The Spatial Distribution of Rural Poverty in the Last Three Quinquennial Rounds of NSS*

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ABSTRACT

The spatial distribution of poverty in India has emerged as a matter of urgent concern in recent times. Although much of this analysis has concentrated on the poverty experiences of states, there is considerable evidence of wide variations within states particularly, but not exclusively, the larger ones. This paper presents evidence on the poverty experiences of 75 NSS regions for the quinquennial rounds of 1987–88, 1993–94 and 1999–2000. The results presented here facilitate easy identification of lagging areas on which anti poverty policy must concentrate. Furthermore, regional inequality in the incidence of poverty has persisted over time. The economic reforms program has been unable to make any significant dent on the spatial distribution of expenditure poverty.

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I. Introduction

Much has been written recently on the behaviour of poverty in India. An important characteristic of poverty trends has been changes in the spatial distribution of such poverty as a consequence of economic reforms. Jha (2000) presented evidence on the non-convergence of poverty rates across states.[1] Dubey and Gangopadhyay (1998) computed poverty indices for the various NSS regions for the 43rd and 50th rounds of the NSS. The wide variations of poverty within many states, as portrayed by Dubey and Gangopadhyay provide an indication that one needs to analyse poverty at a level more disaggregated than individual states.

The present paper provides updates on the rural poverty profile of 75 NSS regions common to the 43rd, 50th and 55th rounds of the NSS. As is well known by now, there are problems of comparability between the 55th and earlier rounds. Hence while the 43rd and 50th round results can and are compared, we do not compare the 55th round results with the other rounds.

The plan of this paper is as follows. Section II briefly outlines the methodology for poverty computation used in this paper. Section III provides results on poverty measures for the 43rd (1987–88), 50th (1993–94) and 55th (1999–2000) quinquennial rounds of the NSS as well as changes in poverty and its intensity across the 43rd and 50th rounds. Section IV concludes.

[1] For a recent analysis of the behaviour of poverty trends in major states of India see Sundaram and Tendulkar (2003).

II. The Methodology

This paper uses the popular Foster–Greer–Thorbecke (FGT) measures of poverty.

FGT poverty measure for a given population is defined by:

$$P_{\alpha} = \int_0^q \left(\frac{z - y}{z} \right)^{\alpha} dy$$

which in discrete terms is

$$PG_{\alpha} = \frac{1}{N} \sum_{i=1}^{q} \left(\frac{z - y_i}{z} \right)^{\alpha}$$

where

- N is the sample size,
- y *is* the variable of interest (monthly per capita expenditure in the case of this paper),
- z is the poverty line(a number or a scalar)

Three poverty measures are calculated based on three values of α.

Head Count Index of Poverty (PG0) $\alpha = 0$:

$$PG0 = \frac{q}{N}$$

This measure fails to capture the extent to which individual income (or expenditure) falls below the poverty line. Hence we use our second measure: the poverty gap index (PG_1) given by the aggregate income shortfall of the poor as a proportion of the poverty line and normalized by the population size.

Poverty Gap (PG_1) $\alpha = 1$:

$$PG_1 = \frac{1}{N} \sum_{i-1}^{q} \left(\frac{z - y_i}{z} \right)$$

PG_1 captures the acuteness of poverty since it measures the total shortfall of the poor from the poverty line. In other words, it measures the total amount of income necessary to remove that poverty. This measure has the drawback that it does not consider the importance of the number of people who are below the poverty line. For

this reason, it is important to use both measures of poverty jointly to evaluate the extent of poverty. There are certain policy changes that favor one group of poor and adversely affect another group. In such cases HC may not register any change but PG_1 may get around this problem to some extent.

Square Poverty Gap (PG_2) $\alpha = 2$:

$$PG_2 = \frac{1}{N}\sum_{i-1}^{q}\left(\frac{z - y_i}{z}\right)^2$$

This measures the severity of poverty even more accurately. In discussing poverty, therefore, it is important to use all three measures. The current analysis uses multipliers as the household sampling weights.[2] The poverty line or minimum per capita monthly expenditure (mpce) is Rs. 49 in 1973–74 prices as suggested by the Planning Commission. We use the CPIAL (All India) for deflating the consumption values.

III. Results

Table 1 provides details of the NSS regions used in this paper. The NSS regional code has varied over the years but we use a common set here for purposes of consistency.

Table 1: NSS regions

State	Region	Code used in this Paper
Andhra Pradesh	Coastal	1
Andhra Pradesh	Inland Northern	2
Andhra Pradesh	South western	3
Andhra Pradesh	Inland southern	4
Arunachal Pradesh	Arunachal Pradesh	5
Assam	Plains Eastern	6
Assam	Plains Western	7
Assam	Hills	8
Bihar	Southern	9
Bihar	Northern	10
Bihar	Central	11

[2] For a treatment of multipliers in the three rounds see the documentation for these rounds provided by NSS.

Goa	Goa	12
Gujarat	Eastern	13
Gujarat	Plains Northern	14
Gujarat	Plains Southern	15
Gujarat	Dry Areas	16
Gujarat	Saurashtra	17
Haryana	Eastern	18
Haryana	Western	19
Himachal Pradesh	Himachal Pradesh	20
J&K	Mountainous	21
J&K	Outer Hills	22
Karnataka	Coastal and Ghats	23
Karnataka	Inlands Eastern	24
Karnataka	Inland Southern	25
Karnataka	Inland Northern	26
Kerala	Northern	27
Kerala	Southern	28
Madhya Pradesh	Chattisgarh	29
Madhya Pradesh	Vindhya	30
Madhya Pradesh	Central	31
Madhya Pradesh	Malwa Plateau	32
Madhya Pradesh	South Central	33
Madhya Pradesh	South western	34
Madhya Pradesh	Northern	35
Maharashtra	Coastal	36
Maharashtra	Inland Western	37
Maharashtra	Inland Northern	38
Maharashtra	Inland Central	39
Maharashtra	Inland Eastern	40
Maharashtra	Eastern	41
Manipur	Plains	42
Manipur	Hills	43
Meghalaya	Meghalaya	44
Mizoram	Mizoram	45
Orissa	Coastal	46
Orissa	Southern	47
Orissa	Northern	48
Punjab	Northern	49
Punjab	Southern	50
Rajasthan	Western	51
Rajasthan	North Eastern	52
Rajasthan	Southern	53
Rajasthan	South Eastern	54
Sikkim	Sikkim	55
Tamil Nadu	Coastal Northern	56
Tamil Nadu	Coastal	57
Tamil Nadu	Southern	58
Tamil Nadu	Inland	59
Tripura	Tripura	60
Uttar Pradesh	Himalayan	61
Uttar Pradesh	Western	62

Uttar Pradesh	Central	63
Uttar Pradesh	Eastern	64
Uttar Pradesh	Southern	65
West Bengal	Himalayan	66
West Bengal	Eastern Plains	67
West Bengal	Central Plains	68
West Bengal	Western Plains	69
Andaman & Nicobar	A&N	70
Chandigarh		71
Dadra & nagar Haveli		72
Delhi		73
Lakshadweep		74
Pondicherry		75

The results on poverty computations for the three quinquennial rounds follow in Tables 2 to 10 for PG0, PG1 and PG2. These magnitudes are arranged in ascending order to facilitate ranking of regions by their poverty profile.[3] The all-India figures are also given in these tables.

