Chronic Poverty and Remote Rural Areas in Eastern India

By

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CHRONIC POVERTY AND REMOTE RURAL AREAS IN EASTERN INDIA

Abstract: This paper attempts to understand the levels and differentials in poverty using non income data in eastern states of India, namely, Orissa and Bihar. The data of national family and health survey, 1998-99 is utilized. The measure of poverty is substantiated with the nutritional measure. In-addition to this, the poverty is examined with the remoteness, measured with respect to distance of the village from the nearest town and district head quarter. The finding revealed that along with distance of the village, the family size, ownership of land holding, caste, educational level are significant predictor of poverty in rural India as well as the eastern states of India.

1.1 Background:

The concept of poverty in its multidimensional form include just not income and calories intake but also access to land and credit, nutrition, health and longevity, literacy and safe drinking water, sanitation and infrastructure facilities (Mehta and Saha, 2001). The three main perspective of poverty as defined in context of human development are Income Perspective, Basic Need Perspective, as well as Capability Perspective (Parr and Shiva, 2004). While income poverty is only one aspect of the deprivation of the right to essential development, assets and opportunities to education, water & sanitation, employment social and political participation are additional elements of the deprivation of capability and employment (Sen, 1998).

There is some broad consensus on the definition of chronic poverty, as *"severe deprivation of basic human needs over an extended period of time"*. But there is no unanimity as to what constitutes the basic needs. Over a period of time, the *`basic needs'* has expanded to encompass not only food, water, shelter and clothing, but access to other assets such as education, health, participation in political process, security and dignity. Those who are chronically poor are poor in several ways, not only in terms of income. Chronically poor households are those that suffer multi-dimensionality of their poverty, they are perpetually haunted by food scarcity; they have no resources to send their children to school or provide health. Chronic poverty in its multidimensional form related to income, consumption, health education, isolation, voice and security (Bird and Hume, 2003). Chronic poverty can

be studied at individual, household, socio-economic group or special region. Bird and Hume cited that individual, household and group located in more RRAs are more prone to chronic poverty. The RRAs are generally characterized by low levels of physical, social and human capital. These factors include geographical remoteness (physical distance from the urban center), geographical isolation (difficult to access because of topology), physical constraints (agricultural activities), interlocking sets of economic, social, and political factor shape pattern of poverty trap, market failure-under investment, state failure: infrastructure, enabling environment, basic services and social protection, *public policy weakness and poor services in family planning*, higher dependency ratio due to high fertility, mortality and out migrants and exposure to higher levels of risk and lower levels of social protection. Out-migration also plays an important role in aggravating the poverty. In addition to this, people living in remote rural areas have to cope with high levels of risk in the form of ill health or injury, natural disaster, harvest failure, terms of trade deterioration, reduced access to work or vulnerability to violence and conflict. Chronic poverty is closely associated with low paid, irregular and insecure work; work related ill health (injuries, lung disease).

Similarly, the relationship of poverty and population growth is a long contested issue among Demographers and Economist. The general empirical observation that poorer countries tend to have higher population growth rates and that larger household tend to be poorer. It establishes a positive causal relation between poverty and fertility at the macro and micro levels. Thus, poverty is considered a key factor driving high fertility and therefore high rate of population growth, consequently delaying the demographic transition. The existing literature, mainly based on either cross sectional or aggregate data, shows that the relationship between poverty and population growth is not unidirectional. Neo Malthusian argued that high birth rate affects the savings and investment and hence lower the economic growth of the country. Their approach was taken in policy matters by supporting family planning as a means of poverty reduction to developing countries in 1960s and 1970s. The failure to recognize that the linkage between the poverty and high fertility in both directions was the major shortcomings of neo-Malthusian (*Merrick Thomas, 2002).*

1.2. Need of the Study:

In India, the estimates of poverty are derived by Planning commission, Govt. of India on the data collected by National Sample Survey based on calories intake. Based on these measures, the percentage of population living below poverty line has reduced from 54.9 percent in 1973-74 to 26.1 percent in 1999-00 based on 30 days recall period. However, these estimates are subject to criticism owing to recall lapse and other limitations. The Below Poverty Line Survey (BPL), used for many official purposes is a non-monetary and non-consumption measure to identify the poor. The BPL 2002 used a total of 13 variables in classifying the poor household. A score of 0, 1, 2, 3 and 4 was assigned to every household in respect of each of the indicator. These indicators focus on the deprivations in the capabilities space and have many limitations (Sundaram, 2003). Srinivasan and Mohanty (2004*),* utilizing the data of National Family Health Survey (a set of consumer durables and literacy status of the adult member) classified household as abject deprivation, moderate deprivation, just above deprivation and well above deprivation. Reddy (2004) in his article "How to Identify Rural Poor? An Alternative Approach" utilizing the data of National Sample Survey of 50^{th} round used 17 variables to classify poor household. The policy makers and administrator are looking for an alternative approach to identify the rural poor household in the country.

The tenth five-year plan (2002-2007) aimed at reduction poverty level to 18.61 percentages for the country and the Millennium Declaration aimed at reducing the poverty by half by the year 2015 from its level in 1990. However, research studies had indicated that as economic growth accelerate for the country, the regional disparities widened in 1990s among the states of India. Even with the estimates of the Planning Commission, the pace of the poverty reduction is highly unequal across the states of India. The state of Orissa, Madhya Pradesh and Bihar remained at high level of poverty while the states of Tamil Nadu, Himachal, Punjab and Gujarat reduced the level of poverty substantially. Also the rapid growth of population particularly in the states of Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan is aggravating the situation. However the prevalence of rural poverty is highest in the *eastern* states of India as compared to other regions of India,

particularly in the state of *Bihar* and *Orissa*. Moreover, the pace of decline in poverty in these regions is the lowest. Even the levels and trends in poverty is not uniform within the states, districts as well as rural and urban areas. Although the poverty is declining in India, one third of the population, that is around 300 million people, still subsist below the Poverty line (Mehta 2005). Two thirds of those living in poverty in India are undernourished. On average 5% of rural households and 2% of urban households cannot access *two square meals* a day. However, in rural households in Orissa, the figure is 15%. Starvation-related deaths do occur despite the accumulation of 50 million tons of food grains in the government stores.

The prevalence of chronic poverty in remote rural areas was also evident in a study from India, in which Surveyed in National Family Health Survey -2 in the year (1998-99) were surveyed twice, in 1993 and again in 1998. In eastern rural part of India, *stunting* is highest and most persistent in midland and mountainous areas – the regions most poorly served by transportation. This survey allows comparison of monetary and nutritional indicators of poverty among adults, and other non-monetary indicators, such as school enrolments and height for age among children.

Though a number of studies carried out on the levels, differentials as well as spatial distribution of poverty but there are a few studies, which focus on the chronic poverty and linking it to remote rural areas. The quantitative studies on chronic poverty uses repeated cross sectional survey in assessing dynamics, proxies for the persistent poverty, depth and multidimensionality and other methods of using household survey. One of the main difficulties in such exercise is the availability of integrated data on poverty and distance at different point of time. The study by Mehta and Kapoor outlined the chronic poverty among tribes in Orissa is due to degradation of forest who end up being agricultural laborers in an economy as well as low demand for laborers.

