Journal of Rural Development, Vol. 29, No. (3) pp. 307 - 330
NIRD, Hyderabad.

DYNAMICS OF RURAL POVERTY IN BIHAR : THE MALADY AND PANACEA OF THE MALAISE

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ABSTRACT

This study examines the incidence of rural poverty in Bihar. It is a renewed and indepth analysis of the poverty problem in its various regional, social and institutional dimensions. To study the malaise of poverty, the relationship between growth and poverty; agricultural growth and poverty; agrarian relations and poverty are analysed. Further, the impact of various poverty alleviation programmes especially with reference to new poverty schemes on poverty has been analysed. Finally main conclusions and policy initiatives to be taken are presented. The study is based on secondary data of National Sample Survey(NSS) to identify the linkages between growth and poverty. The data on sectoral growth pattern are obtained from estimates of Net Domestic Product(NDP) of Central Statistical Organisation(CSO). To assess the impact of anti-poverty programmes, various poverty alleviation studies conducted earlier have been used as an important source material. The study reveals that (a) rural poverty in Bihar is a consequence of poor and lopsided growth of the economy of the State (b) the trickle-down effect of agricultural growth is limited in making significant dent in removing poverty (c) in a predominantly agrarian economy of Bihar, poverty is due to highly iniquitous agrarian relation (d) the poverty alleviation programmes implemented so far have been partially responsible for increasing the incidence of poverty in rural Bihar. To conclude, since poverty has multi-dimensional aspects, the panacea for the problem of poverty is multi-dimensional. Growth must be inclusive. Apart from focusing on agriculture, non-farm and infrastructure sector; stricter governance reforms, catalytic change in the political will power, focusing on development of certain castes and groups need prior attention to make a significant dent on the poverty problem plaguing the State for the last several decades.

India is the second fastest growing major economy in the world, with the Gross Domestic Product(GDP) growth rate averaging 8 to 9 per cent in the last two to three years, before slumping along with the global economy into the global recession of 2008-'09. Still the problem of poverty is menacing shaking the foundations of the economy though making significant strides in some rising sectors such as IT and software services, entertainment, telecommunication, pharmaceuticals, manufacturing etc.

The problem of poverty is more glaring in some backward states such as Bihar. The present Bihar, carved out after bifurcation with Jharkhand in 2000 extends over an area of 94 lakh hectares, constituting about 3 per cent of the geographical area of India. With 8 per cent of its population of 90-2 million (82.9 million as per 2001 census), Bihar is the third most

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populous State of the country. Bihar ranks among the slowest growing regions of India and the growth rate of its SDP during most periods since 1960s has been low. Bihar's annual growth rate was 5.2 per cent compared to all India's 5.6 per cent in the 1980s, declined to 3.46 per cent in contrast to the national growth rate of over 6 per cent in the 1990s and has increased recently, according to CSO to 5.8 per cent, between 1993-94 to 2004-05, just under India's 5.9 per cent per annum.

The State has the second highest incidence of poverty in the country, after Orissa. Headcount poverty ratio based on National Sample Survey Organisation (NSSO) estimates -Uniform Reference Period (URP) in the State was 63.1 per cent in 1983 (against India's at 45.05 per cent) which decreased marginally to 59 per cent in 1987-88 (against India's at 38.85 per cent), which further decreased to 48.6 per cent in 1993-94 (against India's at 34.9 per cent) and 40.1 per cent in 2004-05 (against India's at 27.3 per cent). Rural poverty is even higher at 42.2 per cent in 2004-'05 in the State, against India's at 28.7 per cent.

A vast literature on the poverty problem is already existing. However, these studies were considered in an aggregative manner. This study is a renewed and indepth analysis of the poverty problem in its various regional, social and institutional manifestations. It brings dynamism into the studies of rural poverty in Bihar done so far.

Methodology

The study is based on secondary data. NSS is the major source of secondary information on the requirement of data for examining the nature and magnitude of rural poverty. NSS data are used to identify the linkages between growth, inequality and poverty over time and across the states.

The data on sectoral growth pattern are obtained from estimates of Net Domestic Product of Central Statistical Organisation.

In order to assess the impact of anti-poverty programmes, various poverty alleviation studies conducted in Bihar (particularly those conducted by the Ministry of Rural Development under the Concurrent Evaluation of IRDP, other poverty alleviation programmes and individual researches) have been used as important source material.

MAGNITUDE AND TRENDS IN RURAL POVERTY AND THE SECTORAL GROWTH PATTERN

Growth Characteristics

Relationship between GDP/NDP and Poverty Level : To see the relationship between growth and poverty in Bihar, poverty figures for the State by NSS and growth figures by CSO are taken below.

Poverty trends for the years 1983, 1987-88, 1993-94 and 2004-'05 are examined in the Table 1. Poverty estimates for 1999-'00 are not

Table 1 : Poverty Ratios (Headcount Ratio) based on NSSO estimates (URP)

Year	NSS Round	Bihar			All India		
		Rural	Urban	Total	Rural	Urban	Total
1983	38th	64.7	61.6	63.1	46.5	43.6	45.05
1987-88	43rd	54.2	63.8	59	39	38.7	38.85
1993-94	50th	56.6	40.7	48.6	37.2	32.6	34.9
2004-05	61st	42.2	38.1	40.1	28.7	25.9	27.3

Source : 2004-'05 estimates are calculated from grouped data from NSSO Report 508. Estimates for 1983, 1987-88 and 1993-94 are calculated from the unit level data respectively-Himanshu (2007)[1].

comparable with earlier and later rounds of NSS. The 61st round of the NSS provides results for Uniform Reference Period (URP), which can be compared with that of 1993-94. This round also gives Mixed Reference Period (MRP) results for the year 2004-05 which are approximately comparable with 1999-'00 data. Since there were disputes on the actual decline in poverty in 1999-'00, so intentionally, 1999-'00 data for poverty are not taken here.

The growth performance of an individual state is usually judged in terms of growth rate of overall Net State Domestic Product (NSDP) and its sectoral growth pattern. Table 2 presents the growth of NSDP for Bihar.

Table 2 : NSDP at factor cost for Bihar (Rs. crore)

Year	At current prices	At constant prices
*1983-84	9,479	7,422
*1987-88	14,358	8,455
*1993-94	31,250	20,780
1993-94	9,320	20,780
2004-05	56,110	35,773

Note : Undivided State's figures for * 1983-'84, *1987-'88, and *1993-'94 are at old series of 1980-'81 prices and present Bihar figures for 1993-'94 and 2004-'05 are at new series of 1993-'94 prices.

Source : CSO website as on 26.11.1999 for old series and as on 23.02.2006 for new series, in RBI 2005-06,'Handbook of Statistics on the Indian Economy'[2].

Now a comparison of the percentage change in growth figures derived from Table 2 and percentage change in poverty figures derived from Table 1 will bring out the relationship between the two as shown in the Table 3.

Table 3 : Relationship between growth and poverty

Periods	Percentage change in NSDP in Bihar		Percentage change in population BPL in Bihar (based on URP estimates)		
	At current price	At constant price	Rural	Urban	Total
*1987-88	62.02	13.92	-16.23	3.57	-6.50
Over *1983-84	(15.5)	(3.48)	(-4.05)	(0.89)	(-1.51)
*1993-94	103.48	10.23	0.44	36.2	-17.63
Over *1987-88	(17.25)	(1.7)	(0.07)	(-6.03)	(-2.94)
2004-05	170.02	72.15	-25.44	-6.39	-17.48
Over 1993-94	(15.46)	(6.6)	(-2.3)	(-0.58)	(-1.59)

Note : Figures in brackets are annual percentage figures.