Table 2: 43rd Round PG0 in ascending order

		NSS Region code	Value of PG0
Andaman & Nicobar	A&N	70	0.016454
Lakshadweep		74	0.019009
Manipur	Plains	42	0.022357
Haryana	Western	19	0.061216
Punjab	Northern	49	0.067321
Himachal Pradesh	Himachal Pradesh	20	0.072469
Manipur	Hills	43	0.086385
Punjab	Southern	50	0.088436
Pondicherry		75	0.099759
Uttar Pradesh	Himalayan	61	0.103681
West Bengal	Himalayan	66	0.120279
Kerala	Southern	28	0.121015
Karnataka	Coastal and Ghats	23	0.122746
J&K	Mountainous	21	0.126691
Arunachal Pradesh	Arunachal Pradesh	5	0.127142
Tripura	Tripura	60	0.141281
Gujarat	Saurashtra	17	0.145561
Goa	Goa	12	0.15322
Haryana	Eastern	18	0.161413
Assam	Hills	8	0.173897

[3] Data on all regions may not be reported for each of the rounds. This is because of the lack of convergence of the computational algorithm in these cases.

Assam	Plains Eastern	6	0.17771
Gujarat	Plains Southern	15	0.180894
Kerala	Northern	27	0.190163
Gujarat	Plains Northern	14	0.202723
Sikkim	Sikkim	55	0.209212
J&K	Outer Hills	22	0.210387
Rajasthan	Western	51	0.218354
Tamil Nadu	Inland	59	0.220159
Rajasthan	North Eastern	52	0.228475
Maharashtra	Inland Western	37	0.237904
Meghalaya	Meghalaya	44	0.245716
Maharashtra	Coastal	36	0.248801
Madhya Pradesh	Northern	35	0.249629
Assam	Plains Western	7	0.256803
Gujarat	Eastern	13	0.257946
Rajasthan	South Eastern	54	0.264932
Karnataka	Inlands Eastern	24	0.273112
West Bengal	Western Plains	69	0.277525
Uttar Pradesh	Western	62	0.279102
West Bengal	Central Plains	68	0.286724
Andhra Pradesh	Coastal	1	0.301716
Tamil Nadu	Coastal	57	0.308776
Andhra Pradesh	South western	3	0.324588
Andhra Pradesh	Inland Northern	2	0.330873
India			**0.333**
Maharashtra	Eastern	41	0.360357
Uttar Pradesh	Central	63	0.371178
Orissa	Coastal	46	0.379534
Madhya Pradesh	Malwa Plateau	32	0.383229
Karnataka	Inland Southern	25	0.391199
Maharashtra	Inland Northern	38	0.391875
Karnataka	Inland Northern	26	0.3963
Gujarat	Dry Areas	16	0.404709
Bihar	Southern	9	0.411931
Bihar	Central	11	0.41243
Maharashtra	Inland Eastern	40	0.413714
Madhya Pradesh	Vindhya	30	0.420755
Mizoram	Mizoram	45	0.421329
Maharashtra	Inland Central	39	0.424632
Tamil Nadu	Southern	58	0.425028
Madhya Pradesh	Central	31	0.432351
Bihar	Northern	10	0.433081
Uttar Pradesh	Eastern	64	0.446334
West Bengal	Eastern Plains	67	0.446927
Madhya Pradesh	Chattisgarh	29	0.463963
Tamil Nadu	Coastal Northern	56	0.497642
Orissa	Northern	48	0.499711
Uttar Pradesh	Southern	65	0.510121
Madhya Pradesh	South Central	33	0.511082
Madhya Pradesh	South western	34	0.514094
Andhra Pradesh	Inland southern	4	0.550078

Rajasthan	Southern	53	0.55523
Dadra & nagar Haveli		72	0.598099
Orissa	Southern	47	0.71929

Table 3: 43rd Round Head PG1 in ascending order

		NSS Region code	Value of PG1
Andaman & Nicobar	A&N	70	0.001005
Lakshadweep		74	0.002088
Manipur	Plains	42	0.002762
Punjab	Northern	49	0.008141
Haryana	Western	19	0.009854
Manipur	Hills	43	0.009873
Himachal Pradesh	Himachal Pradesh	20	0.010732
Punjab	Southern	50	0.013532
Pondicherry		75	0.014885
West Bengal	Himalayan	66	0.015569
Uttar Pradesh	Himalayan	61	0.015613
Karnataka	Coastal and Ghats	23	0.01774
Gujarat	Saurashtra	17	0.019381
J&K	Mountainous	21	0.020994
Goa	Goa	12	0.021668
Kerala	Southern	28	0.022725
Assam	Plains Eastern	6	0.023186
Tripura	Tripura	60	0.02548
Assam	Hills	8	0.025689
Sikkim	Sikkim	55	0.031107
Gujarat	Plains Northern	14	0.033405
Arunachal Pradesh	Arunachal Pradesh	5	0.034678
J&K	Outer Hills	22	0.035092
Kerala	Northern	27	0.036372
Haryana	Eastern	18	0.037432
Gujarat	Plains Southern	15	0.037617
Assam	Plains Western	7	0.041906
Rajasthan	Western	51	0.042382
Maharashtra	Inland Western	37	0.043849
Rajasthan	North Eastern	52	0.046786
Tamil Nadu	Inland	59	0.047928
Maharashtra	Coastal	36	0.048435
Karnataka	Inlands Eastern	24	0.048661
Rajasthan	South Eastern	54	0.049513
Gujarat	Eastern	13	0.050042
West Bengal	Western Plains	69	0.052166
Madhya Pradesh	Northern	35	0.057075
Meghalaya	Meghalaya	44	0.057259
West Bengal	Central Plains	68	0.060512
Uttar Pradesh	Western	62	0.060823
Andhra Pradesh	Coastal	1	0.066535
Tamil Nadu	Coastal	57	0.068462

