat Sumshtra       2.003       10.99       0.2862         17.       Haryana Western       2.003       10.99       0.22659         18.       J and K Mouttains       2.342       6.50       0.22195         20.       J and K Johum Valley       2.193       3.89       0.2659         21.       Kamataka Inland Estern       1.53       0.2867         22.       Kamataka Inland Southern       1.814       24.42       0.3510         23.       Kamataka Inland Southern       1.814       24.42       0.3310         24.       Kamataka Inland Northern       1.316       46.15       0.3045         25.       Kurala Northern       1.465       29.93       0.3613         26.       Kerlai Southern       1.465       29.93       0.3613         27.       Madhya Pradesh Control       1.684       4.992       0.3056         28.       Madhya Pradesh South Western       1.444       56.33       0.2776 </td <td>11.</td> <td>Gujarat Eastern</td> <td>1.357</td> <td>30.12</td> <td>0.2212</td>	11.	Gujarat Eastern	1.357	30.12	0.2212
13.       Gujarat Plains Southern       1.772       19.8-9       0.2143         144.       Gujarat Ory Areas       1.205       40.933       0.2243         15.       Gujarat Saurashtra       1.206       39.43       0.2262         16.       Haryana Esstem       2.003       10.99       0.22862         17.       Haryana Esstem       2.022       11.63       0.2795         18.       J and K Mouttains       2.42       6.50       0.22812         19.       J and K Outer Hills       2.365       6.21       0.3263         20.       J and K Oastal and Ghats       1.401       46.05       0.2887         21.       Kamataka Inland Southern       1.814       24.42       0.3510         23.       Karataka Inland Southern       1.316       46.15       0.3394         25.       Kerala Northern       1.465       29.30       0.3613         26.       Kerala Northern       1.465       29.30       0.3613         27.       Madhya Pradeth Chattigarh       1.655       26.17       0.3088         38.       Madhya Pradeth Chattigarh       1.523       34.64       0.3383         39.       Madhya Pradeth South Central       1.316       49.	12.	Gujarat Plains Northern	1.601	21.37	0.2971
14.       Gujara Dry Areas       1.205       40.93       0.7229         15.       Gujara Dry Areas       1.276       39.43       0.2629         16.       Haryana Eastern       2.003       10.99       0.2862         17.       Haryana Western       2.002       11.63       0.2795         18.       J and K Mountains       2.342       6.50       0.2812         19.       J and K Mountains       2.342       6.50       0.28267         20.       J and K Hadum Valley       2.193       3.89       0.2659         21.       Karnataka Inland Estern       1.814       24.42       0.3310         22.       Karnataka Inland Southern       1.814       24.42       0.3310         23.       Karnataka Inland Northern       1.316       46.15       0.3394         24.       Karnataka Inland Northern       1.845       29.93       0.3613         25.       Kernla Northern       1.845       29.93       0.3613         26.       Karnataka Inland Vestern       1.695       26.17       0.3088         27.       Madhya Pradesh Cantlegarh       1.695       26.17       0.3088         28.       Madhya Pradesh South Central       1.316       49.	13.	Gujarat Plains Southern	1.772	19.84	0.2143
15.       Gujarat Saurashtra       1.276       59-3       0.2862         16.       Haryana Eastern       2.003       10.99       0.2862         17.       Haryana Western       2.022       11.63       0.2795         18.       J and K Mountains       2.342       6.50       0.2812         19.       J and K Outer Hills       2.365       6.21       0.3263         20.       J and K Koutar Hills       2.363       6.21       0.3263         21.       Karnataka Indand Castern       1.583       18.73       0.2846         23.       Karnataka Indand Dorthern       1.814       24.42       0.3310         24.       Karnataka Indand Northern       1.814       24.42       0.3310         25.       Kerala Northern       1.845       29.93       0.3613         26.       Kerala Southern       1.845       29.93       0.3613         27.       Madhya Pradesh Chattisgarh       1.695       26.17       0.3068         28.       Madhya Pradesh South Central       1.316       49.92       0.3056         30.       Madhya Pradesh South Central       1.644       30.85       0.3289         31.       Madhya Pradesh South Central       1.644	14.	Gujarat Dry Areas	1.205	40.95	0.2629
