

# Magnitude and Incidence of Agricultural Indebtedness in Bihar

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## Abstract

In Bihar, the inadequate saving and poor access to institutional credit institutions, the majority of farmers rely on non-institutional credit. In Bihar the proportion of indebted farmers increased but the institutional indebtedness declined and non-institutional indebtedness increased in Bihar. With regard to farm size-wise indebtedness (institutional and non-institutional) revealed that the majority of marginal farmers (86.9%) are indebted which declines with the increase in the farm size. Agricultural loans granted by commercial banks also increased from ₹ 325 crore to ₹ 1916 crore during the period however, their share in total institutional agricultural credits in Bihar increased from 59.31 per cent to 64.19 per cent during the last 7 years. The performance of the co-operative has not been satisfactory since its agricultural credit portfolio increased by about two fold and its share in agricultural credit flow declined from 26.64 per cent in 2001 to 9.11 per cent in 2006-07.. Per hectare agricultural loan disbursement increased from ₹ 882 in 2000-01 to ₹ 4814 in 2006-07 in Bihar whereas it increased from ₹ 3386 to ₹ 11363 at national level during the period (Table 10). Despite the best efforts the institutional financing agencies could provide per hectare quantum of loan in Bihar in 2006-07 which was achieved at national level in 2002-03. The agricultural loan is not only inadequate but there is skewed disbursement of loan in different agro-climatic zones of Bihar. Analysis of Agricultural credit data revealed that the Growth in agricultural credit was higher in Bihar (31%) than the corresponding growth achieved at national level (26%) during 2001-02 to 2006-07. It was mainly due to lower base of agricultural credit for Bihar.

**Keywords:** Indebtedness, Institutional credit, Non-Institutional credit, Agriculture, Bihar

Bihar has a large agrarian economy of ₹ 250 billion with more than 80 per cent of rural population subsisting directly on farming. Agriculture contributes about one-third to state domestic product and provides employment to more than three-fourths of working force. There has been some spatial variation in agricultural credit disbursement in the country, in general and in the state of Bihar in particular. The financial requirement of farmers has increased manifold due to adoption of modern technologies; particularly for cultivation of winter maize, medicinal

and aromatic plants, potato, fruits ,vegetables etc. in Bihar (Haque, T. and Maji, C.C. (1978). Our main issue of analysis of agricultural credit flow in Bihar, the inability of institutional rural credit system has been the main cause of the continued dependence of farmers on non-institutional credit and the inability of marginal and small farmers to obtain timely and adequate institutional credit. Hence an increased institutional credit flow is essential for faster agricultural development but rural financing market development is a complex process.

## Methodology

The study is based on secondary data which were collected from State level Banker's Committee, Patna National Bank for Agricultural and Rural Development, Patna, Department of Institutional Finance and Programme Implementation, Patna, Reserve Bank of India, Patna, Bihar. Data related to agro-economic and social variables were collected from Directorate of Agriculture, Directorate of Statistics and Evaluation, Bihar State Electricity Board, Census Office, Patna, Bihar and Publications like Economic Survey of Bihar, Bihar at a Glance, State credit plan, Bihar. The study is based on time series data of Bihar for a period of 25 years that is from 1980-81 to 2005-06. Functional analysis will be based on cross-sectional data of the year 2005-06 since district wise loan was available for this particular year only. Analysis is based on secondary information obtained from NSS reports and development departments of the state. An attempt has also been made to draw relevant conclusions through tabular analysis.

## RESULTS AND DISCUSSION

### Incidence of indebtedness in Bihar

The incidence of indebtedness is studied in two ways; firstly on the basis of agencies that has provided credit and second by incidence of indebtedness on the basis of size of land.

### Incidence of indebtedness on the basis of credit providing agencies

Among major states in India, about 74.55 per cent of loans obtained by farmers in Bihar is granted by non-institutional financing agencies against, 35.84 per cent in Orissa, 49.67 per cent in H.P., 58.70 per cent in Uttar Pradesh and 53.62 per cent at national level in the year 2003 (Table 1). In Bihar, about 74.55 per cent of outstanding loans of farmers is granted by non-institutional agencies, constituting 33 per cent from professional money lenders. The high indebtedness to money lenders may be an important reason for their indifferent attitudes towards lending from institutional agencies which results in low investment leading to low productivity in Bihar. Due to inadequate saving and poor access to institutional credit institutions, the majority of farmers rely on non-institutional credit in Bihar. In

Bihar the proportion of indebted farmers increased but the institutional indebtedness declined and non-institutional indebtedness increased in Bihar. Among the indebted farmers, non-institutional loans constituted 40.3% in 1991 which increased to 74.6 per cent in 2003.