Andhra Pradesh	South western	3	0.072183
Andhra Pradesh	Inland Northern	2	0.073098
India			**0.076252**
Gujarat	Dry Areas	16	0.078319
Maharashtra	Eastern	41	0.078502
Orissa	Coastal	46	0.079532
Uttar Pradesh	Central	63	0.082958
Maharashtra	Inland Northern	38	0.090756
Maharashtra	Inland Eastern	40	0.091759
Madhya Pradesh	Vindhya	30	0.09198
Karnataka	Inland Southern	25	0.092034
Bihar	Northern	10	0.092936
Bihar	Central	11	0.093284
Bihar	Southern	9	0.095157
West Bengal	Eastern Plains	67	0.097719
Uttar Pradesh	Eastern	64	0.102042
Madhya Pradesh	Central	31	0.103508
Mizoram	Mizoram	45	0.104603
Madhya Pradesh	Chattisgarh	29	0.106177
Madhya Pradesh	Malwa Plateau	32	0.10624
Maharashtra	Inland Central	39	0.107433
Karnataka	Inland Northern	26	0.108447
Tamil Nadu	Southern	58	0.115338
Uttar Pradesh	Southern	65	0.124988
Orissa	Northern	48	0.126098
Dadra & nagar Haveli		72	0.126269
Tamil Nadu	Coastal Northern	56	0.132458
Madhya Pradesh	South Central	33	0.148293
Madhya Pradesh	South western	34	0.149902
Andhra Pradesh	Inland southern	4	0.168191
Rajasthan	Southern	53	0.212142
Orissa	Southern	47	0.226991

Table 4: 43rd Round Head PG2 in ascending order

		NSS Region code	Value of PG2
Andaman & Nicobar		70	0.000122
Lakshadweep		74	0.000402
Manipur	Plains	42	0.000534
Manipur	Hills	43	0.001814
Punjab	Northern	49	0.001923
Himachal Pradesh	Himachal Pradesh	20	0.002769
Pondicherry		75	0.003008
Uttar Pradesh	Himalayan	61	0.003662
Punjab	Southern	50	0.00369
Karnataka	Coastal and Ghats	23	0.003894
Haryana	Western	19	0.003912
West Bengal	Himalayan	66	0.004172
Gujarat	Saurashtra	17	0.004639
Assam	Hills	8	0.004749

Assam	Plains Eastern	6	0.004895
Goa	Goa	12	0.004983
J&K	Mountainous	21	0.005358
Kerala	Southern	28	0.007098
Tripura	Tripura	60	0.00715
Sikkim	Sikkim	55	0.007756
Gujarat	Plains Northern	14	0.008194
J&K	Outer Hills	22	0.008804
Assam	Plains Western	7	0.010474
Kerala	Northern	27	0.010499
Gujarat	Plains Southern	15	0.011834
Maharashtra	Inland Western	37	0.01219
Rajasthan	Western	51	0.012469
Karnataka	Inland Eastern	24	0.013001
Rajasthan	North Eastern	52	0.014603
Haryana	Eastern	18	0.014646
Tamil Nadu	Inland	59	0.015034
Maharashtra	Coastal	36	0.015087
Rajasthan	South Eastern	54	0.015309
Arunachal Pradesh	Arunachal Pradesh	5	0.015736
Gujarat	Eastern	13	0.015977
West Bengal	Western Plains	69	0.016256
Madhya Pradesh	Northern	35	0.019366
Meghalaya	Meghalaya	44	0.019462
Uttar Pradesh	Western	62	0.019795
West Bengal	Central Plains	68	0.020038
Gujarat	Dry Areas	16	0.022348
Tamil Nadu	Coastal	57	0.022645
Andhra Pradesh	Inland Northern	2	0.023137
Andhra Pradesh	South western	3	0.023439
Andhra Pradesh	Coastal	1	0.023709
Orissa	Coastal	46	0.025112
Maharashtra	Eastern	41	0.025318
India			**0.026049**
Uttar Pradesh	Central	63	0.026483
Maharashtra	Inland Eastern	40	0.029685
Maharashtra	Inland Northern	38	0.030514
Bihar	Northern	10	0.030533
Bihar	Central	11	0.030758
Madhya Pradesh	Vindhya	30	0.030949
West Bengal	Eastern Plains	67	0.03175
Karnataka	Inland Southern	25	0.03217
Uttar Pradesh	Eastern	64	0.033106
Bihar	Southern	9	0.033355
Madhya Pradesh	Central	31	0.034751
Madhya Pradesh	Chattisgarh	29	0.035157
Dadra & nagar Haveli		72	0.035944
Mizoram	Mizoram	45	0.037817
Maharashtra	Inland Central	39	0.038398
Uttar Pradesh	Southern	65	0.041064
Karnataka	Inland Northern	26	0.042207

Madhya Pradesh	Malwa Plateau	32	0.042441
Orissa	Northern	48	0.0439
Tamil Nadu	Southern	58	0.045295
Tamil Nadu	Coastal Northern	56	0.048439
Madhya Pradesh	South western	34	0.059538
Madhya Pradesh	South Central	33	0.059569
Andhra Pradesh	Inland southern	4	0.068313
Orissa	Southern	47	0.093968
Rajasthan	Southern	53	0.10565

Table 5: 50th Round PG0 in ascending order

		NSS Region code	Value of PG0
Chandigarh		71	0.009439
Andaman & Nicobar	A&N	70	0.010089
J&K	Mountainous	21	0.022598
Mizoram	Mizoram	45	0.025619
Punjab	Northern	49	0.025851
Manipur	Plains	42	0.034073
Goa	Goa	12	0.042441
Punjab	Southern	50	0.069703
Karnataka	Coastal and Ghats	23	0.080235
Manipur	Hills	43	0.083646
Meghalaya	Meghalaya	44	0.085014
Gujarat	Saurashtra	17	0.08973
Kerala	Southern	28	0.094336
Rajasthan	North Eastern	52	0.116657
Sikkim	Sikkim	55	0.121141
Haryana	Western	19	0.124584
Himachal Pradesh	Himachal Pradesh	20	0.124868
Kerala	Northern	27	0.125538
Tripura	Tripura	60	0.132581
Assam	Hills	8	0.134252
Karnataka	Inlands Eastern	24	0.142936
Maharashtra	Coastal	36	0.148927
Rajasthan	Western	51	0.154202
Uttar Pradesh	Himalayan	61	0.154377
Haryana	Eastern	18	0.157044
Assam	Plains Eastern	6	0.168266
Pondicherry		75	0.168632
Tamil Nadu	Coastal	57	0.180922
Madhya Pradesh	Northern	35	0.181075
Arunachal Pradesh	Arunachal Pradesh	5	0.190838
Gujarat	Plains Southern	15	0.191965
Tamil Nadu	Inland	59	0.195879
West Bengal	Central Plains	68	0.196285
Gujarat	Plains Northern	14	0.197661
Gujarat	Eastern	13	0.197889
Uttar Pradesh	Western	62	0.206388
Gujarat	Dry Areas	16	0.207246