16.       Haryana Eastern       2.003       10-2795         17.       Haryana Western       2.002       11.63       0.2795         18.       J and K Mountains       2.342       6.50       0.2812         19.       J and K Mountains       2.342       6.50       0.2812         20.       J and K Mountains       2.342       6.50       0.2867         21.       Kamataka Inland Eastern       1.583       18.73       0.2484         22.       Kamataka Inland Southern       1.316       46.15       0.3394         23.       Karnataka Inland Southern       1.316       46.15       0.3394         25.       Kerala Northern       1.316       46.15       0.3394         26.       Karala Southern       1.4695       26.17       0.3088         27.       Madhya Prudesh Chattiggarh       1.095       54.55       0.3189         28.       Madhya Prudesh Chattiggarh       1.523       34.64       0.3338         30.       Madhya Prudesh South Vestern       1.144       56.63       0.2776         31.       Madhya Prudesh South Vestern       1.144       56.63       0.2776         33.       Madhya Prudesh South Vestern       1.200       52.75	15.	Gujarat Saurashtra	1.276	39.43	0.2862
17.       Hayana Wastern       2.002       17.0       0.2812         18.       J and K Nountains       2.342       6.50       0.2812         19.       J and K Outer Hills       2.365       6.21       0.3263         20.       J and K Duter Hills       2.193       3.89       0.2659         21.       Karnataka Coastal and Ghuts       1.401       46.05       0.2867         22.       Karnataka Inland Eastern       1.814       24.42       0.3319         23.       Karnataka Inland Southern       1.814       24.42       0.3394         24.       Karnataka Inland Northern       1.316       46.15       0.3394         25.       Kerala Northern       1.845       29.93       0.3613         26.       Kerala Northern       1.845       29.93       0.3043         27.       Madhya Pradesh Vindiya       1.195       54.55       0.3189         28.4       Madhya Pradesh Nunkava Plateau       1.523       34.64       0.338         30.       Madhya Pradesh Northern       1.644       30.85       0.3289         31.       Madhya Pradesh Northern       1.610       28.12       0.2976         32.       Madhya Pradesh North Westeron       1.646	16.	Haryana Eastern	2,003	11.63	0.2795
18.       J and K Mouttarins       2.342       0.30	17.	Haryana Western	4.U44 3 343	6 50	0.2812
19.         J and K Outer Thus         250         0         0           20.         J and K Delem Valley         2.193         3.89         0.2659           21.         Karnataka Inland Eastern         1.583         18.73         0.2484           22.         Karnataka Inland Southern         1.814         24.42         0.3394           23.         Karnataka Inland Northern         1.316         46.15         0.3394           24.         Karnataka Inland Northern         1.316         46.15         0.3394           25.         Kerala Northern         1.845         29.93         0.3613           26.         Kerala Southern         1.845         29.93         0.3361           27.         Madhya Pradesh Chatriagarh         1.695         54.55         0.3189           28.         Madhya Pradesh South Central         1.533         34.64         0.3338           30.         Madhya Pradesh South Central         1.684         30.85         0.3289           31.         Madhya Pradesh South Vestern         1.144         56.63         0.22776           33.         Madhya Pradesh South Vestern         1.316         49.91         0.3362           35.         Mahanashtra Inland Vestern	18.	J and K Mountains	4,344 7 265	6.50	0.3263
20.         J. Hole V. Jielum Valley         2.157         2.167         0.2867           21.         Karnataka Indan Ghats         1.401         46.05         0.2484           22.         Karnataka Inland Southern         1.814         24.42         0.3510           23.         Karnataka Inland Southern         1.816         46.15         0.3394           24.         Karnataka Inland Southern         1.416         43.90         0.3613           25.         Kerala Northern         1.416         43.90         0.3613           26.         Kerala Southern         1.695         26.17         0.3083           27.         Madhya Pradesh Chattisgarh         1.695         26.17         0.3083           29.         i         Madhya Pradesh Maiwa Plateau         1.523         34.64         0.3338           30.         Madhya Pradesh South Central         1.644         30.85         0.3289           31.         Madhya Pradesh South Western         1.144         56.63         0.2776           33.         Madhya Pradesh Northern         1.329         45.54         0.3168           33.         Madhya Pradesh Northern         1.328         47.79         0.2708           34.         Maharashtra I	19.	J and K Outer Hills	2.505	3.80	0.2659