**Table 1: Incidence of indebtedness to institutional and non-institutional agencies in for rural area for major states**

State	Institutional		Non-institutional		% of non-institutional to total indebtedness	
	1991	2003	1991	2003	1991	2003
Bihar	9.4	5.7	7.1	16.7	43.03	74.55
M.P.	15.1	15.2	7	15	31.67	49.67
Orissa	18.5	17.9	6.2	10	25.10	35.84
T.N.	16.7	13.9	18.7	21.3	52.82	60.51
U.P.	12.5	10.2	7.7	14.5	38.12	58.70
West Bengal	20.6	12.1	7.6	11	26.95	47.62
India	15.6	13.4	9.8	15.5	38.58	53.63

*Sources: Household indebtedness in India, NSS 59<sup>th</sup> report 2005 and Indebtedness of rural households, Debt and Investment Survey NSS 49<sup>th</sup> report 1992, National Sample Survey Organization, Ministry of Statistics and Programme implementation, Govt. of India.*

During 1991-2003, non institutional indebtedness increased in almost all the major states but it is less in Madhya Pradesh, Orissa and West Bengal, whereas institutional indebtedness was less in Bihar (5.7%) than all the major states.

### Incidence of indebtedness on the basis of size of holding

An analysis of farm size-wise indebtedness (institutional and non-institutional) revealed that the majority of marginal farmers (86.9%) are indebted which declines with the increase in the farm size that is; 9.2 per cent on small farmers, 2.8 per cent on semi medium farmer (2.4 ha) and less than 1.00 per cent on medium and large size of farm households

in Bihar (Table 2). Incidence of indebtedness is, no doubt, comparatively low in Bihar than incidence of indebtedness in the major states in India but the larger proportion of marginal farmers are indebted

in Bihar than that of other states in the country. An effort has been made to analyse the purpose for indebtedness by categorizing purposes broadly in two categories i.e. productive and non-productive.

**Table 2: Incidence of Indebtedness based on land size in major states of India**

State	% of indebted Farmer Households				
	Marginal (<1 ha)	Small (1 to 2 ha)	Semi-Medium (2 to 4 ha)	Medium (4 to 10 ha)	Large (>10.00 ha)
U.P.	71.3	17.4	7.8	3.4	0.3
Maharashtra	36	26.2	23.3	12.2	2.4
M.P.	33	27.1	23.1	13	3.9
Rajasthan	43.9	19.8	17.8	14.1	4.5
Karnataka	50.7	22.8	15.9	9.3	1.2
A.P.	55.7	21.8	15.1	6.6	0.7
Bihar	86.9	9.2	2.8	0.7	0.6
West Bengal	88.7	8.5	2.4	0.4	0
Punjab	53.3	15.8	17	11.8	2.2
Orissa	70.3	20.6	7.3	1.7	0
All India	61	18.9	12.5	6.4	1.2

Source: Report No. 498(59/33/1) Situation Assessment Survey of Farmers: Indebtedness of Farmer Households, National Sample Survey 59<sup>th</sup> Round (Jan.-Dec.2003)

**Table 4: Agricultural loan to respective GADP of Bihar and India for the last five years**

Year	Bihar		India	
	SGADP (₹ crore)	Loan (₹ crore)	% of Agril. loan to SGADP	% of Agri. loan to NGADP in India
2000-01	19450	548	2.82	11.7
2001-02	17404	620	3.56	12.7
2002-03	20851	861	4.13	14.7
2003-04	18663	1587	8.5	16.3
2004-05	19070	2030	10.64	23.4
2005-06	18851	2174	11.53	30.3
2006-07	24777	2985	12.05	31.0

### Magnitude of Institutional credit flow in Bihar

An analysis of ground level agricultural credit with respect to Gross Agricultural Domestic Product revealed that the proportion of agricultural loans was only 2.82 per cent of State Gross Agricultural Domestic Product (SGADP) in Bihar as compared to 11.7 per cent at national level in 1982 which increased to 8.5 per cent and 16.3 per cent, respectively in 2003-04 (Table 4).