Source : Derived from Table 1 and 2 given above.

Table 3 brings out the fact that when annual NSDP at constant price decreases from 3.48 per cent in between *1983-'84 and *1987-'88 period to 1.7 per cent in between *1987-'88 and *1993-'94 period, rural poverty increases slightly by 0.07 per cent in the corresponding period. Again when the growth rate recovered in 90s' by 6.6 per cent, rural poverty decreased by 2.3 per cent in the same period. So growth in NSDP seem to have some effect on the incidence of poverty.

It is because of low growth rates in the pre-reform years that there was low decline in poverty. Though growth picked up after mid 90's, the decline in poverty was not that spectacular to lift a substantial proportion of the poor living Below Poverty Line (BPL) in Bihar. So slow growth is a factor explaining slow decline in poverty in the State. But it is also a fact that the growth, whatever it be has not trickled down to the lower strata of population. So growth by itself is not the only factor affecting the Trickle Down Mechanism, for the poor. Other factors also need to be considered, such as, the composition of growth, growth in per capita NSDP, conditions of very poor persons, per capita consumption expenditure, most importantly distribution of expenditure and other non-economic factors of growth such as the state of literacy, health, employment, consumption pattern, occupational pattern, social concentration of poverty, land ownership pattern, access to basic amenities, rural indebtedness, livestock strength etc .

Sectoral Composition of Growth and Poverty : The growth of the agricultural sector is important for the State since agriculture provides employment to three-fourths of the workforce and is the main source of income for the majority of Bihar's rural poor. But low agricultural growth has kept the poverty figures alarming in the State as seen in the Table 4.

Table 4 : Growth performance of Bihar : 1981-'82 to 2001-'02

	1981-82 to 1990-91		1991-92 to 1995-96		1994-95 to 2001-02	
	Former Bihar	India	Former Bihar	India	Divided Bihar	India
GDP	4.9	5.6	0.0	5.4	3.8	6.1
Agriculture	4.6	3.6	-2.0	2.3	0.8	3
Industry	5.2	7.1	0.5	6.3	10.5	6.4
Service	5.6	6.5	2.2	7	6.4	8

Note : Period growth rate is the average of annual growth rates over the period.
Source: Central Satistical Organisation, GoI, in World Bank (2005)[3].

The sectoral composition of Bihar's economy shows that agriculture showed negative growth in the early 1990s and since the mid-1990s till 2001-'02, the growth was a minimal 0.8 per cent leading to a negative growth rate of agricultural output per capita. This low agricultural growth has led to persistence of substantial poverty in the State.

Even the performance of the industrial and services sector in alleviating poverty is minimal. Ravallion and Datt (2002)[4] has shown by empirical evidence that, non-farm growth does not reduce poverty effectively in Bihar, due to its very limited rural development , HRD and highly unequal distribution of land.

Relationship between Per Capita NSDP and Poverty : Since the GSDP/NSDP hide the impact of population growth, per capita income levels are considered better to delve closely into the impact of growth on an individual person. Table 5 gives the per capita NSDP of Bihar and India both at constant and current prices.

Table 5 : Per capita NSDP (Rs.)

	At constant prices		At current prices	
	Bihar	India	Bihar	India
* 1983-84	1003	-	1281	-
* 1987-88	1050	-	1906	-
* 1993-94	1019	-	3417	-
1993-94	3037	7690	3037	7690
2004-05	4034	12416	6327	23241

Note : Undivided State's figures for * 1983-'84, *1987-'88, and *1993-'94 are at old series of 1980-'81 prices and divided Bihar figures for 1993-'94 and 2004-'05 are at new series of 1993-'94 prices.

Source: CSO website as on 23.2.2006 in RBI 2005-06 'Handbook of Statistics on the Indian Economy[3]'

Comparing per capita growth rates of Table 5 with the poverty figures of Table 3 will bring out the impact of per capita growth on poverty, which is shown in the Table 6 .

Table 6 : Relationship between per capita income and poverty

Period	Percentage change in per capita NSDP				Percentage change in population BPL (URP) in Bihar		
	At constant prices		At current prices				
	Bihar	India	Bihar	India	Rural	Urban	Total
* 1987-88 Over *1983-84	4.69 (1.17)	-	48.79 (12.2)	-	-16.23 (-4.05)	3.57 (0.89)	-6.50 (-1.51)
*1993-94 Over *1987-88	-2.95 (0.49)	-	79.28 (13.2)	-	0.44 (0.07)	-36.2 (-6.03)	-17.63 (2.94)
2004-'05 Over 1993-94	32.83 (2.98)	61.46 (5.59)	108.33 (9.8)	301.33	-25.44 (-2.3)	-6.39 (-0.58)	-17.48 (1.59)

Note : Figures in brackets are annual percentage figures.

Source : Derived from Table 3 and Table 5.

Table 6 shows that in the period *1983-84 to *1987-88 when annual per capita NSDP was 1.2 per cent approximately, rural poverty declined by 4 per cent. Again when annual per capita NSDP growth decreased between *1987-88 and *1993-94 period by less than 1 per cent, poverty increased marginally by 0.07 per cent. Further, when annual per capita NSDP increased to 3 per cent approximately in 1993-94 and 2004-05 period rural poverty declined by 2.3 per cent. It shows that change in per capita NSDP and poverty figures move in an inverse pattern, though there is no strong relationship between the two. So high rural poverty in the State is due to low per capita growth rates.

Concentration of Poverty : Poverty is concentrated in the five States of Bihar, M.P., Maharashtra, Orissa and UP, their share being

65 per cent of the total poor in 2004-05. Bihar had 16.82 per cent of total rural poor of India in 1983 which increased to 19.22 per cent in 1993-94 and 20.11 per cent in 2004-05 (NSS).

Percentage of Very Poor : Similarly, the percentage of rural very poor in the State was 39.53 per cent of the total population in Bihar in 1983, which declined to 28.29 per cent in 1993-94 and 14.65 per cent in 2004-05, but is still higher than the all India rural very poor percentages.

But the percentage distribution of rural very poor persons across major states has increased from 18.70 per cent of all India rural very poor persons to 23.10 per cent in 1993-94 and to 21.26 per cent in 2004-05 (NSS).

Regional Dimensions of Poverty : North Bihar is poorer than South Bihar. Headcount index of rural poverty was 49.3 per cent for North Bihar and 44.4 per cent for South Bihar in 1993-94 (Deaton 2003)[5].

Consumption Expenditure Patterns

Per Capita Consumption Expenditure : Kakwani and Subharao[6] state that the beneficial effects of growth on poverty can be nullified by inequality of consumption. Average Monthly Per Capita Consumption Expenditure (MPCE) for 50th and 61st rounds of NSS for Bihar, show that poverty decline in Bihar in recent yeas is due to lower inflation rather than real growth effort or effectiveness of Poverty Alleviation Programmes (PAPs).

Percentage of population below specified levels of MPCE (NSS, 61st round) shows that in Bihar 46 per cent of rural persons were living below the MPCE level of Rs. 365, which is about Rs. 12 per day, compared with 30 per cent at the all-India level. The levels of living at even lower of Rs. 270 per person per month (Rs. 9 per day) and below was seen in 15 per cent of rural population in Bihar. So the MPCE break-up shows acuteness of poverty in different classes of MPCE.

Distribution of Expenditure : Deaton and Dreze (2002)[7] has shown how a decline in income distribution erodes the contribution of growth to poverty reduction.