J&K	Outer Hills	22	0.217171
Maharashtra	Inland Western	37	0.224261
Rajasthan	South Eastern	54	0.230907
West Bengal	Western Plains	69	0.233157
Andhra Pradesh	Inland Northern	2	0.237828
Andhra Pradesh	Inland southern	4	0.253548
Madhya Pradesh	Malwa Plateau	32	0.260845
Assam	Plains Western	7	0.269192
Rajasthan	Southern	53	0.29014
Andhra Pradesh	Coastal	1	0.293146
India			**0.303**
Karnataka	Inland Southern	25	0.311336
West Bengal	Eastern Plains	67	0.314994
Andhra Pradesh	South western	3	0.316273
Tamil Nadu	Southern	58	0.330586
Madhya Pradesh	Vindhya	30	0.366261
Uttar Pradesh	Eastern	64	0.389746
Karnataka	Inland Northern	26	0.392133
West Bengal	Himalayan	66	0.399828
Tamil Nadu	Coastal Northern	56	0.408904
Madhya Pradesh	Chattisgarh	29	0.42387
Uttar Pradesh	Central	63	0.428002
Bihar	Central	11	0.432061
Orissa	Northern	48	0.440689
Madhya Pradesh	South Central	33	0.443406
Maharashtra	Inland Eastern	40	0.454714
Maharashtra	Inland Northern	38	0.455215
Orissa	Coastal	46	0.456577
Maharashtra	Eastern	41	0.459219
Bihar	Northern	10	0.467322
Dadra & nagar Haveli		72	0.476998
Maharashtra	Inland Central	39	0.478429
Bihar	Southern	9	0.504379
Madhya Pradesh	Central	31	0.504626
Uttar Pradesh	Southern	65	0.560225
Orissa	Southern	47	0.631273
Madhya Pradesh	South western	34	0.657759

Table 6: 50th Round PG1 in ascending order

		NSS Region code	Value of PG1
Chandigarh		71	0.000329
Andaman & Nicobar	A&N	70	0.000501
Mizoram	Mizoram	45	0.0026
J&K	Mountainous	21	0.002881
Punjab	Northern	49	0.003209
Manipur	Plains	42	0.004038
Manipur	Hills	43	0.006735
Goa	Goa	12	0.007722
Meghalaya	Meghalaya	44	0.008543

Punjab	Southern	50	0.009717
Karnataka	Coastal and Ghats	23	0.013413
Kerala	Southern	28	0.014897
Assam	Hills	8	0.015171
Gujarat	Saurashtra	17	0.015713
Sikkim	Sikkim	55	0.016338
Haryana	Western	19	0.019281
Himachal Pradesh	Himachal Pradesh	20	0.021116
Rajasthan	North Eastern	52	0.022302
Uttar Pradesh	Himalayan	61	0.022842
Rajasthan	Western	51	0.023278
Pondicherry		75	0.023567
Tripura	Tripura	60	0.023614
Kerala	Northern	27	0.023912
Karnataka	Inlands Eastern	24	0.024616
Assam	Plains Eastern	6	0.025692
Maharashtra	Coastal	36	0.026387
Haryana	Eastern	18	0.027597
Gujarat	Plains Northern	14	0.030691
Gujarat	Dry Areas	16	0.031836
Tamil Nadu	Coastal	57	0.032964
Tamil Nadu	Inland	59	0.034034
West Bengal	Western Plains	69	0.034717
Madhya Pradesh	Northern	35	0.03567
Gujarat	Plains Southern	15	0.036163
J&K	Outer Hills	22	0.037941
Uttar Pradesh	Western	62	0.038107
Gujarat	Eastern	13	0.038325
Arunachal Pradesh	Arunachal Pradesh	5	0.038445
West Bengal	Central Plains	68	0.038719
Assam	Plains Western	7	0.038963
Andhra Pradesh	Inland Northern	2	0.043827
Rajasthan	South Eastern	54	0.044148
Andhra Pradesh	Inland southern	4	0.044949
Maharashtra	Inland Western	37	0.045165
Madhya Pradesh	Malwa Plateau	32	0.053121
Rajasthan	Southern	53	0.053495
Karnataka	Inland Southern	25	0.058678
West Bengal	Eastern Plains	67	0.059032
Andhra Pradesh	Coastal	1	0.059773
West Bengal	Himalayan	66	0.065284
India			**0.0657**
Andhra Pradesh	South western	3	0.069774
Tamil Nadu	Southern	58	0.073589
Madhya Pradesh	Vindhya	30	0.078815
Madhya Pradesh	Chattisgarh	29	0.082308
Uttar Pradesh	Eastern	64	0.086134
Karnataka	Inland Northern	26	0.089278
Dadra & nagar Haveli		72	0.094064
Bihar	Central	11	0.09585
Maharashtra	Eastern	41	0.096876

Tamil Nadu	Coastal Northern	56	0.098026
Maharashtra	Inland Northern	38	0.098953
Orissa	Northern	48	0.100114
Maharashtra	Inland Eastern	40	0.103324
Orissa	Coastal	46	0.103899
Uttar Pradesh	Central	63	0.105891
Bihar	Northern	10	0.10593
Madhya Pradesh	South Central	33	0.113061
Bihar	Southern	9	0.119749
Madhya Pradesh	Central	31	0.121594
Maharashtra	Inland Central	39	0.153076
Uttar Pradesh	Southern	65	0.15575
Orissa	Southern	47	0.167585
Madhya Pradesh	South western	34	0.215099

Table 7: 50th Round PG2 in ascending order

		NSS Region code	Value of PG2
Chandigarh		71	1.15E-05
Andaman & Nicobar	A&N	70	3.53E-05
Mizoram	Mizoram	45	0.000341
Punjab	Northern	49	0.000568
J&K	Mountainous	21	0.000571
Manipur	Plains	42	0.00069
Manipur	Hills	43	0.001404
Goa	Goa	12	0.001879
Meghalaya	Meghalaya	44	0.00189
Punjab	Southern	50	0.002018
Assam	Hills	8	0.002164
Sikkim	Sikkim	55	0.0033
Karnataka	Coastal and Ghats	23	0.003378
Kerala	Southern	28	0.003941
Haryana	Western	19	0.004446
Uttar Pradesh	Himalayan	61	0.005249
Himachal Pradesh	Himachal Pradesh	20	0.005598
Gujarat	Saurashtra	17	0.00565
Assam	Plains Eastern	6	0.006019
Rajasthan	North-Eastern	52	0.006305
Rajasthan	Western	51	0.006324
Tripura	Tripura	60	0.00662
Pondicherry		75	0.006991
Kerala	Northern	27	0.007043
Maharashtra	Coastal	36	0.007144
Karnataka	Inlands Eastern	24	0.007381
Gujarat	Plains Northern	14	0.007781
Gujarat	Dry Areas	16	0.008116
Haryana	Eastern	18	0.008725
West Bengal	Western Plains	69	0.00874
Assam	Plains Western	7	0.008991
Tamil Nadu	Inland	59	0.009755