After announcement of Farm Credit Package by the Government of India in 2004, the proportion of agricultural loan to National Gross Agricultural Domestic Product (NGADP) increased from 8.5 per cent in 2003-04 to 31 per cent in 2006-07 but the corresponding increase was less than 4 per cent in Bihar i.e. from 8.5 per cent to 12.05 per cent during the period. In Bihar, the performance of Commercial Bank is not only poor in granting loan to agriculture sector but their performance has been poor in

granting loan to other sectors in Bihar. C.D. ratio of Commercial Banks increased from 21 per cent in 2001-02 to 32 per cent in 2006-07 against the norm of 60 per cent (Table 5).

**Table 5: Credit-Deposit ratio in Bihar during 2000 to 2006**

Year	Deposit	Credit	CD ratio
2000-01	27591	6396	23
2001-02	30482.02	6945.52	21
2002-03	338115	8089	25
2003-04	35824	9603.86	27
2004-05	40294.88	12031.2	30
2005-06 (upto Dec. 2005)	46134	14005	32.22
2006-07 (up to Sept 2006)	4891312	15911367	32.53

### Commercial Banks

The deposit of banks per branch increased from ₹ 912 lakh in 2003-04 to ₹ 1125 lakh in 2005-06 whereas per commercial bank branch agricultural credit increased from ₹ 1.94 lakh to ₹ 40.80 lakh, indicating higher growth in agricultural credit during the period. But per branch agricultural credit is much less than the deposit mobilized by commercial banks in Bihar (Table 6). Commercial Bank branches, on an average, granted 3.6 per cent of their deposits as agricultural loans to farmers in Bihar. There are 38 community development blocks without any commercial bank branch in Bihar. Hence programmes like Financial Inclusion, Farm Credit Package etc. do not have any relevance for such un-banked area.

**Table 6: Per branch deposit and agricultural loan in Bihar**

Year	Deposit (₹ Crore)	Per branch deposit (₹ Lakh)	Agril. Loan (₹ Crore)	Per branch Agil. loan (In ₹ Lakh)
2003-04	32931	912	792	1.94
2004-05	36001	665	1325	36.62
2005-06	41007	1125	1489	40.80

### Co-operatives

With regard to co-operatives, the short-term co-operative credit structure consists of Bihar State Co-operative Bank at the apex level. At the middle level the state had originally 25 DCCBs of which license application of 3 were rejected by RBI in 2003, reducing the number to 22 with 279 branches.

**Table 7: Financial position of District Central Co-operative Bank in Bihar (₹ in lakh)**

Year	Number of Bank	Share Capital	Loans Granted	Deposit
2001-02	25	6629	8286	57911
2002-03	24	7466	10386	56228
2003-04	22	7752	14248	58248
2004-05	22	7752	27435	58305
2005-06	22	16252	23461	-

The share capital of District Central Co-operative Banks has been constant at ₹ 77.52 crore during 2002-03 to 2004-05 which increased to ₹ 162.52 crore in 2005-06, mainly due to contribution of ₹ 85.00 crore by the State Government to the share capital of various banks (Table 7). As mentioned earlier, deposit mobilization by the Central Co-operative Banks has got a set-back due to their poor financial performance. At the village level, there are 5936 Primary Agricultural Credit Co-operative Societies with membership of 3668 lakh farmer. About one-fifth of the PACs are non-functional and NABARD identified only 1330 PACs as potentially viable. There are 1971 PACs which have godowns with storage capacity of 1.91 lakh M.T. However, the majority of these godowns are in deplorable condition. There are 893 PACs which are engaged in marketing business of seeds and fertilizers. PACs have also entered in the procurement business of agricultural produce on procurement price fixed by the Government. The main function of PACs is to provide credit facilities to their members. Agricultural credit flow showed increasing trend from ₹ 82.77 crores in 2001-02 to ₹ 234.61 crores in 2005-06 but the PACs achieved only 34 per cent of respective target of lending and accounted for about 10 per cent of total agricultural loan granted in 2005-06 (Table 8).

**Table 8: Disbursement of short-term credit through PACs in Bihar (₹ in Crore)**

Year	Target	Achievement	Achievement in percentage
2001-02	172.00	82.77	48.13
2002-03	291.00	96.06	33.01
2003-04	368.00	142.48	38.72
2004-05	630.00	273.74	43.45
2005-06	691.00	234.61	33.95

In Bihar, as many as 4009 PACs (67.54) were in loss in 2004 and these societies suffer from huge financial imbalances. The PACs at ground level face the problems of low recoveries (49%) also. As reported by the Department of Co-operative, Government of Bihar, there are 36.38 lakh membership in PACs. Hence, per member loans granted worked out to be ₹ 640. But a small number of PACs (one thousand) are granting loan to few members. In 2003, only 2 per cent of member-farmers could obtain credit facility through PACs (NSS, 2003).

