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POVERTY REDUCTION IN INDIA: MILES TO GO

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ABSTRACT

Poverty is a multidimensional dynamic problem for the developing nations. The literature on the analysis of poverty in India highlights, two prime issues related to the matter of policy making for poverty reduction is concern.

First, even after six decades of planned pursuit of development for economic growth with poverty reduction, we are still debating on different issues related to the poverty like-Measurement of absolute and relative poverty, estimation of the number of people lying below the poverty line, the way by which NSSO collect the data etc.

Second, poverty estimates are vital input to design, monitor and implement appropriate anti-poverty policies. It is recognized that it is difficult to measure the various dynamics of poverty in comparable manner over time and across regions. Policy-maker has to face a difficult and challenging task to link the economics growth with poverty reduction. Market driven and demand constrained policies has not only fail to deliver the expected growth success, but has also been far less successful with poverty reduction in India. There are some sets of questions which arise when we talk of major direct and indirect poverty-alleviation programmes and schemes tries to address dynamics of poverty such as – why has these scheme fail to deliver desired outcomes?

The brief review of the literature clearly indicates controversy regarding the measurement, method of estimation and therefore in its rate of decline. But, there is still limited focus on policy measures on how best to reduce poverty. That means how policy maker may design the policy for actual poor.

Therefore, instead of entering into the controversy we have tried to measure the gap between poor and poverty estimate across state. Apart from this, we also tried to find out the principal correlates of cross state variation in the magnitude of poverty in India, which provide the facility to policy maker to plan state specific policy for poverty reduction.

KEYWORDS: *Poverty Reduction, Poverty Alleviation, Poverty Estimates, Poor and Poverty*

INTRODUCTION

This paper is organized as follows. In the remainder of this introductory section, the important issues related to the poverty and objective of studies are briefly outlined. The second section deals with the details about the data and methodology adopted to attain the objective of paper. The third section deals with the correlates of the poverty estimates, which provide the base for state specific policies for poverty alleviation. The fourth section analyses the gap between the aggregate average index of measure of deprivation and poverty estimates as an indicator for deprivation. The last section makes inferences for and about the gap between poor and poverty.

DATA & METHODOLOGY

This study is an attempt to identify the gap between the poor (deprived people) and the person below poverty line in India. The study is based on secondary data published on 5th Dec 2012 by planning commission of India. We have select following indicators on trial and error basis for our analysis.-

Total BPL population % (2009-10) [Poverty]

Per Capita Net State Domestic Product at constant Price (2004-05) for the year 2010-11 [PC_NSDP]

Growth rate of Agriculture & allied sector (2010-11) [GR_AgS]

Availability of Drinking water Source within premises [A_DW_P]

Latrine facility available within premises [LAF_AWP]

Total no of households with using electricity [Ele_city]

Households availing baking services [HH_BS]

Nutritional Status of Children [NS_C]

Percentage of Rural population (2011) [RU_PU]

Assuming that poverty estimate, itself a measure of deprivation, we have calculated the index for measure of deprivation on the scale of 0-1 for 30 state and 8 indicator excluding poverty estimate (see Appendix-1) with the help of the following formula to identify the gap between the poor and poverty estimates:

$$I_{ij} = \frac{Max_j - X_{ij}}{Max_j - Min_j}$$

$$MD_i = \left[\frac{\sum I_{ij}}{N} \right] * 100$$

$$Gap = MD_i - Poverty\ Ratio$$

Whereas –

i = No. of selected state from 1 to 29 (as presented in appendix-1)

j = different indicator of study from 2 to 9 (as presented in appendix-1)

I_{ij} = Measure of deprivation for i^{th} state for j^{th} indicator

MD_i = Aggregate average measure of deprivation

Max_j = maximum value of jth indicator

Min_j = minimum value of jth indicator

X_{ij} = value for i^{th} state jth indicator

INDEX FOR MEASURE OF DEPRIVATION ACROSS STATE

Index of measure of deprivation is providing the ability to make comparison on a scale (0- 1) for the status of various selected indicator across state. The main objective to calculate the index is to identify the level of deprivation across the state. Appendix-3 presents the aggregate average measure of

deprivation in terms of percentage for selected state along with the poverty ratio.

It is observed that Himachal Pradesh (30.67%) is having lowest level of deprivation followed by Goa (34.66%) and Delhi (36.98). These states are also low in terms of poverty ratio. Apart from this, the highest level of deprivation belongs to Odisha, where the poverty ratio is 37%. When we talk about the rank of poverty, Bihar is on the top but; its rank in terms of deprivation is 21 across state. First rank assigns to Pundechary for lowest poverty in India but as far as the level of deprivation is concerned it's on the fifth position. Sixth column of appendix 2 shows that rank difference doesn't follow any symmetrical pattern. Therefore, we can say that the index is not capable enough to capture all the dimension of poverty. There may be the possibility of improvised measure of deprivation by adding or deleting some of the variable.