We have also hypothesized that that people living in remote rural areas (RRAs) account for the substantial proportion of the chronically poor. Further, the above hypothesis is verified using the cross sectional data of national and family health survey, 2 (1998-99). This study also attempts to understand '*Why do people stay poor*?' Here it is looking at how structural factors; vulnerability and shocks combine to entrench poverty. For example, if you look at a household of young children headed by a recently widowed low-caste woman in northern India – there is a whole range of factors that make it hard to get out of poverty. These include social status, discrimination, illiteracy, absence of services and support. We will be focusing the analysis in the states of Bihar and Orissa, as prevalence of poverty is high in these two states.

Some of the specific questions to be addressed by this study are:

1. Whether variation in physical remoteness operates as an important factor influencing poverty within a macro setting of a region/state?
2. Whether social identity (i.e. Tribal ness) is more important factor as compared to spatial characteristics such as availability of forest-produce and physical remoteness in explaining high incidence of poverty in the region?
3. What kind of policy support has reached the people in this remote region? Who have benefited more than the other? Whether physical remoteness influences differential performance of delivery mechanism for providing the nation's support?

1.3. Objectives:

Accordingly, the broad objective of the paper is to understand the linkage of poverty and remoteness in India. However, the specific objectives are as follows:

1. To examine extent of poverty in the eastern region of India and on the country based on non-income criteria.
2. To examine the linkage of remote ness and level of deprivation in eastern India
3. To understand the correlates of deprivation in rural areas including the household and community factors

1.4. Data Source and Methodology:

Most of the studies on chronic poverty are based on longitudinal data. But in this paper we have used the cross sectional data (Data of National Family and Health Survey 2) in quantifying the chronic poverty. We have used the terminology of deprived, poor as synonymous to chronic poverty. The data of national family health survey 2, conducted during 1998-99 is used for above purpose. The NFHS-2 was conducted under rigorous conditions of scientific sampling design, training of investigators and high quality data collection and edit procedures in the country. The NFHS-2 covered a sample of 92,486 households representing about 95 percent of country's population. They were primarily designed to provide reliable information on fertility, mortality, contraceptive use and related factors in the country at state level separately for the rural and urban areas. These were done primarily questioning the ever-married women in the reproductive ages 15 to 49. However the surveys also collected data from the sampled households on the various amenities in the house and the literacy levels of the family members. These data are used in the following analysis.

From the data available in the household schedules of the survey we compiled data on the six variables for the rural areas in the country and eastern states of the country. For each household each variable is given a score of 1 or 0 indicating their presence or absence in the household. As an explanation of the utility of each of the variable, first we perceived that the presence of an adult literate member in a household makes a difference in determining the quality of life of the members in the household. If the household has an adult literate member a score of 1 is assigned and otherwise 0. Similarly, the presence of electricity, and presence of at least one of the amenities such as radio/transistor or bicycle or television is assigned a score of 1 each and otherwise zero. The type of house is again a reflection on the living standard of a family. We have assigned a score of 0 for Kuchha house and 1 for Pucca/Semi Pucca House in rural India; if the household has its own toilet facility a score of 1 is assigned and otherwise zero. We consider land as the prime determinant of economic well being in rural India. Accordingly, if the household has some

agricultural land a score of 1 is assigned and otherwise 0. The description of the variables is shown in Table 4.

The total score for any household varies from 0 to 6. Here 0 means a household does not have any of the specified necessities. These households are categorized as 'Abject Deprivation-AD'; a household with a score of 1 and 2 is categorized as' Moderate Deprivation-MD'; households with a score of 3 or 4 are categorized as 'Just above Deprivation -JAD'; and those with a score of 5 or 6 as 'Well above Deprivation- WAD'. The deprived or poor or chronic poverty are those classified as Abject Deprivation and Moderate Deprivation (AD+MD). This classification of poor is borrowed from Srinivasan and Mohanty (2004). However, we have further substantiate the deprived with two more indirect measure, namely, weight for age for children under age 3 and Body mass Index of women. The data from the following files are merged and used

a. Household file, mainly in identifying the poor based on non income criterion
b. Kids file for substantiate the poverty measure with weight for age of child
c. Women file, to examine the met and unmet need of family planning
d. The village file to relate the distance of the village with the prevalence of poor and non poor

The analysis includes bivariate analysis, statistical significance and logistic regression analysis is used to understand the determinant of poor household. Multidimensional of deprivation has been identified on key dimensions of living standard such as education, health, lack of access to facilities, poor quality of housing conditions. We have used the above-mentioned six variables and the weight for age of children below three years of age as well as the *body mass index* to substantiate the chronic poverty.

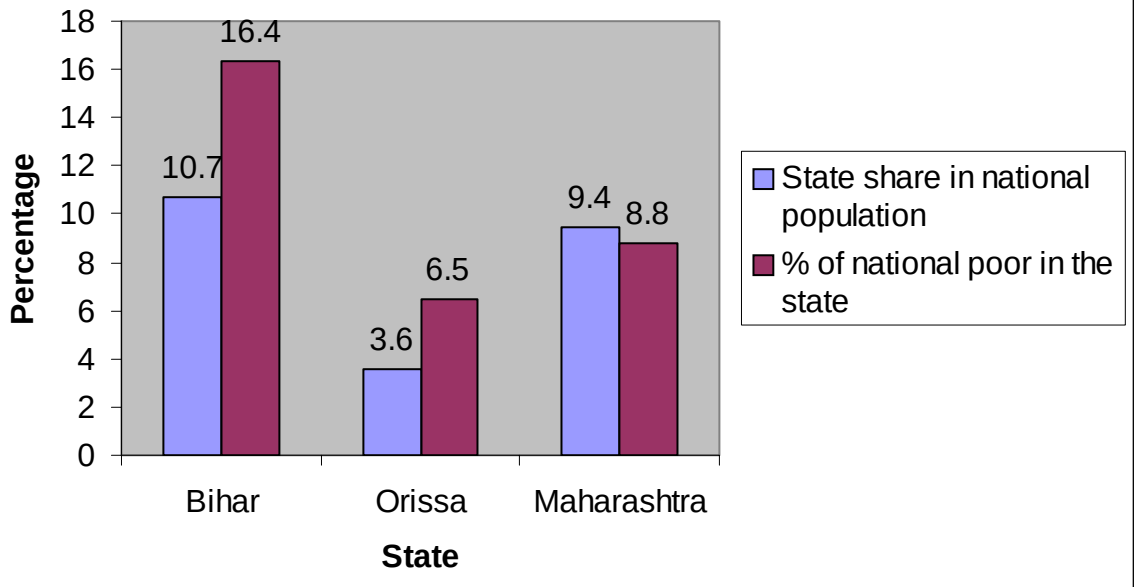
1.5. Discussion and Results:

a. Background

The demographic, social and socio-economic indicators of India and two of the eastern states of India, namely, Bihar and Orissa is given in table 1. The state of Bihar with a population of 83 million as of 2001 lags behind in the process of demographic transition as well as socio economic development. The state is one of the economically back ward state

with low state per capita income and higher percentage of population as agricultural laborers. The state of Orissa, though relatively better in demographic indicator as compared to Bihar, also economically less developed. The level of Infant mortality rate of Orissa is one of the highest though the total fertility rate is relatively lower. The percentage of population living below poverty line in the state is maximum in the country. A comparison of relative proportion of poor and state population (table 2) reveals that the state of Orissa with 3.57 percentage on national population accounts for 6.5 percent of national poor. Similarly, the state of Bihar with 10.69 percent of national population accounts for 16.36 percentage of national poor. This proportion is highest as compared to any other states of India. Even the most populous and economically less developed state like Uttar Pradesh with 17 percent of national population accounts for 20 percent of India's poor. It may also be noted that not only the level of poverty is high, but the pace of poverty reduction is slow in the state of Orissa. The state of Orissa has recorded 1.4 percent reduction in poverty as compared to 9.87 percent for the country during 1993-94 and 1999-00. However, the state of Bihar has recorded 12 percent decline in poverty ratio during this period.