1.1         Kathaliaka Cosistal niho Onitsis         1-83         18-73         0.2484           22.         Karnataka Inland Eastern         1.383         18.73         0.2364           23.         Karnataka Inland Southern         1.814         24.42         0.3510           24.         Karnataka Inland Northern         1.16         46.15         0.3394           25.         Kerala Northern         1.416         43.90         0.3613           27.         Madhya Pradesh Chattisgarh         1.695         26.17         0.3088           28.         Madhya Pradesh Chattisgarh         1.195         54.55         0.3189           29.         I         Madhya Pradesh Malwa Plateau         1.523         34.64         0.3338           30.         Madhya Pradesh Malwa Plateau         1.523         34.64         0.3388           31.         Madhya Pradesh Nothern         1.144         56.63         0.27176           33.         Madhya Pradesh Northern         1.610         2.8.12         0.2996           34.         Maharashtra Inland Northern         1.329         45.24         0.3168           37.         Maharashtra Inland Central         1.200         52.75         0.3296           36.	20.	J and K Jneium Valley	1 401	46.05	0.2867
22.       Kumutaka Inland Southern       1.814       24.4       24.4       Kurnataka Inland Northern       1.316       46.15       0.3394         24.       Kurnataka Inland Southern       1.416       43.90       0.3405         25.       Kerala Northern       1.445       29.93       0.3613         26.       Kerala Southern       1.845       29.93       0.3613         27.       Madhya Pradesh Chatiggarh       1.695       26.17       0.3088         28.       Madhya Pradesh Central       1.316       49.92       0.3056         30.       Madhya Pradesh Malwa Plateau       1.523       34.64       0.3389         31.       Madhya Pradesh South Central       1.684       30.85       0.3289         32.       Madhya Pradesh Northern       1.161       28.12       0.2979         33.       Madhya Pradesh Northern       1.664       28.81       0.3362         34.       Maharashtra Inland Western       1.329       45.24       0.3166         35.       Maharashtra Inland Central       1.200       52.75       0.3296         36.       Maharashtra Inland Central       1.208       47.79       0.2706         40.       Orisas Oastal       1.466       33.1	21.	Kamataka Coastar and Onats	1 583	18.73	0.2484
23.         Ruthattor         1.316         4.15         0.3394           24.         Karnataka Inland Northern         1.316         46.15         0.3394           25.         Kerala Northern         1.446         43.90         0.3405           26.         Kerala Northern         1.445         29.93         0.35613           27.         Madhya Pradesh Chatisgarh         1.695         26.17         0.3088           28.         Madhya Pradesh Chatisgarh         1.95         54.55         0.3189           30.         Madhya Pradesh Central         1.316         49.92         0.3056           30.         Madhya Pradesh South Central         1.684         30.85         0.3289           31.         Madhya Pradesh South Central         1.644         26.63         0.2776           32.         Madhya Pradesh South Western         1.144         56.63         0.27979           34.         Maharashtra Inland Northern         1.329         45.24         0.3168           35.         Maharashtra Inland Central         1.200         52.75         0.3296           36.         Maharashtra Inland Central         1.200         52.75         0.3296           37.         Maharashtra Inland Central	22.	Kamataka iniand Castern	1,305	24.42	0.3510
24.         Ramada fromen         1.440         43.90         0.3405           25.         Kernla Northern         1.845         29.93         0.3613           26.         Kernla Southern         1.845         29.93         0.3613           27.         Madhya Pradesh Chattisgarh         1.695         26.17         0.3088           27.         Madhya Pradesh Vindhya         1.195         54.55         0.3189           29.         I         Madhya Pradesh South Central         1.316         49.92         0.3056           30.         Madhya Pradesh South Central         1.684         30.85         0.3289           31.         Madhya Pradesh South Western         1.144         56.63         0.2776           33.         Madhay Pradesh South Western         1.664         28.81         0.3362           35.         Maharashtra Inland Central         1.230         45.24         0.3168           36.         Maharashtra Inland Central         1.232         45.24         0.3168           37.         Maharashtra Inland Central         1.238         47.79         0.2708           38.         Maharashtra Inland Central         1.238         47.79         0.2708           39.         Maharashtra	23.	Karnataka Inland Northern	1316	46.15	0.3394