Moreover, the figure available in the next column of table, which is calculated on the basis of difference between the measure of deprivation and poverty ratio, depicts that there is a large gap between the no. of person deprived termed as poor and the poverty estimates termed as the no. of person below poverty line. The range of the gap is varies from 2.22 for Bihar to 45.11 for Jammu & Kashmir.

If, we will try to analyses the out comes of the index that will put forward us toward the controversy related to concept of poverty and related estimates. Although, we have established the fact that number of poor is more than the poverty ratio across state. Up to what extent they vary from each other, is a matter of concerned for further research.

CORRELATES OF POVERTY IN INDIA

Most of the economics factor is having a capacity to influence the economic, social and political status of a person. In this connection we tried to identity the correlates of poverty, representing to the various dimension of poverty on trial and error basis. The figures of poverty estimates and selected indicators are presented in Appendix-1. Now as far as the incidence of poverty is concerned, it has declined not only at the national level but also at the rural and urban areas across the state. The national level poverty ratio declined from 37.2 per cent in 2004-05 to 29.8 per cent in 2009-10. It is observed that there are 22 states, having low level of poverty ratio in comparison to the national level of poverty ratio (29.8%). Highest incidence of poverty

is in Bihar with a poverty ratio of 53.5 percent followed by the state Chhatisgrah (48.7%), Manipur (47.1%), Jharkhand (39.1%), Assam (37.9%), Uttar Pradesh (37.7%) and Odisha (37%). It depict that the majority of BPL Population is living in North-west states of India.

First, indicator which is considered for the study is Per Capita Net State Domestic Product at constant Price (2004-05) for the year 2010-11 represented as [PC_NSDP] in Appendix-1 with an expectations of negative association with poverty estimates.

Apart from this, Growth rate of Agriculture & allied sector (2010-11) [GR_AgS], Availability of Drinking water Source within premises [A_DW_P], Latrine Facility Available within Premises [LAF_AWP], Total no of Households using Electricity [Ele_city], Households availing Baking Services [HH_BS], Nutritional Status of Children [NS_C] and Percentage of Rural population (2011) [RP_PU] are the selected indicator for study.

Appendix -3 present the correlation matrix for the various selected indicator and poverty estimates declare by the planning commission for the year 20009-10. Its shows, that there is a high degree of negative association between the poverty ratio and the no of households using electricity across the state. It is observed that, in Bihar there are only 16.4 per cent household can avail electricity, which is on the top in case of incidence of poverty rate in India. And the similar negative relation can be observed in case of Delhi, where the 99.1 percent of household can use electricity with a poverty ratio of 14.1 percent. Therefore, the states which are below the national level in this manner have to workout for electrification which is representing the status of basis infrastructure of state. This policy is particularly appropriate for Bihar, Uttar Pradesh and Assam, any positive movement in this indicator will reduce the poverty ratio.

The correlation coefficient between the poverty ratio and per capita net state domestic product is negative and significant across state. If, we go through the data available in appendix-1 then the analysis illustrate the same picture for Bihar and Delhi.

Moderate level of negative correlation is identified in the result between the poverty estimates and households availing banking services across state. Data shows the state like Arunachal Pradesh, Assam, Manipur, Nagaland and Meghalaya

which have high incidence of poverty are underprivileged in providing banking services to more than 50 percent of households

Although, the two other indicator related to the Availability of drinking water and latrine facility within premises are also negatively associated with the poverty ratio in India. Punjab (85.9%) and Manipur (16.1%) are in the two acute position of high and low level of availability of drinking water respectively. Kerala (95.2%) is on the first rank, and there is a common figure for Jharkhand & Odisha (22%) for last position for another indicator.

Furthermore, it's important to describe that the growth rate of Agriculture and allied sector and percentage of rural population are showing low level of positive correlation with the poverty ratio. It does not mean that there is no need to develop the Agricultural and allied sector. But, it's important to diversify the person engaged in agricultural an allied activity as the dependency of worker is high on this sector so that, the impact of growth plays an important and significant role for the reduction of poverty ratio across state. Therefore, it is suggested for the state like-Rajasthan, Chhattisgrah and Karnataka where high growth rate of agricultural and allied sector is observed along with the high rate of poverty. They should adopt the policy to diversify the worker's from agricultural activity to service or industrial sector.

Whereas, Nutritional status of Children (in terms of percentage of children under age three years born to ever-married women classified as underweight) is having moderate level of positive correlation with poverty estimates. This may enforce to government for the extension of health services in rural areas. As far as the positive and significant association of percentage of rural population with poverty ratio is concerned, we have to consider the example from the state where the poverty ratio is less (below 20 %) with the high percentage of rural population such as Himachal Pradesh (89.96%), Jammu and Kashmir (72.79%) and Uttarakhand (69.45%) for making poverty alleviation programmes.