Fig 1: Relative Share of Population and Poor in Bihar, Orissa and maharashtra



As mentioned before, the poverty level is not uniform within the regions or district of the same state as well as across social groups. In the state of Orissa, the prevalence of poverty is as high as 87 percent in southern region as compared to 32 percent in the coastal region (table 3 b). Further the prevalence of poverty is higher among scheduled tribe as compared to other social groups.

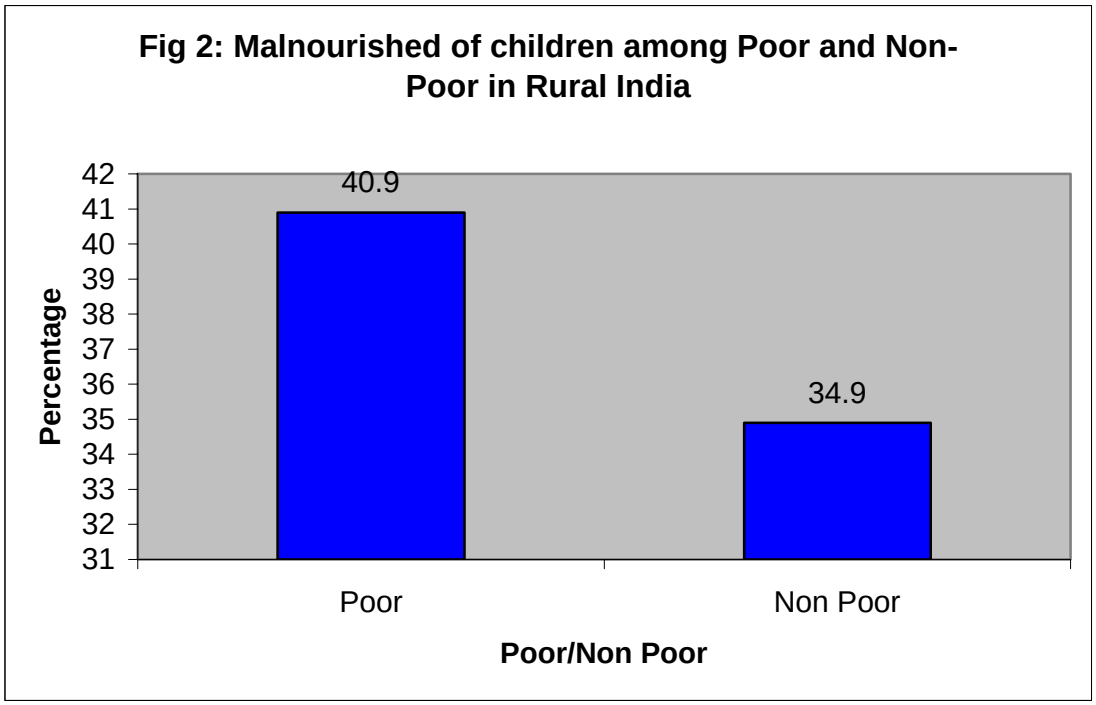
b. Classification of Poor or deprived

With this background we have analyzed the national family and survey data to quantify the poverty or deprivation in these states as well as the country. The analysis is carried out only for rural areas. Table 4 provides the methodology used in quantifying poor and non poor. The household with a composite score of 0 is labeled as abject deprivation while with a score of 1 or 2 moderate deprivations. For our analysis we conceive these two groups (*Abject Deprivation as well as moderate deprivation*) as poor or deprived or chronic poor while others are classified as non -poor. According to this classification, 4.3% of the households in rural India are in "Abject Deprivation" with none of the six characteristics described above, and 27.2 % of the households are in deprivation" (AD+MD). In other words the poor constitute about 31.5 percent of national population while such percentage is 50 percent in Bihar and 45 percent in Orissa (table 5a and table 5b). This classification also close to the poverty estimates of planning commission, though not same.

c. Validation of deprivation index:

We have validated the deprivation score with the indirect measure of poverty, namely, the weight for age of children below age three years and body mass index of women. Among the anthrop-metric measures for children's nutritional status (weight for age, height for age and weight for height), the weight for age is the most significant variables in understanding the nutritional status of children. It is hypothesized that the poor household likely to have higher proportion of underweight children. Moreover, it may be reflection of chronic poverty. Some research studies used the variable, weight for age as proxy of chronic poverty. The cross classification of weight for age and body mass index of women with the deprivation index is given in table 6 (a) and table 6 (b). This validation is done for rural

India. It is found that the proportion of malnourished as well as severely malnourished varies inversely with the deprivation level. About 47 percent children belonging to households under abject deprivation are malnourished as compared to 39.8 percent children belonging to moderate deprivation level, 37 percent children belonging to just above deprivation level and 30 percent for those well above deprivation level in rural India. Similar pattern is also observed for severely malnourished. As compared to poor and non poor, about 41 percent children belonging to poor households are malnourished as compared to 35 percent for non-poor. The differences are statistically significance.