Definition         1.445         29.93         0.3613           26.         Kernia Southern         1.695         26.17         0.3088           27.         Madhya Pradesh Chattisgarh         1.695         26.17         0.3088           28.         Madhya Pradesh Central         1.316         49.92         0.3036           30.         Madhya Pradesh Central         1.523         34.64         0.3338           31.         Madhya Pradesh South Central         1.664         30.85         0.3289           32.         Madhya Pradesh Northern         1.610         28.12         0.2979           33.         Madhya Pradesh Northern         1.664         28.81         0.3362           34.         Maharashtra Inland Western         1.664         28.81         0.3168           35.         Maharashtra Inland Northern         1.329         45.24         0.31168           37.         Maharashtra Inland Central         1.200         52.75         0.3296           38.         Maharashtra Inland Eastern         1.348         44.91         0.3390           39.         Maharashtra Inland Eastern         1.238         47.79         0.2708           40.         Orissa Southern         1.244         48	24. 75	Kamia Northern	1.416	43.90	0.3405
20.         Nadhya Pradesh Chattisgarh         1.693         26.17         0.3088           27.         Madhya Pradesh Chattisgarh         1.95         54.55         0.3189           28.         Madhya Pradesh Central         1.316         49.92         0.3036           29.         I         Madhya Pradesh Maiwa Plateau         1.523         34.64         0.3338           30.         Madhya Pradesh South Central         1.684         30.85         0.3289           31.         Madhya Pradesh South Central         1.664         30.85         0.3289           32.         Madhya Pradesh Northern         1.610         28.12         0.2976           33.         Maharshtra Inland Vestern         1.664         28.81         0.3362           35.         Maharashtra Inland Nextern         1.329         45.24         0.3188           36.         Maharashtra Inland Central         1.200         52.75         0.3296           37.         Maharashtra Inland Central         1.348         44.91         0.3390           38.         Maharashtra Inland Central         1.238         47.79         0.2708           41.         Orissa Coastal         1.466         33.11         0.29944           42.	43. 26	Kerala Notthern	1.845	29.93	0.3613
28.       Madhya Pradesh Vindhya       1.195       54.55       0.3189         29.       Madhya Pradesh Vindhya       1.316       49.92       0.3036         30.       Madhya Pradesh Malwa Plateau       1.523       34.64       0.3338         30.       Madhya Pradesh South Central       1.684       30.85       0.3289         31.       Madhya Pradesh South Central       1.684       30.85       0.22776         33.       Madhya Pradesh South Central       1.684       30.85       0.22776         33.       Madhya Pradesh South Central       1.244       56.63       0.22776         34.       Maharashtra Inland Vestern       1.664       28.81       0.3362         35.       Maharashtra Inland Central       1.200       52.75       0.3296         36.       Maharashtra Inland Central       1.200       52.75       0.3296         37.       Maharashtra Inland Eastern       1.348       44.91       0.3390         38.       Maharashtra Inland Eastern       1.348       33.11       0.2904         41.       Orissa Coastal       1.466       33.11       0.2904         42.       Orissa Southern       2.299       5.66       0.2762         43. <td< td=""><td>20. 27</td><td>Madhya Prodesh Chattisgarh</td><td>1.695</td><td>26.17</td><td>0.3088</td></td<>	20. 27	Madhya Prodesh Chattisgarh	1.695	26.17	0.3088
29.       i       Madhya Pradesh Central       1.316       49.92       0.3056         30.       Madhya Pradesh Central       1.523       34.644       0.3338         31.       Madhya Pradesh South Central       1.684       30.85       0.3289         32.       Madhya Pradesh Northern       1.144       56.63       0.2776         33.       Madhya Pradesh Northern       1.610       28.12       0.2996         34.       Maharashtra Inland Western       1.664       28.81       0.3362         35.       Maharashtra Inland Central       1.200       52.75       0.3296         36.       Maharashtra Inland Central       1.200       52.75       0.3296         37.       Maharashtra Inland Eastern       1.348       44.91       0.3390         38.       Maharashtra Inland Eastern       1.238       47.79       0.2708         40.       Orissa Coatal       1.466       33.11       0.2904         41.       Orissa Northern       1.558       33.01       0.3241         42.       Orissa Northern       2.259       6.66       0.2762         43.       Punjab Northern       2.259       6.02       0.2902         44.       Punjab Northern	#1. 78	Madhya Pradesh Vindhya	1.195	54.55	0.3189
Native and a matrix of a matrix	20. 20. i	Madhya Pradesh Central	1.316	49.92	0.3056