Though Gini Ratio is less for Bihar, Poverty Gap(PG) and Squared Poverty Gap(SPG) are higher than these All-India figures. So the inequality problem still persists due to inequality of assets, weak trickle down and cornering of benefits of development programmes by the non-poor.

Non-Income Indicators of Poverty

A study of non-income indicators of poverty such as state of literacy, health, employment, consumption pattern, occupational pattern, social concentration of poverty, land ownership pattern, access to basic amenities, rural indebtedness, livestock strength etc. brings dynamism into the studies done so far on poverty. The social/regional institutional and other aspects of poverty bring to light an indepth analysis of the aggregative poverty trends.

A closer look at the NSSO data on distribution of population by consumption quintile and education level of household head given in Table 7 shows that as the education level increases, average consumption level of households increase. Illiterates, constituting 80 per cent of household heads were in the bottom quintile in rural areas and were mainly agricultural labour.

Moreover with low literacy, employment is low and hence poverty is high in the State as seen in the Table 8.

Dismal health indicators of low immunistaton, high proportion of under weight children, high Maternal Mortality Rate (MMR) etc., means most part of expenditure of the poor goes on health which is why they are at the risk of shuttling in and out of poverty. Bihar's position is lagging behind even other poor states such as UP and Orissa as shown in the Table 9.

Table 7 : Distribution of population by consumption quintile and education level of household head

Rural	50th (1993/94)						55th (1999/00)					
	Illiterate	Below Primary	Primary	Middle	Secondary	Higher	Illiterate	Below Primary	Primary	Middle	Secondary	Higher
Bottom	78.2	10.4	4.4	4.4	2.4	0.2	71.3	12.9	3.6	5.9	4.5	0.8
Quintile 2	67.0	11.4	6.9	8.0	5.2	1.4	64.6	13.7	6.5	7.3	6.3	1.6
Quintile 3	61.6	13.2	6.1	11.0	7.1	1.1	59.9	14.8	6.2	8.7	8.3	2.2
Quintile 4	50.5	13.7	8.3	13.3	11.4	2.8	50.3	15.5	8.2	12.0	12.1	1.9
Top	37.9	14.7	7.8	14.9	18.1	6.6	41.0	12.8	6.7	14.9	18.0	6.7
Overall	58.9	12.7	6.7	10.3	8.9	2.4	57.4	13.9	6.2	10.0	9.9	2.6
Mean PC exp.	196	229	235	251	278	330	354	380	401	425	470	572
Urban	50th (1993/94)						55th (1999/00)					
	Illiterate	Below Primary	Primary	Middle	Secondary	Higher	Illiterate	Below	Primary	Middle	Secondary	Higher
Bottom	52.8	16.4	6.8	13.3	8.6	2.2	57.5	16.2	9.1	7.0	7.4	2.8
Quintile 2	32.9	17.8	7.9	24.2	15.1	2.1	36.5	18.9	10.7	18.2	12.0	3.7
Quintile 3	23.5	12.1	13.4	23.1	20.2	7.8	25.9	16.8	9.4	12.8	24.6	10.5
Quintile 4	14.2	8.5	5.4	17.2	33.6	21.1	16.2	11.2	6.2	15.4	29.7	21.3
Top	6.1	3.5	5.1	11.6	35.0	38.8	4.9	3.3	3.5	4.7	36.8	46.8
Overall	25.9	11.7	7.7	17.9	22.5	14.4	28.2	13.3	7.8	11.6	22.1	17.0
Mean PC exp.	240	267	301	310	431	581	397	458	473	507	725	1013

Source : The 50th and 55th NSSO round surveys.

Table 8 : Educational attainments of household heads and occupations

Education of head	Agricultural labour	Cultivation	Regular non-farm	Casual non-farm	Self non-farm	Other	Total
50th round (1993/94)							
Illiterate	54.3	31.9	1.5	3.2	8.8	0.2	100
Below Primary	29.3	48.8	3.6	2.2	15.9	0.2	100
Primary	29.8	48.1	3.4	2.6	16.2	0.0	100
Middle	16.4	57.7	7.2	1.3	17.1	0.3	100
Secondary	9.0	59.4	15.7	1.4	14.4	0.2	100
Higher	7.6	51.3	31.0	1.0	9.1	0.0	100
All	41.9	39.9	4.1	2.7	11.4	0.2	100
55th round (1999/00)							100
Illiterate	52.8	30.2	1.1	5.1	10.7	0.1	100
Below Primary	26.2	46.0	3.4	5.1	19.2	0.0	100
Primary	22.1	53.5	4.3	4.9	14.9	0.4	100
Middle	17.9	57.7	5.6	3.1	15.0	0.7	100
Secondary	14.1	53.5	12.9	2.8	15.6	1.1	100
Higher	3.0	58.2	26.6	0.3	12.0	0.0	100
All	40.4	38.5	3.5	4.6	12.8	0.3	100

Source: 50th and 55th round NSSO surveys.

Table 9 : Health Indicators for Bihar and selected states

	Bihar	Orissa	Uttar Pradesh	India
	Infant mortality rates			
1992-931998-99	8973	11281	10087	83.368
	Child mortality rates			
1992-93	128	131	141	119
1998-99	105	104	123	95
	Other health indicators (1998-99)			
Neonatal Mortality (in terms of 10,000 deliveries)	46.5	48.6	53.6	43.4
Safe delivery (per cent)	23.4	33.4	22.4	42.3
Antenatal care (per cent)	17.8	47.3	14.9	43.8

Source : NFHS I and NFHS II.

In Bihar, the consumption pattern is dominated by food and cereals than the other States of India. The consumption pattern by the NSSO data of MPCE (Food and Non-Food) as shown in the Table 10, shows that around 65 per cent of the total MPCE in Rural Bihar is incurred on food compared to India's at 55 per cent. Though the amount of average MPCE on food is lower in Bihar, the expenditure on cereals is higher than the all-India average. So less is spent on non-food items, such as on health, education, compared to other states.

Table 10 : Sector-wise average MPCE (Cereals), MPCE (Food) and MPCE (Non-food)

Statement 4 : Sector-wise average MPCE (Cereals) MPCE(Food) and MPCE (Non-Food) for each state/UT

States & UTs	MPCE		MPCE (cereals)		MPCE (food)		MPCE (non-food)		% population having MPCE below the average MPCE*		MPCE (R) as % of MPCE(U)
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Bihar	112.98	119.51	270.26	356.01	146.85	340.26	417.11	696.27	60.3	66.0	59.9
All India	100.65	105.82	307.60	447.41	251.19	604.95	558.78	1052.36	65.7	67.1	53.1

Note: *MPCE of the state x sector MPCE(R)=MPCE(Rural); MPCE(U)=MPCE (Urban)

Source : NSS Report No. 514 : Household Consumer Expenditure among Socio-Economic Groups : 2004-2005.

Another Table of Average MPCE by household type and social group(urban) in Bihar shows that MPCE of casual labour is lower than other household types as shown in the Table 11.

Table 11 : Average MPCE by household type and social group in Bihar(Urban)

Household type	Average MPCE (Rs.0.00 of households of social group					Number of sample households of social group				
	ST	SC	OBC	Others	All	ST	SC	BOC	Others	All
Self-employed	906.36	388.44	575.87	745.42	610.39	3	66	502	186	759
Regular wage/ salaried	1845.95	769.23	859.84	1020.98	933.45	2	46	130	109	287
Casual labour	0.00	326.28	399.13	687.24	397.26	0	49	71	12	132
Other households	947.50	1723.39	791.26	804.02	917.51	1	16	106	81	204
All households	937.65	639.10	614.96	856.08	696.27	7	178	816	395	1398

Source : NSS Report No. 514: Household Consumer Expenditure among Socio-Economic Groups : 2004-05

Average MPCE for cereals, food, and non-food for major states (rural) across social groups shows inferior position of SC/ST than other social groups in rural areas. Table 12 shows that ST/SCs population have higher percentage of population below the average MPCE in Bihar in rural areas.