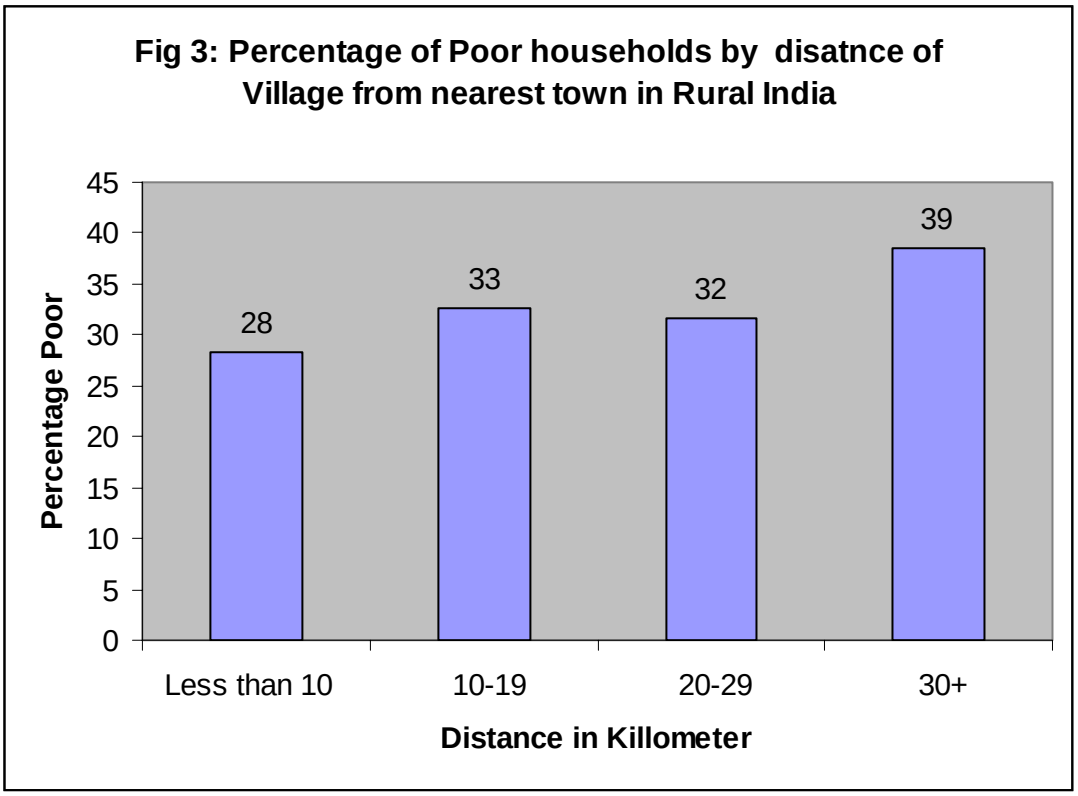


The similar analysis has been also carried out for body mass index of women. In general it is validated that, the children and women belonging to poor households are more likely to be underweight and have low body mass index respectively in rural India.

d. Distance and Poverty:

One of the main objective of this paper is to understand the extent of poverty and differentials in poverty by the remoteness of rural areas. In NFHS 2, a community questionnaire was canvassed indicating the distance of the village from the nearest town and the distance of the village from the district head quarter. Both the variables are used along with the integrated data of household. The distance of the village from the nearest town is reclassifies as less than 10 kilometer, 10-19 kilometer, 20-29 kilometer and 30 kilometer and above. It is hypothesized that the extent of poverty is likely to be more in those villages father from the town. The poverty is measured with respect to poor and non-poor. There is significant difference in the extent of poor by the distance of the village. About 28 percent households within the distance of less than 10 kilometer are poor as compared to 39 percent for those living 30 kilometer and above from the nearest town in the rural India (table 7 (a)). However, there is not much difference in the range of 10-19 kilometer and 20-29 kilometer.

To further substantiate the analysis, the distance of the village is cross-classified by standard of living of the households. The standard of living index is a composite index comprising of set of consumer durables, type of house and land holding of the household. It is taken as proxy of economic status of the household. It may be seen that 42 percent households falls under low standard of living in the distance of less than 10 kilometer from the town while it is 53 kilometer in case of 30 kilometer and above. Similarly, only 6 percent households are classified as high standard of living index in the distance of 30 kilometer and above as compared to 12 percent for less than 10 kilometer for the country. Both the variable showed that the extent of poverty is relatively more in the remote villages as compared to those close to town.



In addition to the distance of the town, the distance of the village from the nearest district headquarter is also categorized as less than 25 kilometer, 26-50 kilometer, 51-75 kilometer and 76 kilometer and above. We have conceptualized so as many of the facilities are located at district head quarter. Here also, the extent of poverty varies directly with the distance from the district head quarter. About 28 percent households in the distance of less than 25 kilometer are poor as compared to 31 percent in the distance of 26-50 kilometer, 34 percent in the distance of 51-75 kilometer and 36 percent in the distance of 76 kilometer and above. The pattern is similar with respect to standard of living index. About 41 percent households in the distance of 25 kilometer or less are poor as compared to 45 percent in the distance of 26-50 kilometer, 47 percent in the distance of 51-75 kilometer and 51 percent in the distance of 76 kilometer and more from the district head quarter. This is the general pattern for the rural areas of the country.

The similar distribution is also given for the state of Bihar and Orissa. In case of Bihar and Orissa, the similar pattern prevails with marginal variation. For example, about 47 percent households are poor in the range of less than 10 kilometer from the nearest town while it is 53 kilometer in the range of 10-19 kilometer and 51 percent for 20 kilometer or above in the state of Bihar. The similar is the pattern with respect to the standard of living index of the households. However, the pattern is more clearer in case of distance from the district headquarter. It is found that about 45 percent households in the distance of less than 25 kilometer are poor as compared to 51 percent in the distance of 26-50 kilometer, 59 percent in the distance of 51-75 kilometer and 58 percent in the distance of 76 kilometer and above in the state of Bihar. The similar is the pattern with respect to standard of living index of the households. In case of Orissa, about 43 percent households are classified as poor in the distance of less than 10 kilometer as compared to 45 percent in the range of 10-19 kilometer, 49.7 kilometer in the range of 20-29 kilometer and 42 percent in the range of 30 kilometer and above. The similar pattern is also observed in case of standard of living index of the household. From the above analysis, it may be said that the remoteness is linked to chronic poverty in the country as well as the eastern states of India.

e. Correlates of Rural poor: To understand the correlates that perpetuate poor in poor condition, a logistic regression equation is estimated. The dependent variable is dichotomous in nature, taking the value of 0 for being poor and 1 for being non-poor. The independent variables are a set of household and community variables including the distance of the village from the town and district head quarter as used in bivariate analysis. These are age of the household, household size, caste of the head of the household, ownership of land holding, size of the village population, educational level of the head of the household, distance of the village from the town and distance of the district headquarter from the village. The classification of these categories along with the reference categories is shown in table 8. Three set of regression equation for rural India, for the state of Orissa as well as for Bihar is given in the table. The age of the household is recategorised as less

than 30 years, 30-50 years and above 50 years. The odds of being not poor are high with increase head of household. The odd ratio of being non-poor is 1.35 for the age of household 30-50 years and 2.08 for age of the household 51 and above. The coefficient is also significant for the country. However, for the state of Orissa and Bihar, the coefficient is significant for the age group 51 years and above. The chance of not being poor varies directly with household size in rural India as well as for both the sates. The coefficients are significant indicating that larger family may relatively less prone in poverty trap as compared to smaller families. The caste of the head of the household is also found significant in the model. As compared to scheduled caste, the scheduled tribes are more disadvantageous while the others are better off. This is true for the country as well as for the states of India.

In rural areas, land is one of the main source of livelihood. According the ownership of land holding is taken as one of the predictor in the model. It is found that the ownership of land holding is an important and significant predictor of not being poor for the country as well as for both the states of India. The odd ratio of not being poor is 5.41 for those own land and statistically significant. The same is true for both the states. The educational level of household is used as an independent variable in the model. It is found that the poverty is highly correlated with the educational level of the household. With increase in educational levels, the odds of not being poor are quite high for India as well as for the states. The variable is significant for the country as well as for the states. The distance of the village from the nearest town is recategorised as less than 20 kilometer and 20 kilometer and above. It is found that the distance is a significant variable in the model. The villages located in the 20 kilometer or above are more likely to have poor households as compared to villages in distance of 20 kilometer or less. The similar pattern is also found for the distance of the village from the district head quarter.