Tamil Nadu	Coastal	57	0.009988
J&K	Outer Hills	22	0.010049
Gujarat	Plains Southern	15	0.010283
Gujarat	Eastern	13	0.010672
Uttar Pradesh	Western	62	0.011027
West Bengal	Central Plains	68	0.011129
Madhya Pradesh	Northern	35	0.011313
Arunachal Pradesh	Arunachal Pradesh	5	0.012177
Andhra Pradesh	Inland Northern	2	0.012524
Rajasthan	South Eastern	54	0.012587
Andhra Pradesh	Inland southern	4	0.013122
Rajasthan	Southern	53	0.014353
Maharashtra	Inland Western	37	0.014962
West Bengal	Himalayan	66	0.015912
Madhya Pradesh	Malwa Plateau	32	0.016256
West Bengal	Eastern Plains	67	0.016668
Karnataka	Inland Southern	25	0.017917
Andhra Pradesh	Coastal	1	0.019121
India			**0.021362**
Andhra Pradesh	South western	3	0.023792
Madhya Pradesh	Chattisgarh	29	0.023794
Madhya Pradesh	Vindhya	30	0.024626
Tamil Nadu	Southern	58	0.024752
Dadra & nagar Haveli		72	0.025484
Uttar Pradesh	Eastern	64	0.026877
Karnataka	Inland Northern	26	0.029484
Bihar	Central	11	0.030302
Maharashtra	Eastern	41	0.030953
Maharashtra	Inland Northern	38	0.031059
Maharashtra	Inland Eastern	40	0.031783
Orissa	Northern	48	0.033245
Orissa	Coastal	46	0.033447
Bihar	Northern	10	0.034783
Tamil Nadu	Coastal Northern	56	0.035414
Uttar Pradesh	Central	63	0.036044
Bihar	Southern	9	0.038862
Madhya Pradesh	Central	31	0.040398
Madhya Pradesh	South Central	33	0.040558
Uttar Pradesh	Southern	65	0.059494
Orissa	Southern	47	0.060705
Maharashtra	Inland Central	39	0.065787
Madhya Pradesh	South western	34	0.092784

Table 8: 55th Round PG0 in ascending order

		NSS Region code	Value of PG0
Andaman & Nicobar	A&N	70	0.000838
Mizoram	Mizoram	45	0.003396
J&K	Outer Hills	22	0.005404
Manipur	Plains	42	0.006929

Meghalaya	Meghalaya	44	0.012255
Kerala	Southern	28	0.017627
Punjab	Northern	49	0.018191
Himachal Pradesh	Himachal Pradesh	20	0.019824
Punjab	Southern	50	0.020581
Haryana	Eastern	18	0.021111
Gujarat	Saurashtra	17	0.0249
Chandigarh		71	0.032311
J&K	Mountainous	21	0.036778
Karnataka	Inlands Eastern	24	0.040528
Kerala	Northern	27	0.043866
Rajasthan	Western	51	0.045898
Karnataka	Coastal and Ghats	23	0.046545
Haryana	Western	19	0.046563
Gujarat	Plains Northern	14	0.055588
Rajasthan	North-Eastern	52	0.055947
Sikkim	Sikkim	55	0.057474
Tripura	Tripura	60	0.072067
Maharashtra	Inland Western	37	0.074009
Manipur	Hills	43	0.077862
West Bengal	Central Plains	68	0.081975
Gujarat	Dry Areas	16	0.083543
Uttar Pradesh	Himalayan	61	0.087823
Arunachal Pradesh	Arunachal Pradesh	5	0.091169
Gujarat	Plains Southern	15	0.097549
Tamil Nadu	Inland	59	0.100341
Karnataka	Inland Southern	25	0.100603
Rajasthan	South Eastern	54	0.102106
Tamil Nadu	Coastal	57	0.109226
Pondicherry		75	0.109993
Maharashtra	Coastal	36	0.110184
Dadar&Nagar Haveli		72	0.135966
Uttar Pradesh	Western	62	0.13643
Andhra Pradesh	Coastal	1	0.137396
Rajasthan	Southern	53	0.142023
Uttar Pradesh	Southern	65	0.145063
Tamil Nadu	Southern	58	0.162049
Madhya Pradesh	Northern	35	0.171503
West Bengal	Himalayan	66	0.176618
Assam	Plains Eastern	6	0.178222
Gujarat	Eastern	13	0.18343
India			**0.192**
West Bengal	Eastern Plains	67	0.199724
Andhra Pradesh	Inland Northern	2	0.203942
Maharashtra	Inland Central	39	0.205122
Maharashtra	Inland Northern	38	0.214337
Orissa	Coastal	46	0.220304
Karnataka	Inland Northern	26	0.223039
Maharashtra	Inland Eastern	40	0.234722
Uttar Pradesh	Eastern	64	0.236043

Assam	Plains Western	7	0.252002
West Bengal	Western Plains	69	0.253793
Madhya Pradesh	Malwa Plateau	32	0.255366
Madhya Pradesh	Vindhya	30	0.272628
Bihar	Northern	10	0.2755
Andhra Pradesh	South western	3	0.291118
Tamil Nadu	Coastal Northern	56	0.300514
Assam	Hills	8	0.303971
Uttar Pradesh	Central	63	0.307119
Andhra Pradesh	Inland southern	4	0.307857
Bihar	Central	11	0.308016
Madhya Pradesh	Central	31	0.32594
Bihar	Southern	9	0.352541
Maharashtra	Eastern	41	0.357428
Madhya Pradesh	South western	34	0.370324
Orissa	Northern	48	0.376655
Madhya Pradesh	Chattisgarh	29	0.394778
Madhya Pradesh	South Central	33	0.464826
Orissa	Southern	47	0.747464

Table 9: 55th Round PG1 in ascending order

		NSS Region code	Value of PG1
Andaman & Nicobar	A&N	70	2.69E-05
Mizoram	Mizoram	45	0.000171
Manipur	Plains	42	0.000712
J&K	Outer Hills	22	0.000735
Meghalaya	Meghalaya	44	0.00089
Chandigarh		71	0.001462
Punjab	Northern	49	0.002433
Punjab	Southern	50	0.002444
Himachal Pradesh	Himachal Pradesh	20	0.002778
Kerala	Southern	28	0.002917
Haryana	Eastern	18	0.003043
Gujarat	Saurashtra	17	0.003616
J&K	Mountainous	21	0.0046
Haryana	Western	19	0.006013
Karnataka	Inlands Eastern	24	0.00612
Rajasthan	Western	51	0.006687
Kerala	Northern	27	0.006769
Sikkim	Sikkim	55	0.007316
Rajasthan	North Eastern	52	0.007775
Gujarat	Plains Northern	14	0.00786
Karnataka	Coastal and Ghats	23	0.008927
Manipur	Hills	43	0.009271
Tripura	Tripura	60	0.010218
Maharashtra	Inland Western	37	0.010711
Rajasthan	South Eastern	54	0.010948
Uttar Pradesh	Himalayan	61	0.011005