Table 12 : Sector-wise percentage of population having MPCE below the average MPCE (State/Sector)

States/UTs	Rural					Urban				
	ST	SC	OBC	Other	All	ST	SC	OBC	Other	All
Bihar	65.6	82.0	57.6	39.6	60.3	67.7	80.7	76.0	41.7	66.0
All India	79.6	77.4	64.1	53.3	65.7	74.3	84.0	75.4	54.5	67.1

Source : NSS Report No. 514 : Household Consumer Expenditure among Socio–Economic Groups: 2004-2005.

Similarly, in the occupational pattern, the NSSO data of distribution of rural working population of Bihar by per capita consumption quintile and principal economic activity, given in Table 13 show that agricultural labour and cultivation together accounted for around 80 per cent of occupations. The poor are generally agricultural wage workers or casual non-farm labourers. Though the wages of non-agricultural labour have increased recently, it does not reduce their vulnerability to adverse economic shocks.

Table 13 : Distribution of rural working age population of Bihar by per capita consumption quintile and principal economic activity

	Agricultural labour	Cultiva-tion	Regular non-farm	Casual non-farm	Self non-farm	Other	Total
50th round (1993/94)							
Bottom	65.6	21.8	1.1	3.9	7.4	0.2	100
Quintile 2	53.0	30.9	2.6	3.3	10.0	0.2	100
Quintile 3	43.0	40.3	2.6	2.5	11.3	0.2	100
Quintile 4	32.3	48.4	4.2	1.9	13.0	0.1	100
Top	17.5	56.3	9.5	1.9	14.7	0.1	100
Overall	41.9	39.9	4.1	2.7	11.4	0.2	100
55th round (1999/2000)							
Bottom	54.5	25.2	1.1	6.9	12.1	0.2	100
Quintile 2	51.6	29.5	1.6	5.3	11.7	0.3	100
Quintile 3	41.9	38.1	2.4	4.0	13.5	0.1	100
Quintile 4	33.5	46.0	3.2	4.5	12.8	0.1	100
Top	23.5	51.2	8.7	2.8	13.3	0.5	100
Overall	40.4	38.5	3.5	4.6	12.7	0.3	100

Source : 50th and 55th round. NSSO surveys.

Rural poverty among social groups in Bihar shows that poverty is high among weaker groups, lower castes, landless and labour households. SC/STs have the highest incidence of poverty, (59 per cent), followed by other Backward Caste (OBC) people (42 per cent), who are landless. SC/ST households are more likely to be landless than others. According to the 61st round of NSSO survey, SCs/STs constitute 33 per cent of the rural poor, Lower OBCs 36 per cent, Upper OBCs 12 per cent and Other Hindu Castes(that include Upper Castes & OBCs) 3.6 per cent, OBC Muslims 4.9 per cent, Other Muslims 4.5 per cent[8]. So particular castes, groups are more poor than others.

Poverty declines with increase in the size of holdings. Poverty is mainly in land size below 2.01 hectares and disappears above it. 56.6 per cent of the rural poor were landless in 2004-05. It shows the importance of land for removal of poverty in the State. Majority of landless were SC/STs, lower OBCs and Muslims. Large holdings are concentrated among the Upper OBCs and Other Hindu (Upper) castes)[9].

Poor have less access to basic amenities of house, drinking water, food, school and health facilities. Though overall 22.5 per cent of the rural households were living in pucca houses in 1999, yet only 8 per cent of the SC households, 2.4 per cent of the agricultural labour, 9.8 per cent of the landless and merely 1.21 per cent of SC agriculture labour and landless households were living in the pucca house (Sharma 2007) [10]. Even toilet facilities and lighting were not available in most of these households. In terms of access to food, 56.5 per cent of SC households, 66.8 per cent of agriculture labourer, 45 per cent of landless and 56.2 per cent of SC agriculture labour and landless were not getting enough food in 1999. Similarly, the literacy rate was lowest among these people and they had little access to institutional health facilities[11].

Because of poverty, the poor migrate, who belong to landless, casual labour in agriculture, SCs/STs and lower OBCs. Rural indebtedness is mainly found in SCs, agriculture labourers and landless. Three-fourths of all rural household are indebted from traditional sources, the level as high as 90 per cent in case of landless households. On an average, the rate of annual interest is about 75 per cent. Thirty per cent of all the loan is either for current consumption or meeting the high medical needs[12].

Poor own low quality livestock. The total value of livestock per household in the richest quintile is almost six times higher than that of the poorest quintile.

Unemployment is high, but poverty is low in the State. Unemployment rates according to usual status in rural areas of Bihar was 2.6 per cent in 1987-88 (43rd Round of NSS) which has increased to 16 per cent in 2004-05 (61st round of NSS) as shown in Table 14. It means low productive employment or disguised unemployment, due to lack of alternative employment opportunities.

Table 14 : Unemployment rates according to usual status (ps) and usual status (ps + ss) or usual status (adjusted) for each state and U/T

Rural

State/U.T.	Unemployment rate					
	Usual status (ps)			Usual status (adjusted)		
	Male	Female	Persons	Male	Female	Persons
Bihar	19	3	16	18	2	15
All-India	21	31	25	16	18	17

Source : NSS Report No.515 : Employment and Unemployment situation in India, 2004-05.

In rural areas there are less employed persons in non-agriculture sectors than agriculture sector, which is why they have to cling to agriculture sector, showing less of unemployment, though this is a case of distress job condition.

Table 15 shows employment according to usual, current weekly and current daily statuses for states in which Bihar has lower than all India figures and other prosperous states.

Table 15 : Number of persons in the labour force per 1000 persons (LFPR) according to usual, current weekly and current daily statuses for each state and UT

Rural

State/U.T.	Male				Female				Persons			
	Usual status		Weekly status	Daily status	Usual status		Weekly status	Daily status	Usual status		Weekly status	Daily status
	ps	ps+ss			ps	ps+ss			ps	ps+ss		
Bihar	478	486	483	468	88	138	118	89	292	320	309	287
All-India	546	555	545	531	249	333	287	237	401	446	418	387

Source : NSS Report No. 515 Employment and unemployment situation in India, 2004-05.

Even employment by category of employment shows least regular employees among all other states. But self-employed persons are higher here than many states. Even casual labour persons are high here showing temporary nature of work and vulnerability to slipping in and out of poverty as shown in the Table 16.

Table 16 : Per 1000 distribution of usually employed by category of employment for different states and UTs

Rural person

State/U.T.	Usually employed					
	Principal status			Principal & subs. status		
	Self-employed	Regular employees	Casual labour	Self-employed	Regular employees	Casual labour
Bihar	601	29	370	602	27	371
All-India	573	78	350	602	71	328

Source : NSS Report No. 515 : Employment and Unemployment situation in India, 2004-05.

So along with high aggregate poverty compared to other states, even non-economic dimensions show acuteness of the poverty in the State. And most importantly some groups are more poor than the rest of population. The poor are mainly SC/ST, lower OBCs, Muslims, landless, agricultural labourers, mainly casual labourers.