31.       Madhya Pradesh South Central       1.684       30.85       0.3289         32.       Madhya Pradesh South Western       1.144       56.63       0.2776         33.       Madhya Pradesh Northern       1.610       28.12       0.2996         33.       Mahya Pradesh Northern       1.664       28.81       0.3362         35.       Maharashtra Inland Western       1.329       45.24       0.3168         36.       Maharashtra Inland Central       1.200       52.75       0.3296         38.       Maharashtra Inland Central       1.200       52.75       0.3296         38.       Maharashtra Inland Central       1.200       52.75       0.3296         39.       Maharashtra Eastern       1.348       44.91       0.33300         40.       Orissa Coastal       1.466       33.11       0.2904         41.       Orissa Northern       1.588       33.01       0.3241         42.       Orissa Northern       2.299       5.66       0.2762         43.       Punjab Northern       2.250       6.02       0.2902         44.       Punjab Northern       1.647       29.26       0.3252         45.       Rajasthan North Eastern       1.647 <td>30</td> <td>Madhya Pradesh Malwa Plateau</td> <td>1.523</td> <td>34.64</td> <td>0.3338</td>	30	Madhya Pradesh Malwa Plateau	1.523	34.64	0.3338
22.       Madhya Pradesh Northern       1.144       56.63       0.2776         33.       Madhya Pradesh Northern       1.610       28.12       0.2979         34.       Maharashtra Costal       2.230       9.10       0.2996         35.       Maharashtra Inland Western       1.664       28.81       0.3362         36.       Maharashtra Inland Central       1.200       52.75       0.3296         37.       Maharashtra Inland Eastern       1.348       44.91       0.3390         38.       Maharashtra Inland Eastern       1.238       47.79       0.2708         40.       Orissa Coastal       1.466       33.11       0.2904         41.       Orissa Southern       1.58       33.01       0.3241         42.       Orissa Northern       1.58       33.01       0.3241         43.       Punjab Northern       2.299       5.66       0.2762         44.       Punjab Southern       1.647       29.26       0.3324         45.       Rajasthan Noth Eastern       1.647       29.26       0.3294         46.       Rajasthan Southern       1.798       27.92       0.3252         47.       Rajasthan Southern       1.798       0.2966	31.	Madhya Pradesh South Central	1.684	30.85	0.3289
33.       Madhya Pradesh Northern       1.610       28.12       0.2979         34.       Maharashtra Coastal       2.230       9.10       0.2996         35.       Maharashtra Inland Western       1.664       28.81       0.3362         36.       Maharashtra Inland Northern       1.329       45.24       0.3168         37.       Maharashtra Inland Central       1.200       52.75       0.3296         38.       Maharashtra Inland Eastern       1.348       44.91       0.3390         39.       Maharashtra Eastern       1.238       47.79       0.2708         40.       Orissa Coastal       1.466       33.11       0.2904         41.       Orissa Southern       1.284       44.80       0.2949         42.       Orissa Northern       2.299       5.66       0.2762         44.       Punjab Southern       2.250       6.02       0.3294         45.       Rajasthan North Eastern       1.692       30.86       0.3707         44.       Punjab Southern       1.788       18.36       0.2862         45.       Rajasthan North Eastern       1.788       18.36       0.2862         46.       Rajasthan North Eastern       1.788       1	32.	Madhya Pradesh South Western	1.144	56.63	0.2776
34.       Maharashtra Coastal       2.230       9.10       0.2996         35.       Maharashtra Inland Western       1.664       28.81       0.3362         36.       Maharashtra Inland Central       1.200       52.75       0.3296         37.       Maharashtra Inland Central       1.200       52.75       0.3296         38.       Maharashtra Inland Central       1.200       52.75       0.3296         38.       Maharashtra Inland Central       1.200       52.75       0.3296         38.       Maharashtra Inland Central       1.284       44.91       0.3390         39.       Maharashtra Eastern       1.284       44.80       0.2904         40.       Orissa Coastal       1.466       33.11       0.2004         41.       Orissa Southern       1.284       44.80       0.2949         42.       Orissa Northern       2.259       6.02       0.2002         44.       Punjab Northern       2.250       6.02       0.2902         45.       Rajasthan North Eastern       1.692       30.86       0.3707         47.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan Southern       1.713 <t< td=""><td>33.</td><td>Madhya Pradesh Northern</td><td>1.610</td><td>28.12</td><td>0.2979</td></t<>	33.	Madhya Pradesh Northern	1.610	28.12	0.2979