In Bihar, agricultural credit increased from ₹ 548 crore in 2000-01 to ₹ 1587 crore in 2003-04 which further increased to ₹ 2985 crore in 2006-07 (Table 9) Institutional agricultural credit recorded three fold increase during first three year of the present century (2000-01 to 2003-04) but it could increase by two fold during last three years. Despite the announcement of Farm Credit Package, in June 2004, the growth in agricultural credit has decelerated during the last three years. Agricultural loan is still about 12.05 per cent to SGADP (at current prices) in Bihar against about 31 per cent at national level. Among different institutional sources, agricultural loans granted by RRBs increased from ₹ 77 crore in 200-01 to ₹ 797 crore in 2006-07, recording 10 time increase during the final 7 years and proportion of RRB loan also increased from 14.05 per cent in 2000-01 to 26.70 per cent in 2006-07 to respective total loans granted by all the institutional agencies in Bihar.

Agricultural loans granted by commercial banks also increased from ₹ 325 crore to ₹ 1916 crore during the period however, their share in total institutional agricultural credits in Bihar increased from 59.31 per cent to 64.19 per cent during the last 7 years. The support made by commercial banks is higher (Sugaya, N. (1978). The performance of

the co-operative has not been satisfactory since its agricultural credit portfolio increased by about two fold and its share in agricultural credit flow declined from 26.64 per cent in 2001 to 9.11 per cent in 2006-07. There have been many variations in year to year loan disbursement through co-operative, mainly due to their weak financial strength and dependence on outside finance for granting agricultural loan.

**Table 9: Source-wise Institutional credit flow in Bihar during 2000-01 to 2006-07**

(in ₹ crore)

Year	Source-wise Institutional credit flow			
	Commercial Bank	Gramin Bank	Co-operative Bank	Total
2000-01	325 (59.31)	77 (14.05)	146 (26.64)	548 (100.00)
2001-02	462 (74.52)	75 (12.10)	83 (13.39)	620 (100.00)
2002-03	605 (70.27)	154 (17.89)	102 (11.85)	861 (100.00)
2003-04	794 (50.03)	232 (14.62)	561 (35.35)	1587 (100.00)
2004-05	1325 (65.27)	431 (21.23)	274 (13.50)	2030 (100.00)
2005-06	1489 (68.49)	450 (20.70)	235 (10.81)	2174 (100.00)
2006-07	1916 (64.19)	797 (26.70)	272 (9.11)	2985 (100.00)

\* Figures in parentheses are percentage to respective totals

Among different types of agricultural loans, crop loan increased by more than two fold during last three years and its proportion to total loan increased from 39.27 per cent in 2003-04 to 46.03 per cent in 2005-06. Minor irrigation and farm mechanization loans also increased during the period but their shares in total institutional credit showed declining trend. Institutional loans to livestock sector (dairy, poultry and goatry etc.) constituted less than 8 per cent of total agricultural loan and their proportion to total agricultural loan also showed declining trend during the 10<sup>th</sup> Five-year plan.

### Per hectare loan

Adequacy of agricultural loan is a pre-requisite to have a significant impact on agricultural production. Per hectare agricultural loan granted in Bihar (₹ 8820) was the lowest among major states of the country and much lower than the national average of ₹ 3306 in 2000-01 whereas the higher per hectare agricultural loan was granted in Punjab (₹ 12154) followed by Haryana (₹ 10426) and Kerala (₹ 10759) (Kumar, 2003). Per hectare agricultural loan disbursement increased from ₹ 882 in 2000-01 to ₹ 4814 in 2006-07 in Bihar whereas it increased from ₹ 3386 to ₹ 11363 at national level during the period (Table 10). Despite the best efforts the institutional financing agencies could provide per hectare quantum of loan in Bihar in 2006-07 which was achieved at national level in 2002-03 and a decade ago in Punjab.

**Table 10: Per ha of cultivated area agricultural credit flow in Bihar vs. India**

Year	Bihar	India
2001-01	882	3386
2001-02	1000	3977
2002-03	1389	4517
2003-04	1835	5648
2004-05	3274	8137
2005-06	3506	11720
2006-07	4814	11363

*Source: Agricultural Statistics at a Glance, 2007*

As per NSS report, per cultivator household agriculture loan disbursed through institutional agencies was also much lower in Bihar (₹ 322) against the ₹ 12118 in Punjab, ₹ 2569 in Madhya Pradesh and ₹ 1028 in West Bengal and ₹ 2647 at national level in 2003. The lowest quantum of institutional agricultural loan to only 1.3 per cent of farmers in the year of survey i.e. 2003. Due to increase in Institutional agricultural credit is worked out to be ₹ 2596 in Bihar against ₹ 15882 in the country in 2006-07. Hence, Bihar is still much behind in improving access of farmers to financing institution for agricultural credit which needs to be improved for desired agricultural growth in the state.