1.6. Concluding Remark:

From the above analysis, it is found that the non-income measure can be suitable in identifying the poor household in rural areas. The levels of poverty remained higher in the state of Bihar and Orissa. It is also found that underweight of children is higher among poor households as compared to non-poor. The remoteness of the village is found to be associated with the level of deprivation or poor. Those living in remote villages are more likely to live in chronic poverty as compared to those living closure to the town or city center. The multivariate analysis revealed that household size, caste of the household, ownership of land holding, educational level of the household, village size are significant predictor of poverty. In addition to this the distance of the village from the nearest town as well as distance of the village from the district also associated with poverty. The study suggests that the policy makers should develop the methodologies for giving space and incentives to chronically poor people to escaping from that vicious circle of the chronic poverty where no political voice and taste of modernization are the dream for chronically poor people those who are dwelling far from the town or city in the rural eastern part of India.

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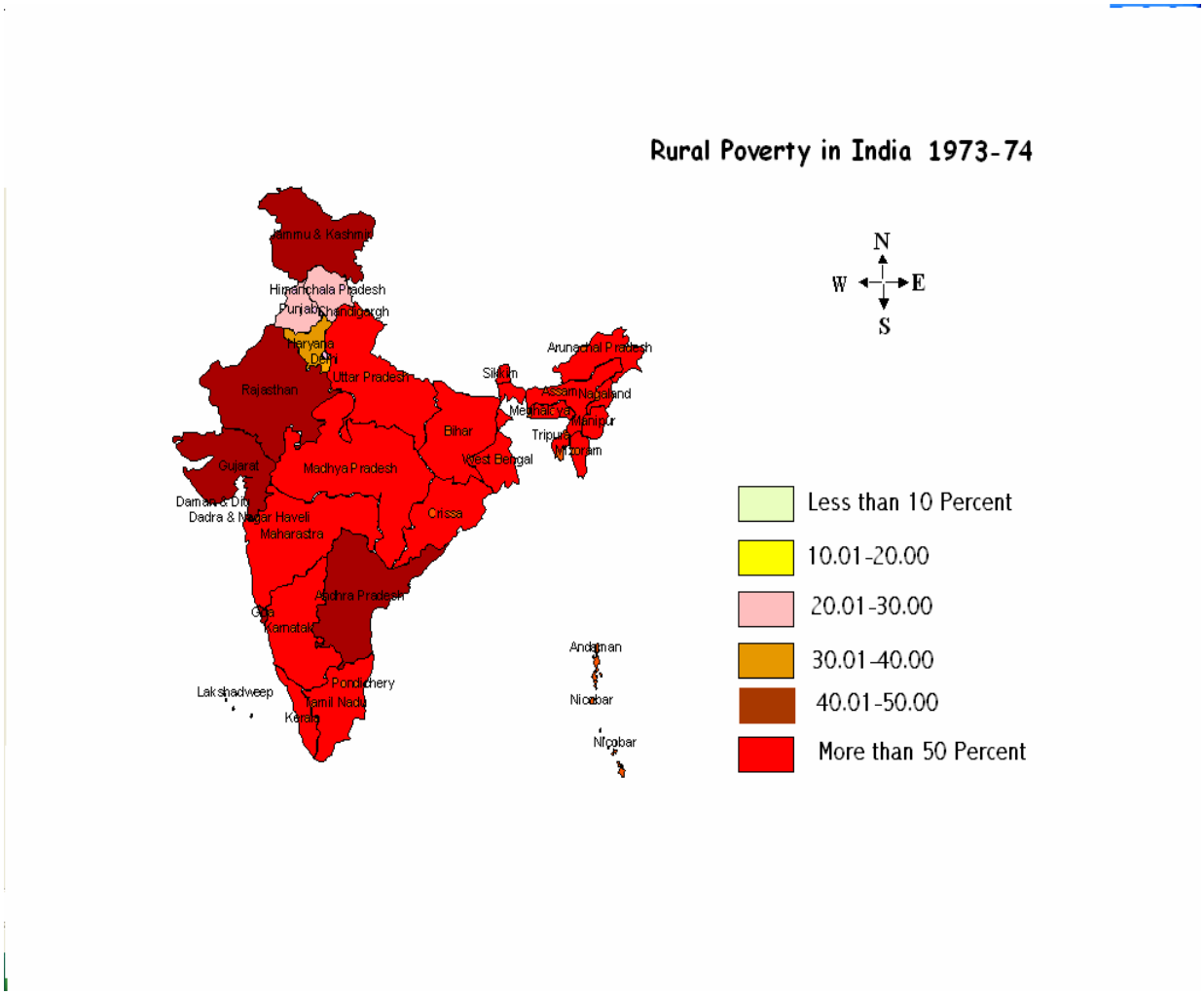
Rural Poverty in India 1973-74
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Jammu & Kashmir
Himanchala Pradesh
Punjab
Chandigargh
Haryana
Delhi
Uttar Pradesh
Rajasthan
Arunachal Pradesh
Sikkim
Assam
Nagaland
Meghalaya
Tripura
Manipur
Mizoram
Bihar
West Bengal
Gujarat
Madhya Pradesh
Damam & Diu
Dadra & Nagar Haveli
Maharastra
Crissa
Andhra Pradesh
Goa
Karnatak
Pondichery
Lakshadweep
Tamil Nadu
Kerala
Andaman
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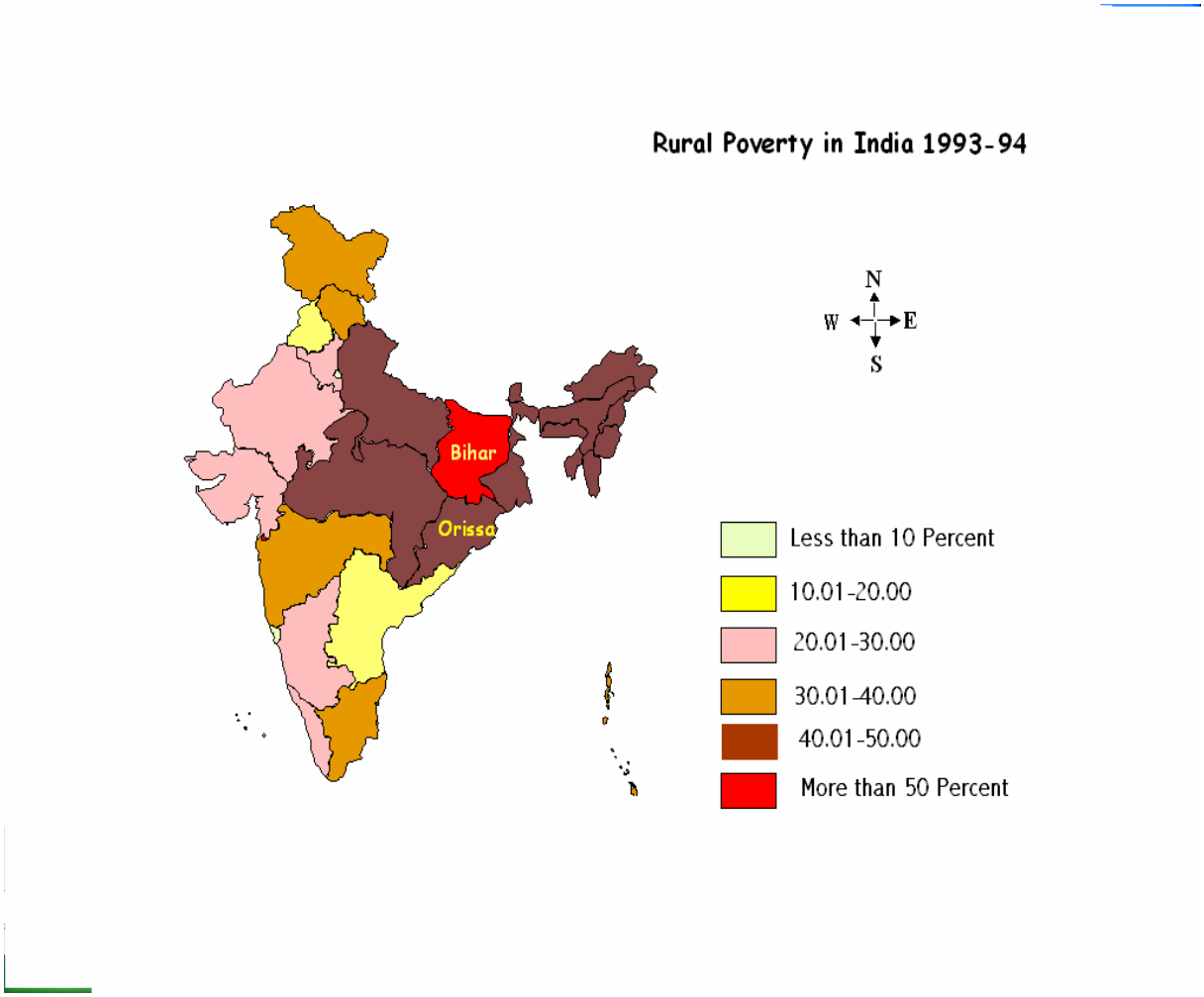
Less than 10 Percent
10.01-20.00
20.01-30.00
30.01-40.00
40.01-50.00
More than 50 Percent