CONCLUSION

This study is an attempt (i) to identify the gap between the poor and poverty estimates (ii) to find out the correlates of poverty across state to make the state specific poverty alleviation programme. The following conclusions emerge from our study.

Poor and poverty estimates are away from each other; therefore, we can't blindly faith on the poverty estimates. We have to find out the possible way's to confirm the reliability of data related to the poverty. Measure of deprivation is an attempt in the same direction. There is a possibility to improve this index over time and may be across state.

As far as the policy matter is concerned, the policy maker design the poverty reduction strategies, while keeping so many issues related to the poverty like-geography of poverty, sociology of poverty, concept of poverty, and measurement of poverty etc. but, the need is for flexibility in the design of poverty reduction programme as the incidence of poverty along with its various dimension varies across state.

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S. No.	State/Uts	Poverty	PC_NSDP	GR_AgS	A_DW_P	LAF_AWP	EL_CITY	HH_BS	NS_C	RU_PU
					APPENDIX – 1: SELECTED INDICATOR ACROSS STATE					
1	Andhra Pradesh	21.1	40366	9	43.2	49.6	92.2	53.1	29.8	66.51
2	Arunachal Pradesh	25.9	37417	14.37	41.1	62	65.7	53	29.6	77.33
3	Assam	37.9	21406	6.49	54.8	64.9	37.1	44.1	35.8	85.92
4	Bihar	53.5	13632	23.63	50.1	23.1	16.4	44.4	55	88.7
5	Chhattigrah	48.7	27156	19.85	19	24.6	75.3	48.8	47.8	76.76
6	Delhi	14.2	108876	5.06	78.4	89.5	99.1	77.7	24.9	2.5
7	Goa	8.7	102844	1.77	79.7	79.7	96.9	86.8	21.4	37.83
8	Gujarat	23	52708	14.41	64	57.4	90.4	57.9	41.3	57.42
9	Haryana	20.1	59221	6.13	66.5	68.6	90.5	68.1	38.2	65.21
10	Himachal Pradesh	9.5	47106	16.85	55.5	69.1	96.8	89.1	31.1	89.96
11	Jammu & Kashmir	9.4	27607	2	48.2	51.2	85.1	70	24	72.79
12	Jharkhand	39.1	21734	7.68	23.2	22	45.8	54	54.5	75.95
13	Karnataka	23.6	39301	13.35	44.5	51.2	90.6	61.1	33.2	61.43
14	Kerala	12	49873	-0.24	77.7	95.2	94.4	74.2	21.2	52.28
15	Madhya Pradesh	36.7	22382	2.99	23.9	28.8	67.1	46.6	57.9	72.37
16	Maharashtra	24.5	62729	12.49	59.4	53.1	83.9	68.9	32.5	54.77
17	Manipur	47.1	23298	6.13	16.1	89.3	68.4	29.6	19.5	69.79
18	Meghalaya	17.1	35932	4.51	24.1	62.9	60.9	37.5	42.9	79.92
19	Mizoram	21.1	36732	2.81	31.2	91.9	84.2	54.9	14.3	48.49
20	Nagaland	20.9	40957	2.01	29.3	76.5	81.6	34.9	23.6	71.03
21	Odisha	37	25708	1.93	22.4	22	43	45	39.4	83.32
22	Puducherry	1.2	79333	3.7	77.4	68.5	97.7	64		31.69
23	Punjab	15.9	44752	2.94	85.9	79.3	96.6	65.2	23.6	62.51
24	Rajasthan	24.8	26436	27.2	35	35	67	68	36.9	75.11
25	Sikkim	13.1	47655	4.81	52.6	87.2	92.5	67.5	17.3	75.03
26	Tamil Nadu	17.1	51928	7.02	34.9	48.3	93.4	52.5	25.9	51.55
27	Tripura	17.4	37216	1.98	37.1	86	68.4	79.2	35.2	73.82
28	Uttar Pradesh	37.7	17349	4.44	51.9	35.7	36.8	72	41.5	77.72
29	Uttarakhand	18	44723	2.84	58.3	65.8	87	80.7	31.6	69.45
30	West Bengal	26.7	32228	-0.74	38.6	58.9	54.5	48.8	37.6	68.11
	India	29.8	35993	7	46.6	46.9	67.3	58.7	40.4	68.84

Source: Planning Commission (2012): "Data for use of Deputy Chairman Planning Commission, http://planningcommission.gov.in