West Bengal	Central Plains	68	0.011229
Arunachal Pradesh	Arunachal Pradesh	5	0.011333
Karnataka	Inland Southern	25	0.014408
Tamil Nadu	Inland	59	0.014838
Tamil Nadu	Coastal	57	0.015577
Gujarat	Dry Areas	16	0.017137
Pondicherry		75	0.021019
Gujarat	Plains Southern	15	0.021021
Uttar Pradesh	Western	62	0.022801
Madhya Pradesh	Northern	35	0.023294
Andhra Pradesh	Coastal	1	0.023415
DNH		72	0.024364
Rajasthan	Southern	53	0.024825
Tamil Nadu	Southern	58	0.025299
West Bengal	Himalayan	66	0.025306
Maharashtra	Coastal	36	0.025327
Andhra Pradesh	Inland Northern	2	0.029401
Assam	Plains Eastern	6	0.030231
Maharashtra	Inland Northern	38	0.030965
Uttar Pradesh	Southern	65	0.031125
Gujarat	Eastern	13	0.031201
West Bengal	Eastern Plains	67	0.031201
Orissa	Coastal	46	0.034595
India			**0.035225**
Karnataka	Inland Northern	26	0.035895
Maharashtra	Inland Eastern	40	0.040516
Uttar Pradesh	Eastern	64	0.040679
Maharashtra	Inland Central	39	0.04117
Assam	Hills	8	0.044169
Bihar	Northern	10	0.04649
Madhya Pradesh	Vindhya	30	0.046949
Assam	Plains Western	7	0.047413
Uttar Pradesh	Central	63	0.055586
Bihar	Central	11	0.056255
Maharashtra	Eastern	41	0.05783
West Bengal	Western Plains	69	0.05831
Andhra Pradesh	Inland southern	4	0.061409
Madhya Pradesh	Malwa Plateau	32	0.061448
Andhra Pradesh	South western	3	0.061582
Tamil Nadu	Coastal Northern	56	0.065501
Bihar	Southern	9	0.065549
Madhya Pradesh	Central	31	0.070149
Madhya Pradesh	South western	34	0.073527
Orissa	Northern	48	0.077265
Madhya Pradesh	Chattisgarh	29	0.08062
Madhya Pradesh	South Central	33	0.104506
Orissa	Southern	47	0.215514

Table 10: 55th Round PG2 in ascending order

		NSS Region code	Value of PG2
Andaman & Nicobar	A&N	70	8.64E-07
Mizoram	Mizoram	45	1.32E-05
Manipur	Plains	42	0.000084
J&K	Outer Hills	22	0.000125
Meghalaya	Meghalaya	44	0.000135
Chandigarh		71	0.000222
Punjab	Southern	50	0.000469
Himachal Pradesh	Himachal Pradesh	20	0.000579
Punjab	Northern	49	0.000704
Gujarat	Saurashtra	17	0.000806
Kerala	Southern	28	0.000845
J&K	Mountainous	21	0.000887
Haryana	Eastern	18	0.000915
Haryana	Western	19	0.001575
Kerala	Northern	27	0.001616
Sikkim	Sikkim	55	0.001619
Rajasthan	Western	51	0.001621
Gujarat	Plains Northern	14	0.001718
Manipur	Hills	43	0.001728
Rajasthan	South Eastern	54	0.001805
Karnataka	Inlands Eastern	24	0.002093
Uttar Pradesh	Himalayan	61	0.002101
Rajasthan	North Eastern	52	0.002155
Arunachal Pradesh	Arunachal Pradesh	5	0.002324
Karnataka	Coastal and Ghats	23	0.002509
Maharashtra	Inland Western	37	0.002584
Tripura	Tripura	60	0.002665
West Bengal	Central Plains	68	0.002749
Karnataka	Inland Southern	25	0.003463
Tamil Nadu	Coastal	57	0.003526
Tamil Nadu	Inland	59	0.003878
Gujarat	Dry Areas	16	0.00503
Madhya Pradesh	Northern	35	0.005151
West Bengal	Himalayan	66	0.005446
Tamil Nadu	Southern	58	0.005723
		72	0.005919
Rajasthan	Southern	53	0.006221
Pondicherry		75	0.006362
Gujarat	Plains Southern	15	0.006367
Uttar Pradesh	Western	62	0.006469
Andhra Pradesh	Coastal	1	0.006565
Andhra Pradesh	Inland Northern	2	0.006614
West Bengal	Eastern Plains	67	0.007344
Assam	Plains Eastern	6	0.007835
Maharashtra	Inland Northern	38	0.007875
Orissa	Coastal	46	0.008569

Gujarat	Eastern	13	0.009043
Maharashtra	Coastal	36	0.00907
Karnataka	Inland Northern	26	0.009249
Assam	Hills	8	0.010085
India			**0.010136**
Uttar Pradesh	Southern	65	0.010294
Uttar Pradesh	Eastern	64	0.0108
Maharashtra	Inland Eastern	40	0.010997
Bihar	Northern	10	0.011851
Madhya Pradesh	Vindhya	30	0.012283
Assam	Plains Western	7	0.013995
Maharashtra	Inland Central	39	0.014602
Maharashtra	Eastern	41	0.015075
Bihar	Central	11	0.015425
Uttar Pradesh	Central	63	0.015569
Bihar	Southern	9	0.018065
Andhra Pradesh	Inland southern	4	0.018646
West Bengal	Western Plains	69	0.020002
Madhya Pradesh	Malwa Plateau	32	0.02101
Madhya Pradesh	Central	31	0.021794
Madhya Pradesh	South western	34	0.022069
Orissa	Northern	48	0.023046
Tamil Nadu	Coastal Northern	56	0.023338
Madhya Pradesh	Chattisgarh	29	0.023631
Andhra Pradesh	South western	3	0.023991
Madhya Pradesh	South Central	33	0.034622
Orissa	Southern	47	0.079788

We now assess how the various regions have performed in respect of poverty between 1987–88 and 1993–94. Thus in table 11 the head count ratio for 1993–94 is subtracted from that for 1987–88 for each region. The first entry in Table 11 indicates that the head count ratio was 0.2795 higher in 1993–94 as compared to 1987–88 in Himalayan West Bengal. In each table the changes are arranged in order of magnitude. Negative changes indicate worsening performance whereas positive changes indicate improved performance. Thus, over the period 1987–88 to 1993–94 the deterioration in the head count ratio was greatest in Himalayan West Bengal. The greatest improvement was in Mizoram. The changes in PG0, PG1 and PG2 for India as a whole are also noted. At the national level there was a mild drop in PG0 and PG1 but a much sharper drop in the PG2 measure of poverty intensity.