Rural Poverty in India 1993-94
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20.01-30.00
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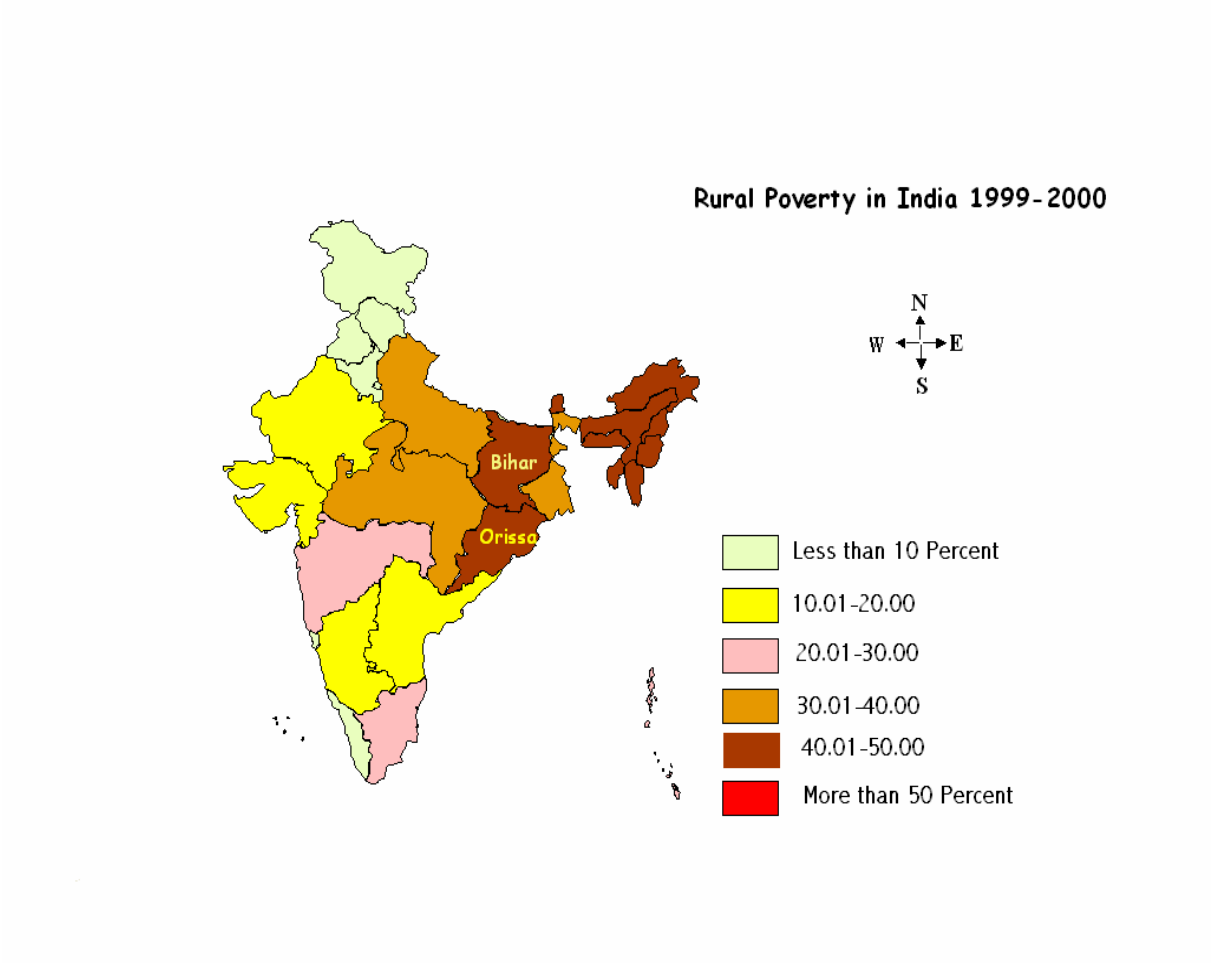
More than 50 Percent


Rural Poverty in India 1999-2000
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Bihar
Orissa
Less than 10 Percent
10.01-20.00
20.01-30.00
30.01-40.00
40.01-50.00
More than 50 Percent