So the major cause of rural poverty in Bihar is slow agricultural growth, lack of land, lack of non-farm growth, infrastructural bottlenecks, caste and class dominance, lack of human resource development in health, education etc.

AGRICULTURAL DEVELOPMENT, AGRARIAN RELATIONS AND RURAL POVERTY

In seeking to analyse the relationship between agricultural growth and poverty, agricultural growth figures for Bihar are compared with poverty ratio of the State as shown in the Table 17.

Table 17 : Relationship between agricultural growth and poverty

Period	Annual Average Rate of Exponential Agricultural Growth in Bihar	Period	Annual change in percentage of population BPL (based on URP estimates) in Bihar		
			Rural	Urban	Total
1950-51 to 1964-65	2.5				
1969-70 to 1989-90	1.6	1983-84 to 1987-88	-4.05	0.89	-1.51
1989-90 to 1995-96	2.8	1987-88 to 1993-94	0.07	-6.03	-2.94
1990-93 to 1996-99	3.3	1993-94 to 2004-'05	-2.3	-0.58	-1.59

Source : (1) CSO, GoI, triennium average (2) For 1990-93 to 1996-99, Area and production of principal crops in India, Ministry of Agriculture, GoI (3) Same as in Table 3 for poverty figures.

Table 17 shows that in the post-Green Revolution period of 1969-70 to 1989-90, agricultural growth in the State decreased to 1.6 per cent. Corresponding poverty figures of 1983-84 and 1987-88 show high rural poverty rates of 64.7 and 54.2 per cent, respectively, though the poverty declined annually by 4 per cent approximately. With an improvement in agricultural growth rate to 3 per cent approximately in early 90's, poverty infact increased to 56.6 per cent in 1993-94. Again in 2004-05 rural poverty though declined by 2.3 per cent, still stands at a staggering 42.2 per cent compared to India's poverty declining to 28.7 per cent in the same year. So the trickle down effect of agricultural growth appears limited in removing poverty.

The level of agricultural productivity measured by NSDP and poverty figures (Headcount URP) as shown in the Table 18 again shows weak link between high agricultural growth from mid-90's and low decline in poverty in Bihar as against strong relation for Punjab and Haryana. Even Kerala shows weak link of decline in poverty against declining agricultural productivity. It means there are other reasons for this weak link.

According to Datt and Ravallion 1998[13], Todaro and Smith 2003[14], Aghion and Aghion 2006[15], Mehra 1976[16], significant decline in poverty during 1960-'80 for all India has been attributed to Green Revolution. But after the weakening of Green Revolution impact, still the decling trend in poverty during 1980's and 1990's for all India has been attributed by some scholars to sustained productivity growth in the manufacturing sector.

The agricultural productivity in Bihar measured by value added in agriculture per hectare of Net Sown Area (NSA) as shown in the Table 19 is far less developed than the

Table 18 : Relationship between Trend Growth Rate in NSDP Agriculture and Poverty Ratios in different states in India

States	Rural Head Count Poverty Ratio (URP; Official Poverty Lines)				Trend Growth Rate in NSDP Agriculture at 1993-94 Prices	
	1983	1987-'88	1993-'94	2004-'05	1984-85 to 1995-96	1995-96 to 2004-'05
Bihar	64.7	54.2	56.6	42.2		2.82
Haryana	21.9	15.3	28.3	13.6	4.60	1.98
Punjab	14.3	12.8	11.7	10	4	2.16
Kerala	39.6	29.3	25.4	13.2	3.60	-3.54
All India	46.5.	39	37.2	28.7	3.62	1.85

Source : (1) 2004 poverty estimates are calculated from grouped data from NSSO Report No. 508. Estimates for 1983, 1987-88 and 1993-94 are calculated from the unit level data, respectively.

(2) State Domestic Product (State series), CSO, GoI, New Delhi[12], various issues (available at www.mospi.nic.in/mospi-cso-rept-pubn.htm.)

(3) Agricultural statistics at a glance, Ministry of Agriculture, GoI, New Delhi.

agriculturally developed States of Punjab and Haryana which explains that with majority of workforce employed in agriculture in Bihar, the per capita income in agriculture is declining.

Low share of Bihar in country's annual foodgrains production at 6.3 per cent, compared to its share in population at 8.09 per cent, also explains the indifference of poverty in the State to rising agricultural growth.

State expenditure, food price, initial conditions of physical and human infrastructure of irrigation, female literacy and

Table 19 : Level of aggregate productivity in various states

State	NSDP Kg/Ha NSA at Current Prices		
	1984-85 and 1985-86	1994-95 and 1995-96	2003-04 and 2004-05
Haryana	6672	26604	48154
Punjab	8467	35417	66864
Bihar (New)		18622	28915
BIhar (Old)	6654	18743	32654
All-India	4973	17763	34349

Sources : (1) State Domestic Product (State Series), Central Statistical Organisation, GoI, New Delhi, various issues (available at www.mospi.nic.in/mospi_cso_rept-pubn.htm)

(2) Agricultural Statistics at a Glance, Ministry of Agriculture, GoI, New Delhi.

health, public investment in agriculture, irrigation, credit availability, marketing, R & D, adequate pricing and incentives for private investment, power consumption, fertiliser usage, cropping intensity are other vital constraints for the State explaining the low trickle down.

Low integration of agriculture and industry in the State, given the fact that Bihar is the second largest producer of vegetable and fourth in the production of fruits in the country, also shows the ineptness of the State to exploit the potential.

Disguised unemployment in the State, though showing low open unemployment, leads to low productivity in the agriculture sector thereby perpetuating poverty.

Dependence on non-institutional sources of credit, charging exorbitant rates of interest against low returns from crop cultivation in Bihar along with other infrastructure bottlenecks makes farming non-viable. Narayana Moorthy (2007)[17] is also of the view that unless price realisations from agriculture do not improve, farmers would not adopt the modern technology in cultivation. So agriculture will remain backward leading to low trickle down.

Further, the relationship between agrarian relations and poverty is analysed, since Bihar is basically an agrarian economy.

Landholding pattern in Bihar (NSS) shows that as the size of land increases, poverty decreases, as shown in the Table 20, 75 per cent of the rural poor were landless or near landless in 1999-2000 which increased by 8 per cent since 1993-94, which explains the high poverty in the State.

Table 20 : Rural poverty incidence and shares by land ownership in Bihar

Land owned (ha)	50th round (1993/94)			55th round (1990/00)		
	% of rural population	Poverty incidence	% share of the poor	% of rural population	Poverty incidence	% share of the poor
No land	9	51	12	10	56	14
0<*<=0.4 ha	43	51	55	53	46	61
0.4<*<= 1 ha	24	34	20	20	29	15
1<*<=2 ha	15	28	10	10	30	7
2<*<=4 ha	7	18	3	4	16	2
>4 ha	3	6	0	2	18	1
Overall	100	40	100	100	40	100

Note : Poverty is defined as per capita consumption rank <40 per cent.

Source : The 50th and 55th round NSSO surveys (Schedules I & II).

Percentage change in number and area of operational holdings (Agricultural Census 1970-71 and 1980-81), shows increase in the number of small farm holdings though it may be due to lack of alternative non-farm employment opportunities and are mainly unviable. Moreover, with such large number of small farmers of 83 per cent constituting just 41 per cent of land area points to the iniquitous agrarian structure of Bihar's rural economy. Productivity on these farms is low and hence the income is less. Majority of them live below the poverty line. To make them viable, farm and non-farm employment opportunities must be expanded.