Table 11: Poverty Changes Between 43rd – 50th Rounds (PG0)

Deteriorating Head Count Ratio			
West Bengal	Himalayan	66	-0.27955
Madhya Pradesh	South western	34	-0.14366
Maharashtra	Eastern	41	-0.09886
Bihar	Southern	9	-0.09245
Orissa	Coastal	46	-0.07704
Madhya Pradesh	Central	31	-0.07228
Pondicherry		75	-0.06887
Arunachal Pradesh	Arunachal Pradesh	5	-0.0637
Haryana	Western	19	-0.06337
Maharashtra	Inland Northern	38	-0.06334
Uttar Pradesh	Central	63	-0.05682
Maharashtra	Inland Central	39	-0.0538
Himachal Pradesh	Himachal Pradesh	20	-0.0524
Uttar Pradesh	Himalayan	61	-0.0507
Uttar Pradesh	Southern	65	-0.0501
Maharashtra	Inland Eastern	40	-0.041
Bihar	Northern	10	-0.03424
Bihar	Central	11	-0.01963
Assam	Plains Western	7	-0.01239
Manipur	Plains	42	-0.01172
Gujarat	Plains Southern	15	-0.01107
Chandigarh		71	-0.00944
J&K	Outer Hills	22	-0.00678
Improving Head Count Ratio			
Manipur	Hills	43	0.002739
India			**0.030253**
Karnataka	Inland Northern	26	0.004167
Haryana	Eastern	18	0.004369
Gujarat	Plains Northern	14	0.005062
Andaman & Nicobar	A&N	70	0.006365
Andhra Pradesh	South western	3	0.008315
Tripura	Tripura	60	0.0087
Assam	Plains Eastern	6	0.009444
Maharashtra	Inland Western	37	0.013644
Punjab	Southern	50	0.018732
Lakshadweep		74	0.019009
Tamil Nadu	Inland	59	0.02428
Kerala	Southern	28	0.026678
Rajasthan	South Eastern	54	0.034025
Assam	Hills	8	0.039645
Madhya Pradesh	Chattisgarh	29	0.040094
Punjab	Northern	49	0.041471
Karnataka	Coastal and Ghats	23	0.042512
West Bengal	Western Plains	69	0.044368
Madhya Pradesh	Vindhya	30	0.054495
Gujarat	Saurashtra	17	0.05583
Uttar Pradesh	Eastern	64	0.056589
Orissa	Northern	48	0.059022

Gujarat	Eastern	13	0.060057
Rajasthan	Western	51	0.064152
Kerala	Northern	27	0.064625
Madhya Pradesh	South Central	33	0.067675
Madhya Pradesh	Northern	35	0.068554
Uttar Pradesh	Western	62	0.072714
Karnataka	Inland Southern	25	0.079863
Orissa	Southern	47	0.088018
Sikkim	Sikkim	55	0.088071
Tamil Nadu	Coastal Northern	56	0.088738
West Bengal	Central Plains	68	0.09044
Andhra Pradesh	Inland Northern	2	0.093045
Tamil Nadu	Southern	58	0.094442
Maharashtra	Coastal	36	0.099874
J&K	Mountainous	21	0.104093
Goa	Goa	12	0.110779
Rajasthan	North Eastern	52	0.111818
Dadra & nagar Haveli		72	0.121101
Madhya Pradesh	Malwa Plateau	32	0.122384
Tamil Nadu	Coastal	57	0.127854
Karnataka	Inlands Eastern	24	0.130176
West Bengal	Eastern Plains	67	0.131933
Meghalaya	Meghalaya	44	0.160703
Andhra Pradesh	Coastal	1	0.164319
Gujarat	Dry Areas	16	0.197464
Rajasthan	Southern	53	0.26509
Andhra Pradesh	Inland southern	4	0.296529
Mizoram	Mizoram	45	0.395711

Table 12: Poverty Changes Between 43rd – 50th Rounds (PG1)

Deteriorating PG1

Madhya Pradesh	South western	34	-0.0652
West Bengal	Himalayan	66	-0.04972
Maharashtra	Inland Central	39	-0.04564
Uttar Pradesh	Southern	65	-0.03076
Bihar	Southern	9	-0.02459
Orissa	Coastal	46	-0.02437
Uttar Pradesh	Central	63	-0.02293
Maharashtra	Eastern	41	-0.01837
Madhya Pradesh	Central	31	-0.01809
Bihar	Northern	10	-0.01299
Maharashtra	Inland Eastern	40	-0.01156
Himachal Pradesh	Himachal Pradesh	20	-0.01038
Haryana	Western	19	-0.00943
Pondicherry		75	-0.00868
Maharashtra	Inland Northern	38	-0.0082
Uttar Pradesh	Himalayan	61	-0.00723
Arunachal Pradesh	Arunachal Pradesh	5	-0.00377
J&K	Outer Hills	22	-0.00285

Bihar	Central	11	-0.00257
Assam	Plains Eastern	6	-0.00251
Maharashtra	Inland Western	37	-0.00132
Manipur	Plains	42	-0.00128
Chandigarh		71	-0.00033
Improving PG1			
Andaman & Nicobar	A&N	70	0.000505
India			**0.01046**
Gujarat	Plains Southern	15	0.001453
Tripura	Tripura	60	0.001867
Lakshadweep		74	0.002088
Andhra Pradesh	South western	3	0.002409
Gujarat	Plains Northern	14	0.002714
Assam	Plains Western	7	0.002943
Manipur	Hills	43	0.003137
Gujarat	Saurashtra	17	0.003668
Punjab	Southern	50	0.003816
Karnataka	Coastal and Ghats	23	0.004328
Punjab	Northern	49	0.004932
Rajasthan	South Eastern	54	0.005365
Andhra Pradesh	Coastal	1	0.006762
Kerala	Southern	28	0.007828
Haryana	Eastern	18	0.009835
Assam	Hills	8	0.010518
Gujarat	Eastern	13	0.011717
Kerala	Northern	27	0.01246
Madhya Pradesh	Vindhya	30	0.013165
Tamil Nadu	Inland	59	0.013894
Goa	Goa	12	0.013946
Sikkim	Sikkim	55	0.014769
Uttar Pradesh	Eastern	64	0.015908
West Bengal	Western Plains	69	0.017448
J&K	Mountainous	21	0.018114
Rajasthan	Western	51	0.019105
Karnataka	Inland Northern	26	0.019169
Madhya Pradesh	Northern	35	0.021405
West Bengal	Central Plains	68	0.021793
Maharashtra	Coastal	36	0.022048
Uttar Pradesh	Western	62	0.022717
Madhya Pradesh	Chattisgarh	29	0.023869
Karnataka	Inlands Eastern	24	0.024045
Rajasthan	North Eastern	52	0.024484
Orissa	Northern	48	0.025984
Andhra Pradesh	Inland Northern	2	0.029271
Dadra & nagar Haveli		72	0.032205
Karnataka	Inland Southern	25	0.033356
Tamil Nadu	Coastal Northern	56	0.034432
Madhya Pradesh	South Central	33	0.035232
Tamil Nadu	Coastal	57	0.035497
West Bengal	Eastern Plains	67	0.038687
Tamil Nadu	Southern	58	0.041749

Gujarat	Dry Areas	16	0.046483
Meghalaya	Meghalaya	44	0.048716
Madhya Pradesh	Malwa Plateau	32	0.053118
Orissa	Southern	47	0.059407
Mizoram	Mizoram	45	0.102003
Andhra Pradesh	Inland southern	4	0.123242
Rajasthan	Southern	53	0.158647

Table 13: Poverty Changes Between 43rd – 50th Rounds (PG2)