Causes and Manifestation of Poverty

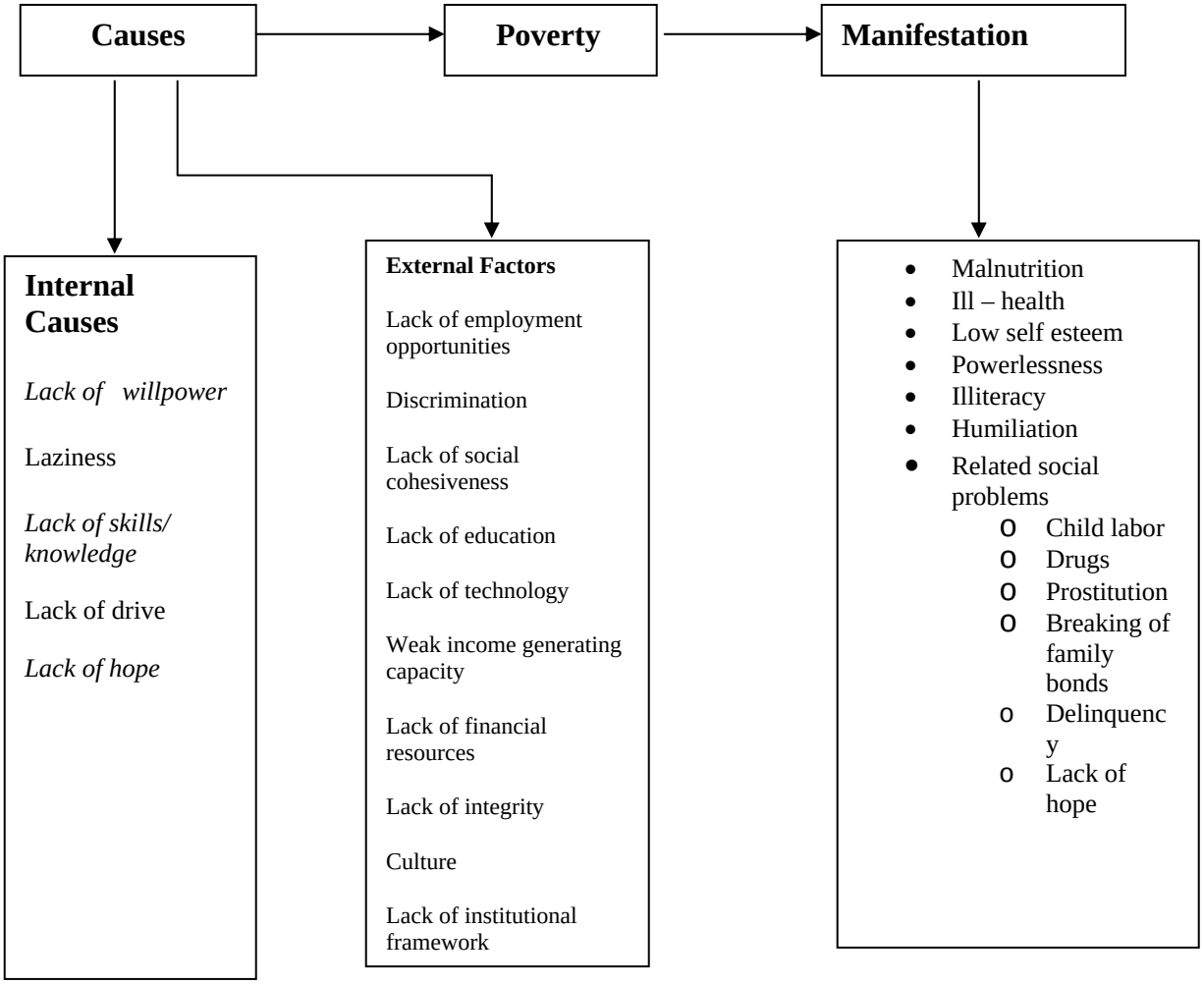

Table-1. Socio-Economic and Demographic Characteristics of Bihar and Orissa

Variables	Year	Year & Sources	Bihar	Orissa	India
Demographic Variables					
Total Population (million)	2001	Census 2001	82.99	36.80	1028.61
CBR	2002	SRS	30.9	23.2	25.0
TFR	2002	SRS	4.2	2.6	3.0
IMR	2002	SRS	61	87	63
Use of Modern method (contraception)	1998-99	NFHS 2 (1998-99)	35.4	45.2	51.2
Decadal growth rate	2001	Census (2001)	28.43	15.94	21.34
Sex Ratio	2001	Census (2001)	921	972	933
Percentage pop.(0-4)	2001	SRS (2002)	14.1	10.7	11.3
Density	2001	Census of India, 2001	880	236	324
Social Variables					
Literacy					
Male	2001	Census of India, 2001	60.32	75.95	75.85
Female	2001	Census of India, 2001	33.57	50.97	54.16
Total	2001	Census of India, 2001	47.53	63.61	65.38
Life expectancy					
Male	2000	SRS (1998-2002)	61.4	58.5	63.3
Female	2000	SRS (1998-2002)	59.5	58.4	62.0
Total	2000	SRS (1998-2002)	60.8	58.5	62.5
Percent Below Poverty Line	1999-2000	Planning commission, 1999-2000	42.6	47.12	26.1
Economic Variables					
Percentage of Agricultural laborer.	2001	Census (2001)	48.0	35.03	26.69
NET State Domestic Product Per Capita	2002-03	Economic Survey (2003-04)	Rs 6015	Rs10103	Rs 24,482

Table 2: Incidence and Concentration of Income poverty in seven selected states of India.

State	State share of India's poor population	State share of India's Population	Percentage of the population of the state that is in poverty			Percentage Reduction in poverty	Percentage Reduction in poverty)
	1999-2000	2001	1973-74	1993-94	1999-2000	(1973-74 & 1993-94	(1993-94 & 1999-2000
Asam	3.63	2.59	51.21	40.86	36.09	10.35	4.77
Bihar*	**16.36**	**10.69**	**61.91**	**54.96**	**42.06**	**6.95**	**12.90**
M..P. *	11.04	7.91	61.78	42.52	37.43	19.26	5.09
Maharastra	8.76	9.42	53.24	36.86	25.02	16.38	11.84
Orissa	**6.50**	**3.57**	**66.18**	**48.56**	**47.15**	**17.62**	**1.40**
U.P.*	20.36	17	57.07	40.85	31.15	16.22	9.70
W.B	8.20	7.81	63.43	35.66	27.02	27.77	8.64
All India	100	100	54.88	35.97	26.10	18.91	9.87

* Including the districts in the now newly formed states.
Sources: Mehta and Shah (2003) based on government of India, poverty estimates for 1999-2000,press information Bureau, February22, and March 1997 and Government of India, 2001 provisional population tables.

Table-3 (a): Deprivation at the Regional Level in Rural and Urban: Different Dimension

State	Region	Percentage Severely poor	Percentage Poor	Child Mortality	Female Literacy	Total Literacy	Electricity	Toilet facility
Rural								
Orissa	Southern	34.08	69.02	123.25	11.01	23.56	6.64	2.77
Bihar	Central	24.06	54.03	72.28	22.53	39.77	6.53	7.74
Bihar	Northern	27.62	58.68	76.05	15.71	30.39	3.88	3.98
Bihar	Southern	31.57	62.44	69.08	16.31	52.66	7.65	3.65
Urban								
Orisaa	Coastal	26.54	48.42	127.52	41.29	55.92	23.50	4.51
Orissa	Southern	33.33	45.64	123.25	11.01	23.56	6.64	2.77
Bihar	Northern	21.68	49.37	76.65	15.71	30.39	3.88	3.98

(Sources**:** Planning Commission, June 2000 and NIRD, India Rural Development Report, 1999).