Percentage distribution of category of farmers and landholding operated in Bihar (CMIE) shows that the area and number of various categories of farmers is highly skewed and do

not match with the area operated by them. Increasing marginalisation of holdings which are unviable for agricultural production has perpetuated poverty. Marginal landholders employing agricultural labour and casual non-farm labour are likely to be poor.

Further, due to absence of security of tenure and exploitative system in the division of harvest, the tenants are not interested in increasing the quantity or quality of the produce. Poverty has declined significantly in states such as Kerala and West Bengal, where tenancy legislations were implemented successfully.

Even in the ceiling reforms, very low percentage of surplus land acquired to cultivated area at 1.26 per cent is quite insignificant to pull the landless poor above the poverty line. Gross inequality is seen in land occupancy in the State, 547 big landholders occupy 2.9 lakh acres of land (Jagdish Prasad, 2007)[18].

Land consolidation was a major factor for agricultural development and consequent reduction in poverty in Punjab. But low land consolidation and that too done in an inappropriate manner made it a fruitless effort.

Thus, it is the iniquitous agrarian relation that has not led to the improvement in the condition of small and marginal farmers working on unviable land and hence the poverty debacle.

Table 21 : Benefit incidence from public employment programmes for rural households, 2004-'05

S.No.	State	Benefit incidence (%)						
		Extremely poor	Poor	Transient	All Poor	Rank	Not Poor	Total
1	Andhra Pradesh	2.3	8.1	5.1	5.5	5	3.5	4.0
2.	Assam	12.0	5.3	2.8	4.7	7	0.6	2.3
3.	Bihar	0.0	0.5	0.1	0.3	16	0.4	0.3
4.	Gujarat	7.8	10.5	2.7	6.2	4	1.1	2.7
5.	Haryana	0.0	0.0	2.3	1.2	12	0.8	0.9
6.	Himachal Pradesh	0.0	3.0	0.8	1.4	11	0.5	0.7
7.	Karnataka	2.5	2.1	0.3	1.2	13	0.3	0.6
8.	Kerala	0.0	0.0	0.2	0.1	18	0.0	0.0
9.	Madhya Pradesh	2.0	3.6	0.9	2.2	10	1.4	1.8
10.	Maharashtra	2.5	2.5	5.5	3.8	8	4.9	4.4
11.	Orissa	17.8	11.4	4.9	11.5	3	2.1	8.2
12.	Punjab	0.0	0.1	0.0	0.0	19	0.1	0.0
13.	Rajasthan	17.3	18.4	14.3	16.1	2	9.8	12.0
14.	Tamil Nadu	0.0	0.2	0.4	0.3	17	0.2	0.2
15.	Uttar Pradesh	0.8	0.6	0.2	0.5	15	0.2	0.3
16.	West Bengal	2.9	1.8	2.4	2.3	9	2.5	2.4
17.	Chhattisgarh	11.0	5.3	2.2	5.3	6	5.6	5.4
18.	Jharkhand	1.7	0.7	0.5	0.9	14	0.3	0.6
19.	Uttaranchal	18.0	20.3	10.6	16.3	1	5.9	11.7
20.	All India	5.0	3.8	2.7	3.5		2.2	2.7

Source : Estimated from NSSO 61st Round Sch. 1.0.

AN IMPACT EVALUATION OF POVERTY ALLEVIATION PROGRAMMES

In this section impact of various poverty alleviation programmes on poverty has been analysed.

In terms of Benefit incidence from Public Employment Programmes for Rural Households (2004-'05) (which gives some information on the participation of households in selected public programmes like Public Works Programme, Integrated Child Development Scheme, the Mid-day Meal Scheme and the Public Distribution System) through 61st Round of the NSS by Ravi Srivastava (2007)[19] as shown in the Table 21, Bihar holds a rank of 16 out of 19 states, showing a low benefit at just 0.3 per cent. Non-poor have mainly benefited from the programmes, thus increasing the incidence of poverty in Rural Bihar.

Further, the Comparative Performance Index of Public Employment Programme for rural poor households by Ravi Srivastava (2007), (which is the ratio of the percentage of beneficiary households in the State to total beneficiary households country wide and the

Table 22 : Comparative performance index of public employment programme for rural poor households

S.No.	States	% distribution of fund allocated for food for work scheme by state	% distribution of poor HH benefited from by state for work	Comparative Index	Rank
1.	Andhra Pradesh	6.26	7.61	1.22	6
2.	Assam	5.68	3.81	0.67	12
3.	Bihar	13.53	0.94	0.07	18
4.	Gujarat	2.05	5.49	2.68	4
5.	Haryana	0.14	0.40	2.79	3
6.	Himachal Pradesh	0.16	0.15	0.99	9
7.	Karnataka	1.50	1.43	0.96	10
8.	Kerala	0.28	0.04	0.13	16
9.	Madhya Pradesh	8.10	4.62	0.57	13
10.	Maharashtra	7.94	8.65	1.09	7
11.	Orissa	11.42	22.60	1.98	5
12.	Punjab	0.37	0.01	0.03	19
13.	Rajasthan	1.81	19.07	10.54	1
14.	Tamil Nadu	2.49	0.44	0.18	14
15.	Uttar Pradesh	13.52	2.28	0.17	15
16.	West Bengal	5.87	5.86	1.00	8
17.	Chhattisgarh	5.33	5.07	0.95	11
18.	Jharkhand	11.58	0.96	0.08	17
19.	Uttaranchal	0.52	5.11	9.84	2
	All India	100.00	100.00	1.00	

Source : Ravi Srivastava (2007), 'Performance of Anti – Poverty Programmes in Indian States: Identifying the Achilles' Heel'.

percentage of Central allocation to the State to total Central allocation for the programme) as shown in the Table 22, shows yawning gap between the fund allocated and household benefited on food for work scheme showing corruption in the implementation of programmes meant for alleviating poverty. Concurrent Evaluation of the IRDP, a Self- Employment Programme done in 1996 revealed that though IRDP was successful in increasing income of the poor, the number of households able to cross the poverty line was relatively small.

Ministry of Rural Development(MoRD) survey shows improper selection of beneficiaries, low quality of assets and lack of monitoring in Bihar. Even the findings of Department of Rural Development(DoRD) survey are similar to MoRD survey (Sharma'95)[20].

Other independent researches eg, by Jean Dreze (1990)[21], Committee constituted by Planning Commission (1997) under Hashim, Member, Planning Commission, also points to the flaws in the implementation of IRDP.

SGSY, merging all of the earlier self-employment programmes, was launched in 1999.The'Living Conditions Household Surveys' 1998 (LCHS)[22], shows mistargeting of the programme, low investment per beneficiary (Papola 2003)[23] limits the poor from crossing the BPL.

Study of Wage Employment Programmes by Verma et al 1987[24], Kumar 1993[25], 'The LCHS,1998',Concurrent Evaluation on JRY, show mistargeting, low employment, wages and quality of assets. SGRY, integrated all rural wage employment programmes into one in 2001 but still the flaws continued. NREGA is the latest wage employment programme implemented in 2005. State-specific indicators show low employment generation of only 8 days in Bihar compared to 77 days for Rajasthan. Other flaws are low participation of women in the programme. There is varying district level performance with employment generation per rural household being just one person day in Madhubani in Bihar as against a high of 111 days in Dungarpur district of Rajasthan[26].