### Regional disparity

In Bihar, agricultural loan is not only inadequate but there is skewed disbursement of loan in different

agro-climatic zones of Bihar. Analysis of zone wise per hectare disbursement of agricultural loan revealed that per hectare loan disbursement was comparatively high in zone-I (₹ 4585) and zone-III B (₹ 4578) than Zone-II (3131) and Zone-IIIA (₹ 3091) (Table 11).

**Table 11: Zone wise net sown area, agricultural loan and per ha agricultural loan in Bihar during 2005-06**

Particulars	Net Sown Area		Agril. Loan		Per ha Loan (in Rs.)
	In '000 ha	% of Total	Rs. in lakh	% of Total	
Zone-I	2038	39	93443	43	4585.03
Zone-II	1097	21	34347	16	3130.99
Zone-IIIA	507	9	15672	7	3091.12
Zone-IIIB	1615	31	73941	34	4578.39
Bihar	5257	100	217403	100	4135.5

Zone-I has 39% of net sown area but obtained 43% of agricultural loan whereas Zone-I has 21% of net shown area but could get only 16% of agricultural loan disbursed in the state in year 2005-06. Availability of agricultural credit has been skewed in Bihar. Farmers of 5 districts namely; Madhepura, Jamui, Khagaria, Banka and Kishanganj constituting 10% net sown area of the state could get 6% of agricultural loan whereas just reverse situation has been observed in another three districts (Samatipur, Patna and West Champaran) constituting 10% net sown area of the state but obtained 20% agricultural loan disbursed in the state, indicating skewed distribution of agricultural loans in Bihar. Hence, the institutional financing agencies are more active around state capital and slack in advancing loan in remote area of the state namely; Purnea, Saharsa and Bhagalpur Divisions. The level of agricultural development seems to have some relationship with level of agricultural loan disbursement. Agriculturally developed districts namely West Champaran, Patna, Begusarai, Samastipur, Nalanda and Vaishali have larger credit flow than agriculturally underdeveloped districts such as Madhepura, Banka, Supaul and Araria. Hence, there is an urgent need to increase agricultural credit flow to underdeveloped and remotely placed districts in Bihar.

The analysis of Agricultural credit data revealed that the Growth in agricultural credit was higher in Bihar (31%) than the corresponding growth achieved at national level (26%) during 2001-02 to 2006-07. It was mainly due to lower base of agricultural credit for Bihar. But after announcement of “Agricultural Credit Package” by Govt. of India in 2004 for doubling agricultural credit there was deceleration in growth rate in agricultural credit in Bihar from 47% during 2004-05 to 19% during 2004-07 whereas, the growth rate of disbursement of agriculture credit increased from 17% to 24% at national level during the respective periods. There has also been instability in agricultural credit disbursement in Bihar, Particularly in 2001-02 through Co-operative and Gramin Banks. (Table 12). Hence, it may be said that agricultural credit flow has not been only low but also unstable in Bihar during the last six years (Singh, H.P., 1997).

**Table 12: Compound Annual Growth Rates and Variability in institutional Credit Flow in Bihar vs. India during last 6 years (in %)**

Source of credit	Annual Growth			Co-efficient of Variables
	2001-02 to 2003-04	2004-05 to 2006-07	2001-02 to 2006-07	2001-02 to 2006-07
Bihar	47	19	31	51.43
Commercial Bank	27	18	29	51.71
Gramin Bank	56	31	45	67.36
Co-operative Bank	95	(- )01	22	73.58
India	17	24	26	48.93

The findings of recently conducted rural appraisal revealed that the majority of villages are still located away from bank branches, existence of non-functional PACs and dominance of non-institutional credit players in the villages who are charging exorbitant rate of interest, particularly from marginal farmers and agricultural labourers (Kisan Ayog, 2008).

## ACKNOWLEDGEMENTS

The authors are grateful to Dr. Ram Bharat Thakur, Supervisor for Ph.D, and other staff of R.B. College, Dalsingsarai (Samastipur) and L.N. Mithila University, Darbhanga.

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