Deteriorating PG2			
Madhya Pradesh	South western	34	-0.03325
Maharashtra	Inland Central	39	-0.02739
Uttar Pradesh	Southern	65	-0.01843
West Bengal	Himalayan	66	-0.01174
Uttar Pradesh	Central	63	-0.00956
Orissa	Coastal	46	-0.00833
Madhya Pradesh	Central	31	-0.00565
Maharashtra	Eastern	41	-0.00563
Bihar	Southern	9	-0.00551
Bihar	Northern	10	-0.00425
Pondicherry		75	-0.00398
Himachal Pradesh	Himachal Pradesh	20	-0.00283
Maharashtra	Inland Western	37	-0.00277
Maharashtra	Inland Eastern	40	-0.0021
Uttar Pradesh	Himalayan	61	-0.00159
J&K	Outer Hills	22	-0.00125
Assam	Plains Eastern	6	-0.00112
Gujarat	Saurashtra	17	-0.00101
Maharashtra	Inland Northern	38	-0.00055
Haryana	Western	19	-0.00053
Andhra Pradesh	South western	3	-0.00035
Manipur	Plains	42	-0.00016
Chandigarh		71	-1.2E-05
Improving PG2			
Andaman & Nicobar	A&N	70	8.71E-05
Lakshadweep		74	0.000402
Manipur	Hills	43	0.00041
Gujarat	Plains Northern	14	0.000413
Bihar	Central	11	0.000456
Karnataka	Coastal and Ghats	23	0.000516
Tripura	Tripura	60	0.00053
Punjab	Northern	49	0.001355
Assam	Plains Western	7	0.001483
Gujarat	Plains Southern	15	0.001551
Punjab	Southern	50	0.001672
Assam	Hills	8	0.002585
Rajasthan	South Eastern	54	0.002722
Goa	Goa	12	0.003104
Kerala	Southern	28	0.003157

Kerala	Northern	27	0.003456
Arunachal Pradesh	Arunachal Pradesh	5	0.00356
Sikkim	Sikkim	55	0.004456
Andhra Pradesh	Coastal	1	0.004589
India			**0.004687**
J&K	Mountainous	21	0.004787
Tamil Nadu	Inland	59	0.005279
Gujarat	Eastern	13	0.005305
Karnataka	Inlands Eastern	24	0.00562
Haryana	Eastern	18	0.005921
Rajasthan	Western	51	0.006144
Uttar Pradesh	Eastern	64	0.006229
Madhya Pradesh	Vindhya	30	0.006323
West Bengal	Western Plains	69	0.007516
Maharashtra	Coastal	36	0.007944
Madhya Pradesh	Northern	35	0.008053
Rajasthan	North Eastern	52	0.008299
Uttar Pradesh	Western	62	0.008768
West Bengal	Central Plains	68	0.008909
Dadra & nagar Haveli		72	0.01046
Andhra Pradesh	Inland Northern	2	0.010614
Orissa	Northern	48	0.010655
Madhya Pradesh	Chattisgarh	29	0.011363
Tamil Nadu	Coastal	57	0.012657
Karnataka	Inland Northern	26	0.012723
Tamil Nadu	Coastal Northern	56	0.013025
Gujarat	Dry Areas	16	0.014231
Karnataka	Inland Southern	25	0.014253
West Bengal	Eastern Plains	67	0.015082
Meghalaya	Meghalaya	44	0.017571
Madhya Pradesh	South Central	33	0.019012
Tamil Nadu	Southern	58	0.020543
Madhya Pradesh	Malwa Plateau	32	0.026185
Orissa	Southern	47	0.033263
Mizoram	Mizoram	45	0.037476
Andhra Pradesh	Inland southern	4	0.055191
Rajasthan	Southern	53	0.091297

At this juncture, it is natural to ask whether the ranks of NSS regions by measures of poverty differ significantly across the years.[4] To address this we calculate Kendall's coefficient of concordance (see Boyle and McCarthy (1997)) to track the mobility of individual NSS regions over time. The motivation for calculating it in the

[4] Although poverty figures for the 55th round are not comparable with the earlier rounds, we proceed with the rank concordance tests since there is little reason to believe that the rankings of different regions would be affected by changes in the method of recall.

context of our work is to determine if the regions that were relatively deprived earlier are still deprived or whether there has been any convergence. Kendall's coefficient of concordance, *W,* is used to determine the association among the rankings obtained by various regions in different years. (For a lucid discussion of this methodology as used in this paper as well as by Boyle and McCarthy (1997) see Seigel (1956)).

If all the regions had the same ranks in all three years, then the variance of the sum of the ranks over the years of all the regions would be the maximum. The coefficient of concordance can be thought of as an index of divergence of the actual agreement from the maximum possible (perfect) agreement. The degree of actual agreement in ranks obtained by the regions in various years is reflected by the degree of variance among the *J* (total number of regions) sums of the ranks. Thus *W* is calculated as:

$W = s/\{(1/12)(k^2)J(J^2-1)\}$

where, *s* = sum of squares of the observed deviations from the mean of R_j (the sum of

$$s = [\sum_j R_j - \sum_j R_j / N]^2$$

the ranks obtained by a particular region in different years), that is,

and

k = no. of years (the set of rankings.)

J = no. of regions.

Now, $(1/12)k^2(J^3-J)$= maximum possible sum of squared deviations, i.e. the sum of *s* which would occur with perfect agreement among *k* rankings.

The value of the rank concordance index ranges from zero to one. The coefficient of concordance is calculated for the three years 1987–88, 1993–94 and 1999–2000. This enables us to study the mobility of ranks at each point in time. The

probability associated with the occurrence under H_O (rankings are unrelated to each other) of any value as large as an observed *W* can be determined by finding χ^2 by the formula

$\chi^2 = s/[(1/12)kJ(J+1)] = k(J-1)W$

with degrees of freedom J-1.

For PG0, PG1, PG2 the value of the Kendall statistics were 0.86, 0.86 and 0.85 respectively. In each case these are highly significant. This indicates that there is remarkable stability in rankings of regions by poverty. Inequality has persisted over time and the reforms have not made a significant impact on this inequality. Convergence in terms of values cannot be tested for because we need several more data points for this.

IV. Conclusions

The spatial distribution of poverty in India has emerged as a matter of urgent concern in recent times. Although much of this spatial analysis has concentrated on the poverty experiences of states, there is considerable evidence of wide variations within states particularly, but not exclusively, the larger ones. This paper has presented evidence on the poverty experiences of 75 NSS regions for the quinquennial rounds of 1987–88, 1993–94 and 1999–2000. The results presented here facilitate easy identification of lagging areas on which anti-poverty policy must concentrate. Of particular concern are those areas with PG0, PG1 and PG2 values above the national average of 0.27, 0.054, and 0.045 respectively for these measures of poverty. Furthermore, regional inequality in the incidence of poverty has persisted over time. The economic reforms program has been unable to make any significant dent on the spatial distribution of expenditure poverty.

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