PDS/TPDS reported high leakages. BPL grains are sold in the black market (Mooij 1999)[27]. According to 1998 LCHS, a large number of rich households used the TPDS. Households from the top two consumption quintile grabbed 24 per cent of the eligible household list. Benefit Incidence from the PDS/TPDS for Rural Households in 2004-05 by Ravi Srivastava ranks Bihar at 18 out of 19 states.The benefit incidence in PDS for the poor is 2.4 per cent for Bihar (UP-88.7 per cent), and in TPDS is 1.8 per cent (Tamil Nadu – 88.5 per cent). Further, in the Comparative Performance Index of TPDS for rural poor households by Ravi Srivastava, the percentage distribution of poor households benefited from PDS by State is as low as 0.8 per cent compared to 20.24 per cent for Rajasthan. It shows corruption in the schemes implemented for poor that prevent the benefit flowing to the poor. Radha Krishna et al's (1997)[28] study shows low welfare gains from PDS by the poor and cornering of benefits mainly by the non-poor. Impact of PDS by using NSSO 55th Round (1999-00) data on income gain for the poor shows low income gains of only 1.08 per cent of the total monthly per capita expenditure for poor in Bihar. The effect of PDS on poverty is very less at an average of 2.38 per cent for the country as a whole.

Antyodaya Anna Yojana benefited mainly middle and big peasants and landlords and not the poor (study by ILO and AN Sinha Institute of Social Studies, between 1981 and 1983).

Benefit Incidence from ICDS scheme for Eligible Rural Households from 61st round of NSS Consumption Expenditure (Ravi Srivastava 2007) shows low coverage in the State at a bare 0.7 per cent among all households (of Extremely poor, Poor and Transient), with a child less than 6 years. Further, in the Comparative Performance Index of ICDS programme for rural households (Ravi Srivastava 2007), only 0.89 per cent of eligible All India Poor households were benefited from ICDS in the State.

Benefit incidence from the Midday Meal Scheme for all eligible rural households (Ravi Srivastava 2007) shows lowest coverage in Bihar at 17.4 per cent in 2004-'05 for all poor households with the highest in Tamil Nadu at 86.2 per cent. Non-poor have equally benefited in Bihar.

Even Social Security Programmes-National Social Assistance Programme(NSAP) reveals low levels of physical achievements (by Operations Research Group)[29].

Thus, the various evaluation studies of poverty alleviation programmes point to the fact that these programmes have proved a sham for Bihar, thereby having little effect on the poverty of the State. The reluctance with which the programmes are implemented, inordinate delays, bureaucratic hassles, lack of transparency, corruption in departments, misallocation of funds etc. have led to little benefits for the poor, for whom the programmes are implemented. The cornering of benefits of programmes mainly by the non-poor has led to increasing the incidence of poverty in Rural Bihar.

Conclusion and Policy Implications

To conclude, since poverty has multi-dimensional aspects, the panacea for the problem of poverty is also multi-dimensional. According to Joseph E Stiglitz, winner of Nobel Prize in Economics in 2001, "Governments can enhance growth by increasing inclusiveness"[30]. According to Martin Ravallion, "High inequalities in access to opportunities such as education, credit, patterns of public spending etc. can undermine the growth process itself and hence retard progress against poverty"[31]

In Bihar, since majority of the population are dependent on agriculture, agricultural growth is very important for the State. Directly targeted programmes should also be emphasised for the small and marginal farmers, landless, unskilled lower castes and groups.

Agricultural productivity must be enhanced through the introduction of large scale irrigation, increased use of genetically modified crops, multiple cropping , water management, improved agricultural practice, new ITC based marketing infrastructure that integrates markets, makes price discovery more efficient and reduces intermediaries between the cultivator and the market. Thus, by enhancing productivity and providing gainful employment opportunities for the rural poor, poverty can be reduced in the State. Punjab's decline in rural poverty through agricultural development is exemplary. This happened due to increase in agricultural productivity leading to increase in income of farmers and of agricultural labourers. Agricultural growth in Punjab led to direct expansion of employment in agriculture and allied sectors and indirect expansion of employment in other sectors of the economy due to rise in wage rates.

Crop diversification to commercial crops, livestock, dairy, poultry, fishery, sericulture, mushroom cultivation apiary etc. will generate additional income and employment, lead to optimum use of resource and minimisation of risk and uncertainties associated with only crop production.

Majority of farms in the State are small operated by family members for labour is excessive. New technology while land saving is capital intensive, which is lacking with the majority of small and marginal farmers. So the appropriate small farm technology need to be adopted which is labour intensive and capital saving.

To make farming viable, MSP and agricultural insurance need to be increased, agricultural research and development should be promoted, cooperatives should be formed; removal of infrastructural, technological and institutional bottlenecks. Bihar can tap its advantageous position in fruits and vegetables for agricultural export ,for Bihar (undivided) is the second largest producer of vegetables and fourth largest producer of fruits. In fruits, litchi, mango, banana, papaya, guava, water melon are significantly produced in Bihar. Similarly, in vegetables, potato, onion can be exported. Other

commodities having export potential are makhana, products from sericulture, floriculture, animal husbandry etc. Though small farms predominate in Bihar, but by forming cooperatives they can be made viable for these purposes. But before that infrastructural, technological, institutional (post-harvest operations and processing of fruits and vegetables) bottlenecks need to be removed to attract the corporate into contract farming arrangements with small farmers, to facilitate efficient production for meeting domestic demand and export ends.

Major subsidies to agriculture are fertiliser, irrigation and power. Subsidies on fertilisers should continue to increase productivity of crops. Irrigation and power facilities should be efficiently provided. Bihar has plenty of water reserves which can be harnessed to irrigate its needy land. Substantial public investments in canal-based irrigation, flood control, drainage and minor irrigation are needed. The participatory irrigation management approach in Bihar is worth emulating, where irrigation management is taken by the water users themselves instead of by the public sector. This has shown that irrigation services can be significantly expanded and yields increased at lower unit cost to both communities and the government. Erratic power supply is a major stumbling block in proper use of irrigation facilities, which need to be provided on cheaper rates. Investment in the power sector is important to enhance its capacity and efficiency. Power sector reforms is one of the primary responsibilities of the government. New power generation facilities should be established and transmission losses should be reduced through active community participation. Besides rural electrification should be stepped up. Hydro power potential of Bihar – Nepal need to be harnessed by Central endeavour.

Effective use of land, land management policies and incentives for land development would enable more land to be put to optimum use. Substantial proportion of waterlogged areas in Bihar can be reclaimed for cultivation by proper drainage. Groundwater development and control of flood in North Bihar, while development of both surface and groundwater irrigation in South Bihar need to be done for water resource development.

Huge investments in infrastructure sectors of roads and communication, marketing and processing facilities, power and water supply, service infrastructure, input supply system are needed. According to Swaminathan S. Anklesaria Aiyar, mere increase of subsidies won't improve the lot of poor for it mainly goes to non-poor, instead the provision of infrastructure will lead the rural India to take off. Besides public investment, PPP need to be undertaken in all sectors of economy. High quality all weather (pucca) roads must be developed with mechanised techniques which helped in developing Punjab as well. S. S. A. Aiyar has vehemently emphasised the importance of good all weather roads and telecom in connecting rural areas to cities and towns. In his words, "I have long argued that rural areas need, above all, connectivity to reduce poverty and stimulate growth in rural areas. The cities have been connected to the global economy and have taken off. Do the same for rural areas and they will take off too. Today, alas many villages are not even connected by road or telecom to the closest town, let alone the world"[32]. He further says that," Economist Ashok Gulati states that studies by IFPRI (International Food Policy Research Institute) in China, Vietnam and some African countries point to the same conclusion – rural roads do more for growth and poverty mitigation than virtually anything else."