APPENDIX-2: INDEX FOR MEASURE OF DEPRIVATION ACROSS STATE						
State/Uts	POVERTY	MD$_I$	RANK_P	RANK_MD	R_DIFF	GAP
Andhra Pradesh	21.1	52.58	15.5	16	0.50	31.48
Arunachal Pradesh	25.9	51.36	21	15	-6.00	25.46
Assam	37.9	57.23	26	21	-5.00	19.33
Bihar	53.5	55.72	30	19	-11.00	2.22
Chhattigrah	48.7	54.90	29	18	-11.00	6.20
Delhi	14.2	36.58	7	3	-4.00	22.38
Goa	8.7	34.66	2	2	0.00	25.96
Gujarat	23	40.75	17	6	-11.00	17.75
Haryana	20.1	38.86	13	4	-9.00	18.76
Himachal Pradesh	9.5	30.67	4	1	-3.00	21.17
Jammu & Kashmir	9.4	54.51	3	17	14.00	45.11
Jharkhand	39.1	62.31	27	28	1.00	23.21
Karnataka	23.6	48.58	18	14	-4.00	24.98
Kerala	12	41.24	5	8	3.00	29.24
Madhya Pradesh	36.7	60.90	23	26	3.00	24.20
Maharashtra	24.5	43.43	19	10	-9.00	18.93
Manipur	47.1	65.20	28	29	1.00	18.10
Meghalaya	17.1	58.66	9.5	24	14.50	41.56
Mizoram	21.1	58.60	15.5	23	7.50	37.50
Nagaland	20.9	60.08	14	25	11.00	39.18
Odisha	37	70.09	24	30	6.00	33.09
Puducherry	1.2	39.18	1	5	4.00	37.98
Punjab	15.9	41.14	8	7	-1.00	25.24
Rajasthan	24.8	47.64	20	13	-7.00	22.84
Sikkim	13.1	44.69	6	11	5.00	31.59
Tamil Nadu	17.1	56.86	9.5	20	10.50	39.76
Tripura	17.4	46.53	11	12	1.00	29.13
Uttar Pradesh	37.7	57.90	25	22	-3.00	20.20
Uttarakhand	18	43.35	12	9	-3.00	25.35
West Bengal	26.7	61.38	22	27	5.00	34.68
Source: calculated on the basis of methodology						

APPENDIX–3: CORRELATION METRICS FOR SELECTED INDICATOR

Correlations

		POVERTY	PC_NSDP	GR_AGS	A_DW_P	LAF_AWP	ELE_CITY	HH_BS	NS_C	RP_PU
POVERTY	Pearson Correlation	1	-.668**	.373*	-.574**	-.591**	-.772**	-.608**	.621**	.499*
	Sig. (2-tailed)	.	.000	.042	.001	.001	.000	.000	.000	.005
	N	30	30	30	30	30	30	30	29	30
PC_NSDP	Pearson Correlation	-.668**	1	-.221	.677**	.516**	.694**	.535**	-.457*	-.847**
	Sig. (2-tailed)	.000	.	.242	.000	.003	.000	.002	.013	.000
	N	30	30	30	30	30	30	30	29	30
GR_AGS	Pearson Correlation	.373*	-.221	1	-.147	-.469**	-.189	-.040	.370*	.293
	Sig. (2-tailed)	.042	.242	.	.439	.009	.317	.833	.048	.117
	N	30	30	30	30	30	30	30	29	30
A_DW_P	Pearson Correlation	-.574**	.677**	-.147	1	.442*	.470**	.663**	-.341	-.533**
	Sig. (2-tailed)	.001	.000	.439	.	.014	.009	.000	.070	.002
	N	30	30	30	30	30	30	30	29	30
LAF_AWP	Pearson Correlation	-.591**	.516**	-.469**	.442*	1	.570**	.290	-.799**	-.458*
	Sig. (2-tailed)	.001	.003	.009	.014	.	.001	.120	.000	.011
	N	30	30	30	30	30	30	30	29	30
ELE_CITY	Pearson Correlation	-.772**	.694**	-.189	.470**	.570**	1	.484**	-.632**	-.604**
	Sig. (2-tailed)	.000	.000	.317	.009	.001	.	.007	.000	.000
	N	30	30	30	30	30	30	30	29	30
HH_BS	Pearson Correlation	-.608**	.535**	-.040	.663**	.290	.484**	1	-.264	-.332
	Sig. (2-tailed)	.000	.002	.833	.000	.120	.007	.	.166	.073
	N	30	30	30	30	30	30	30	29	30
NS_C	Pearson Correlation	.621**	-.457*	.370*	-.341	-.799**	-.632**	-.264	1	.449*
	Sig. (2-tailed)	.000	.013	.048	.070	.000	.000	.166	.	.015
	N	29	29	29	29	29	29	29	29	29
RP_PU	Pearson Correlation	.499**	-.847**	.293	-.533**	-.458*	-.604**	-.332	.449*	1
	Sig. (2-tailed)	.005	.000	.117	.002	.011	.000	.073	.015	.
	N	30	30	30	30	30	30	30	29	30

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).