35.       Maharashtra Inland Western       1.664       28.81       0.3362         36.       Maharashtra Inland Northern       1.329       45.24       0.3168         37.       Maharashtra Inland Central       1.200       52.75       0.3296         38.       Maharashtra Inland Eastern       1.348       44.91       0.3390         39.       Maharashtra Eastern       1.238       47.79       0.2708         40.       Orissa Coastal       1.466       33.11       0.2904         41.       Orissa Southern       1.284       44.80       0.2949         42.       Orissa Northern       1.558       33.01       0.3241         43.       Punjab Northern       2.299       5.66       0.2762         44.       Punjab Southern       1.647       29.26       0.3294         45.       Rajasthan Notth Eastern       1.692       30.86       0.3707         46.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan Southern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal       1.600       27.41       0.3344         51.       Tamil Nadu Coastal       1.600       27.41	34.	Maharashtra Coastal	2.230	9.10	0.2996
36.       Maharashtra Inland Central       1.329       45.24       0.3108         37.       Maharashtra Inland Central       1.200       52.75       0.3296         38.       Maharashtra Inland Eastern       1.348       44.91       0.3390         39.       Maharashtra Eastern       1.238       47.79       0.2708         40.       Orissa Coastal       1.466       33.11       0.2904         41.       Orissa Southern       1.284       44.80       0.2949         42.       Orissa Northern       1.558       33.01       0.3241         43.       Punjab Northern       2.290       5.66       0.2762         44.       Punjab Northern       2.250       6.02       0.2902         45.       Rajasthan Western       1.647       29.26       0.3294         46.       Rajasthan Southern       1.788       18.36       0.2862         47.       Rajasthan Southern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal       1.600       27.41       0.3234         50.       Tamil Nadu Southern       1.713       31.95       0.3560         51.       Tamil Nadu Southern       1.414       42.76       0.3570 </td <td>35.</td> <td>Maharashtra Inland Western</td> <td>1.664</td> <td>28.81</td> <td>0.3362</td>	35.	Maharashtra Inland Western	1.664	28.81	0.3362
37.       Maharashtra Inland Central       1.200       52.75       0.3290         38.       Maharashtra Inland Eastern       1.348       44.91       0.3390         39.       Maharashtra Eastern       1.238       47.79       0.2708         40.       Orissa Coastal       1.466       33.11       0.2904         41.       Orissa Southern       1.284       44.80       0.2949         42.       Orissa Northern       1.558       33.01       0.3241         43.       Punjab Northern       2.299       5.66       0.2762         44.       Punjab Southern       2.250       6.02       0.2902         45.       Rajasthan Western       1.647       29.26       0.3294         46.       Rajasthan Southern       1.692       30.86       0.3707         47.       Rajasthan Southern       1.788       18.36       0.2862         48.       Rajasthan South Eastern       1.788       18.36       0.3234         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Southern       1.414       42.76       0.3570         52.       Tamil Nadu Inland       1.897       21.44       0.3500	36.	Maharashtra Inland Northern	1.329	45.24	0.3108
38.       Maharashtra Inland Eastern       1.348       44.91       0.3590         39.       Maharashtra Eastern       1.238       47.79       0.2708         40.       Orissa Coastal       1.466       33.11       0.2904         41.       Orissa Southern       1.238       44.80       0.2949         42.       Orissa Northern       1.258       33.01       0.3241         43.       Punjab Northern       2.299       5.66       0.2762         44.       Punjab Southern       2.250       6.02       0.2902         45.       Rajasthan Western       1.692       30.86       0.3707         46.       Rajasthan North Eastern       1.798       27.92       0.3252         48.       Rajasthan Southern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal       1.600       27.41       0.3234         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Coastal       1.600       27.41       0.3234         52.       Tamil Nadu Southern       1.414       42.76       0.3570         52.       Tamil Nadu Southern       1.470       38.84       0.3162 <td>37.</td> <td>Maharashtra Inland Central</td> <td>1.200</td> <td>52.75</td> <td>0,3290</td>	37.	Maharashtra Inland Central	1.200	52.75	0,3290
39.       Maharashtra Eastern       1.238       41.79       0.2703         40.       Orissa Coastal       1.466       33.11       0.2904         41.       Orissa Southern       1.284       44.80       0.2949         42.       Orissa Northern       1.558       33.01       0.3241         43.       Punjab Northern       2.299       5.66       0.2762         44.       Punjab Southern       2.250       6.02       0.2902         45.       Rajasthan Western       1.647       29.26       0.3294         46.       Rajasthan North Eastern       1.692       30.86       0.3707         47.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal       1.600       27.41       0.3234         50.       Tamil Nadu Southern       1.414       42.76       0.3500         52.       Tamil Nadu Inland       1.897       21.44       0.3340         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Central       1.746       31.35       0.3601	38.	Maharashtra Inland Eastern	1.348	44.91	0.3390