Similarly, agricultural marketing needs to be strengthened for eg. in West Bengal, where the Finance Minister of the State announced formation of a new marketing corporation for agricultural products in the State in 2008. The plan is to have the corporation decentralised procurement of farm produce directly from farmers with the help of local Self-Help Groups (SHG) with support of panchayats and municipalities and sell them through retail outlets across the State to eliminate multiple

layers of intermediaries that currently exist between the farmer and the end consumer. Further, regulated future markets can bring higher and assured returns to the farmers and better prices for consumers. Efficient Marketing Cooperatives can play a significant role in aiding the small and marginal farmers in assessing the market and credit for selling their produce and freeing them from exploitation of private marketing agencies/ individuals.

Access to institutional credit by the poor will free them from the exploitative traditional sources of lending. Grammen Banks' of Bangladesh is worth emulating. These banks working since 1976, serving 5 million clients and most of them being illiterate, have helped reduce poverty in Bangladesh by 20 per cent and even beggars in rural areas there have been given employment. NGOs have worked wonders there in reproduction rates, literacy rates and in the HDI. Mohammad Yunus, the Nobel prize winner of Bangladesh, the micro-finance expert, says how he has made 6000 beggars self-employed on giving just a loan of Rs. 350 by Grameen banking. In the last two years preceding 2007, by working with 85000 beggars, he has stopped 6000 beggars from begging. Micro-finance Institutions, micro credit need to be strengthened and regulated by the State.

The government should aim at reducing the dependence of farmers on subsidies and loan waivers but help in capacity building and training programmes on the basis of which they are able to take informed and calculated choices and decisions. Tie-ups with international training organisation in order to provide farmers training to carry out hi-tech and high value farming need to be explored.

According to Abhijit Sen, economist and Planning Commission member, a good extension network can bridge the huge gap between what is produced on research stations and demonstration fields and the average actual production.

Agrarian reforms are needed to make technological development in agriculture and make full utilisation of resources for development. Most of the holdings in Bihar are marginal and small holdings, which are economically unviable with limited resource base of the farmers. So land reforms are essential to make them viable. But land reforms in Bihar is still half baked. Consolidation of landholdings, computerisation of land records need to be pursued. Besides vast tracts of land remain unused. For that ceiling of land need to be reinitiated on an urgent basis to solve the problem of landlessness (land hunger) on the one hand and make effective use of large tracts of land on the other hand.

According to M.S. Swaminathan[33], in China, Government helped small farmers to produce more per unit of land and thereby increase their marketable surplus and cash income and by shifting millions of farmers to the Township-Village Enterprises (TVE) designed to provide opportunities for remunerative non-farm work. These TVEs have become major outsourcing hubs in the manufacturing sector. So according to him, attention needs to be paid to integration of agriculture and industry. He further says, that to assure reasonable income to small farmers, the number of people engaged in farming should be brought down to one-third of our population by 2020 from the present 60 per cent. This is why the National Commission on Farmers recommended a well planned and economically viable non-farm employment initiative. On the one hand, technological upgrading of small farm agriculture through the application of new technologies like space, information, nuclear and biotechnologies, should be achieved and on the other, relevant industrialisation including small scale industries in the manufacturing sector should be promoted. Landless labourers and small farmer families must be trained in modern scientific agriculture. The aim should be to enhance productivity per unit of land, water, labour and capital so that small producers have greater cash income.

Agri-business ventures which have both the technological and financial base, have sufficient potential as export earnings as well.

For example, the recent venture of ITC into edible oil production with an impressive performance in sunflower cultivation, to production and marketing of edible oil, can be replicated in other areas as well like in the production of biofuels from maize and sugarcane cultivation, food processing industries from mango, litchi, banana, makhana.

Rural poor women's employment and empowerment makes a substantial difference in ameliorating their lot and hence in their upliftment from BPL. *Kudumbashree* project in Kerala is a successful scheme in which women from BPL families can voluntarily take its membership and then attend weekly meetings where they are exposed to various enterprise opportunities. It has 33.84 lakh families networked into 1.68 lakh neighbourhood groups that are federated into 14,547 area development societies and 1,050 community development schemes. It is a State government initiative scheme run with the efficiency of a private organisation but manned entirely by government employees. It can be replicated in Bihar as well.

Agro-based industries, eg. of fruits, vegetables, maize, sugarcane, dairy, paddy, pulses has immense potential as revenue earner both domestically and globally. Labour intensive SSI, tourism industry need to be promoted.

Kiran Karnik[34], former president of NASSCOM has opined that technology can provide information related to commodity prices, transportation, agricultural practices, weather to the farmer easily and speedily either at a village computer kiosk or on a mobile handset.

Job oriented education, vocational courses, investment in school infrastructure, increase in quality of secondary and higher education, provision of technical institutes is an investment in HRD which enhances skills. As the level of education increases poverty decreases.

Public Health System need to be improved so that poor can have access to them at cheaper cost.

Poverty Alleviation programmes must be effectively implemented. Moreover, local government organisations must be adequately represented by the women and the landless for ensuring effective delivery. Multipronged steps need to be taken for better implementation of various PAPs. Earnest endeavour of the politicians, governance at the grassroots, mobilisation of the masses and ensuring accountability and fulfilment of targets by monitoring, evaluation, quality control and strict actions against any fraud need to be amalgamated for alround results.

Social Audit of NREGA has a strong empowering effect by enhancing awareness of entitlements under the Act and make the beneficiaries assertive of their rights and keep officials on their toes. It has reduced corruption in Andhra Pradesh, Rajasthan and some other states.

Programmes for special groups and castes should be given priority for targeting the poor. Bureaucracy should be made more accountable. Governance is the basic problem impeding development pace of the State. Governance reform is crucial for the alround social and economic development with equity. Administration should also be revamped by separating administration and development works. Physical verification and monitoring of the schemes should be given more stress as it will bring out the lacunae of the schemes. Offices at the grassroots level should be computerised and directly linked to the concerned state department for proper vigilance and direct contact with persons. Red tapism must be removed and there should be transparency in devolution of funds to panchayats. Decentralisation, social development and modernisation of law and order machinery are other steps that should be taken to address governance problems in Bihar. Training, capacity building schemes and incentives should be provided to make the bureaucracy effective on the one hand and on the other hand punitive measures against the bureaucracy should be taken to make them

accountable in case found guilty. IT enabled services and e-governance can bring transparency in government functions.

The image of the State is marred by the legacy of non-development, corruption, crime, lawlessness, backwardness and caste wars for the last several decades. This image needs to be broken. The past wrongs need to be corrected by the State, by breaking the shambles of caste, crime and corruption and instead project itself as willing to embrace change, consistency and confidence. This will attract private investments and knowledge. Moreover, government can play an active role in creating the right milieu, for attracting private sector investment in agriculture and industrial sector. It should provide incentives to attract entrepreneurs and simplify procedures for speedy clearance of projects.

Still, according to the Planning Commission, only Rajasthan and Madhya Pradesh have come out of the BIMARU bracket in 1991, a term coined by an economist, Prof. Ashish Bose in 1970s for Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh, which means like Sub-Sahara Basket case.

Winds of change have started flowing. Tides of turnaround are surging in contemporary Bihar. Saplings of development have been planted in the State. By upholding the rights of the downtrodden, neglected castes and groups, the longstanding citadels of caste and group dominance in the State will crumble down in the years ensuing. With renewed stricter governance reforms, the bureaucratic bastions of power, pelf and plunder will be undermined. For all this to happen, a catalytic change in the political will power is essential.

According to Peter Bauer, the development economist, it is policy not poverty that keeps people poor.

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