Table-3 (b): Head Count Ratio by Regions and Social Groups (Rural): 1999-2000

	Social Groups			
	S.T.	**S.C.**	**Other**	**All**
Coastal	66.63	42.18	24.32	31.74
Southern	92.42	88.90	77.65	87.05
Northern	61.69	57.22	34.67	49.81
All (Orissa)	**73.08**	**52.30**	**33.29**	**48.01**

Note: Based on estimates by Haan & Dubey (2003), Table, and P-12.

Table 4: Alternative measures in defining poverty

Variables used in computing Household Deprivation Score (HDS)

Variable	**Variable used**	**Description**	**Categorization of households on deprivation based on total score**
Rural	1.Adult Literacy	0= No adult literate in the household 1= Presence of any adult literate in household	0: ' Abject Deprivation' (AD)
	2.Type of House	0= Kuchha House 1= Semi Pucca / Pucca House	1-2: "Moderate Deprivation' (MD)
	3.Electricity	0 = House is not electrified 1= House is Electrified	3-4: "Just Above Deprivation" (JAD)
	4.Drinking water facility	0= No arrangement within the residence 1= Own arrangement within the residence	5-6: "'Well Above Deprivation" (WAD)
	5.Radio/transistor or bicycle or Television	0 = Neither radio nor transistor nor bicycle nor TV 1= At least one of these	
	6.Land Holding	0= No land 1= Have some land	

Table 5 (a): Percentage distribution of households on deprivation score in Rural India, 1998-99

Composite score	India	Bihar	Orissa
0	4.3	10.8	7.6
1	10.8	19.8	16.0
2	16.4	19.4	21.0
3	20.9	19.4	22.5
4	22.0	15.3	18.3
5	18.5	11.2	12.4
6	7.1	4.0	2.3
N	**66772**	**5620**	**4166**

Table 5 (b): Percentage distribution of households on Household Deprivation Score in eastern states of India, 1998-99

Rural	States	
	Bihar	**Orissa**
Abject Deprivation (AD)	10.8	7.6
Moderate Deprivation (MD)	39.2	36.9
Just above Deprivation (JAD)	34.7	40.8
Well above Deprivation (WAD)	15.2	14.7
Poor (AD+MD**)**	50.1	44.5
Non-poor (JAD+WAD**)**	49.9	55.5
N	**5260**	**4166**

Table 6 (a): Percentage distribution of children on nutritional status of children by levels of deprivation in India, 1998-99

Composite score	Malnourished	N	Severely Malnourished	N
AD	47.0	547	22.3	547
MD	39.8	3182	18.6	3183
JAD	37.0	4292	14.0	4291
WAD	30.0	2053	39.2	2054
Poor	40.9	6347	19.1	6347
Non Poor	34.9	3728	12.4	3728
All	37.0	10074	14.9	10075

Table 6 (b): Percentage distribution of women on levels of deprivation in India, 1998-99

	Less than 18.5	18.5-24.5 (Normal)	Above 24.5	N
AD	48.1	50.3	1.6	2005
MD	47.1	50.4	2.5	14433
JAD	40.9	53.2	5.9	26745
WAD	30.9	56.2	12.9	17828
Poor	47.2	50.4	2.4	16438
Non Poor	36.9	54.4	8.7	44573
Total	**24209**	**32546**	**4256**	**61011**

Table-7 (a): Remoteness and Rural poverty
Distribution of poor by distance of village from the nearest town and district head quarter in India.

	Distance of village from nearest town				**Distance of village from nearest dist. Head quarters**			
	< Than 10k.m.	**10-19 km**	**20-29 km**	**30 km & above**	**< Than 26 km**	**26-50 km**	**51-75 km**	**76 km & above**
Poor	28.3	32.7	31.9	38.6	28.0	31.2	33.7	35.8
Non-poor	71.7	67.3	68.1	61.4	72.0	68.8	66.3	64.2
N	27542	22146	9165	7603	20245	22241	12420	11107
SLI								
Low	41.6	46.2	46.4	53.0	41.1	44.5	47.4	51.3
Medium	46.2	44.0	43.8	40.8	45.5	44.7	44.8	41.8
High	12.2	9.8	9.8	6.2	13.4	10.8	7.8	6.9
N	**27292**	**21989**	**9086**	**7548**	**20062**	**220707**	**12314**	**11023**

Table-7(b) Remoteness and Rural poverty
Distribution of poor by distance of village from the nearest town and district head quarter in eastern states of India.

States	**Deprivations And SLI**	**Distance of village from nearest town**				**Distance of village from nearest dist. Head quarters**			
		< Than 10k.m.	**10-19 km**	**20-29 km**	**30 km & above**	**< Than 25 km**	**26-50 km**	**51-75 km**	**76 km & above**
BIHAR	Poor	47.1	53.0	50.6	50.6	45.1	50.6	59.1	58.2
	Non-poor	52.9	47.0	49.4	49.4	54.9	49.4	40.9	41.8
	SLI								
	Low	59.7	63.3	63.5	61.4	57.6	62.4	68.7	68.2
	Medium	32.7	33.0	30.6	34.8	34.5	33.9	27.4	27.1
	High	7.6	3.7	5.9	3.9	8.0	3.7	3.8	4.6
ORISSA	Poor	43.1	45.2	49.7	42.3	42.8	44.6	41.4	49.6
	Non-poor	56.9	54.8	50.3	57.7	57.2	55.4	58.6	50.4
	SLI								
	Low	59.9	64.2	68.9	62.5	60.9	61.6	62.0	68.4
	Medium	32.8	30.0	27.5	29.9	31.0	32.1	31.8	27.6
	High	7.3	5.8	3.5	7.5	8.0	6.3	6.2	4.0

Table 8: Result of Logistic Regression showing the correlates of poor in Rural India

Variables	Exp (B): India	Exp (B): Orissa	Exp (B): Bihar
Age of Head of Household			
Less than 30 (R)			
30-50	1.35*	1.08	1.14
50+	2.08*	1.48*	2.06*
Household Size			
Less than 5 (R)			
5-7	1.58*	1.79*	1.69*
7+	2.49*	4.09*	3.67*
Caste			
Schedule Caste (R)			
Schedule Tribe	0.709*	0.633*	0.864*
Others	1.496*	1.63*	1.87*
Ownership of land holding			
No (R)			
Yes	5.41*	10.44*	9.82*
Size of Village Population			
Less than 1000 (R)			
1000-2000	1.05*	1.132	1.33*
Above 2000	1.40*	0.989	1.77*
Educational level of HH Head			
No education (R)			
Incomplete primary	3.21*	3.36*	4.18*
Complete primary	5.01*	5.60*	6.84*
Incomplete secondary	7.55*	7.21*	9.45*
Complete secondary	12.48*	23.38*	18.66*
Higher	25.61*	41.52*	40.42*
Distance of village from town			
Less than 20 kilometer (R)			
20 kilometer and above	0.749*	1.002	0.90
Distance of village from district Head Quarter			
Less than 50 kilometer (R)			
50 kilometer or more	0.827	1.001	0.536*

* Significant at 1 percent level