40.       Orissa Coastal       1.466       35.11       0.2049         41.       Orissa Southern       1.284       44.80       0.2949         42.       Orissa Northern       1.558       33.01       0.3241         43.       Punjab Northern       2.299       5.66       0.2762         44.       Punjab Southern       2.250       6.02       0.2902         45.       Rajasthan Western       1.647       29.26       0.3252         46.       Rajasthan South Eastern       1.692       30.86       0.3707         47.       Rajasthan South Eastern       1.798       27.92       0.3252         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal Northern       1.414       42.76       0.3570         51.       Tamil Nadu Southern       1.414       42.76       0.3500         52.       Tamil Nadu Southern       1.470       38.84       0.3162         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Kestern       1.539       33.27	39.	Maharashtra Eastern	1.238	47.79	0.2708
41.       Orissa Southern       1.284       44.80       0.1214         42.       Orissa Northern       1.558       33.01       0.3241         43.       Punjab Northern       2.299       5.66       0.2762         44.       Punjab Southern       2.250       6.02       0.2902         45.       Rajasthan Western       1.647       29.26       0.3294         46.       Rajasthan North Eastern       1.692       30.86       0.3707         47.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Coastal       1.600       27.41       0.3234         52.       Tamil Nadu Inland       1.897       21.44       0.3500         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Central       1.746       31.35       0.3601         55.       Uttar Pradesh Southern       1.377       45.89       0	40.	Orissa Coastal	1.466	33.11	0.2904
42.       Orissa Northern       1.538       33.01       0.2241         43.       Punjab Northern       2.299       5.66       0.2762         44.       Punjab Southern       2.250       6.02       0.2902         45.       Rajasthan Western       1.647       29.26       0.3294         46.       Rajasthan North Eastern       1.692       30.86       0.3707         47.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Southern       1.414       42.76       0.3570         52.       Tamil Nadu Inland       1.897       21.44       0.3500         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Kestern       1.476       31.35       0.3661         55.       Uttar Pradesh Central       1.746       31.35       0.3664         56.       Uttar Pradesh Southern       1.377       45.89	41.	Orissa Southern	1.284	44.80	0.2241
43.       Punjab Northern       2.299       5.66       0.2902         44.       Punjab Southern       2.250       6.02       0.2902         45.       Rajasthan Western       1.647       29.26       0.3294         46.       Rajasthan North Eastern       1.692       30.86       0.3707         47.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Southern       1.414       42.76       0.3500         52.       Tamil Nadu Southern       1.414       42.76       0.3340         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Kestern       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Southern       1.377       45.89       0.3664         57.       Uttar Pradesh Southern       1.377       45.89<	42.	Orissa Northern	1.558	55.01	0.2762
44.       Punjab Southern       2.2.30       0.02       0.02         45.       Rajasthan Western       1.647       29.26       0.3294         46.       Rajasthan North Eastern       1.692       30.86       0.3707         47.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal Northern       1.713       31.95       0.3570         51.       Tamil Nadu Coastal       1.600       27.41       0.3234         52.       Tamil Nadu Southern       1.414       42.76       0.3570         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Southern       1.377       45.89       0.3664         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944	43.	Punjab Northern	2.299	5.00	0.2902
45.       Rajasthan Western       1.047       27.93       0.3707         46.       Rajasthan North Eastern       1.692       30.86       0.3707         47.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Southern       1.414       42.76       0.3500         52.       Tamil Nadu Southern       1.414       42.76       0.3500         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Western       1.539       33.27       0.3085         56.       Uttar Pradesh Eastern       1.377       45.89       0.3664         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413	44.	Punjab Southern	1.647	20.26	0.3294
46.       Rajasthan North Eastern       1.092       50.00       0.3252         47.       Rajasthan Southern       1.798       27.92       0.3252         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3254         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Southern       1.414       42.76       0.3570         52.       Tamil Nadu Southern       1.414       42.76       0.3340         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2	45.	Rajasthan Western	1.047	30.86	0.3707
47.       Rajasthan Southern       1.790       21.32       1.720         48.       Rajasthan South Eastern       1.788       18.36       0.2862         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Southern       1.414       42.76       0.3570         52.       Tamil Nadu Inland       1.897       21.44       0.3500         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614	46.	Rajasthan North Eastern	1.092	27.92	0.3252
48.       Rajastnan South Eastern       1.745       10.35         49.       Tamil Nadu Coastal Northern       1.713       31.95       0.3560         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Southern       1.414       42.76       0.3570         52.       Tamil Nadu Inland       1.897       21.44       0.3500         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614	47.	Rajasthan Southern	1,790	18 36	0.2862
49.       Tamil Nadu Coastal Northern       1.715       51.05         50.       Tamil Nadu Coastal       1.600       27.41       0.3234         51.       Tamil Nadu Southern       1.414       42.76       0.3570         52.       Tamil Nadu Inland       1.897       21.44       0.3500         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614	48.	Rajasthan South Eastern	1.780	31.95	0.3560
50.       Tamil Nadi Coastal       1.500       21.14       0.3570         51.       Tamil Nadu Southern       1.414       42.76       0.3570         52.       Tamil Nadu Inland       1.897       21.44       0.3500         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614	49.	Tamil Nadu Coastal Northern	1.600	27.41	0.3234
51.       Famil Nadu Soutiern       1.414       1.417       1.415         52.       Tamil Nadu Inland       1.897       21.44       0.3500         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614	5U.	Tamit Nadu Coastai	1 414	42.76	0.3570
52.       Famil Nadu Inland       1.007       21.007         53.       Uttar Pradesh Himalayan       2.303       14.47       0.3340         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614         61.       West Bengal Vestern Plains       1.510       21.87       0.2509	31. C2	Lamit Nadu Jounem	1 807	21.44	0.3500
53.       Ottar Pradesh Franzyan       1.200       100       100         54.       Uttar Pradesh Western       1.470       38.84       0.3162         55.       Uttar Pradesh Central       1.746       31.35       0.3601         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614         61.       West Bengal Vestern Plains       1.510       21.87       0.2509	54.	Littar Dradach Himalayan	2 303	14.47	0.3340
54.       Ottat Pladesh Western       1.746       31.35       0.3601         55.       Uttar Pradesh Central       1.746       31.35       0.3085         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Central Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614	33. 54	Uttar Protech Western	1 470	38.84	0.3162
55.       Ottar Pradesh Central       1.739       33.27       0.3085         56.       Uttar Pradesh Eastern       1.539       33.27       0.3085         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Central Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614         61.       West Bengal Vestern Plains       1.510       21.87       0.2509	34. 55	Uttar Dradech Central	1.746	31.35	0.3601
50.       Ottal Flatesh Latern       1.377       45.89       0.3664         57.       Uttar Pradesh Southern       1.377       45.89       0.3664         58.       West Bengal Himalayan       1.944       6.26       0.2434         59.       West Bengal Eastern Plains       1.413       36.02       0.2697         60.       West Bengal Central Plains       2.102       17.93       0.3614         61.       West Bengal Vestern Plains       1.510       21.87       0.2509	JJ. 56	Uttar Deadech Factors	1.539	33.27	0.3085
S1.         Ottal Platesh obtaicht         1.944         6.26         0.2434           58.         West Bengal Himalayan         1.944         6.26         0.2697           59.         West Bengal Central Plains         1.413         36.02         0.2697           60.         West Bengal Central Plains         2.102         17.93         0.3614           61.         West Bengal Western Plains         1.510         21.87         0.2509	JU. 57	Uttar Francist Eastern Littar Dradech Couthern	1.377	45.89	0.3664
59.West Bengal Central Plains1.41336.020.269760.West Bengal Central Plains2.10217.930.361461.Wast Bengal Western Plains1.51021.870.2509	51. 58	West Rengal Himalayan	1.944	6.26	0.2434
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