

## **FARMERS' INDEBTEDNESS IN HARYANA: A STUDY**

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### **ABSTRACT**

*Farmers' Indebtedness in the State emerged as a central issue. This is because, the problem of indebtedness, damaged the social status of a farmer and triggered to commit suicide. In India, on an average, there is one farmer suicide in every 30 minutes since 2002 [Sainath: 2008a], while in case of Haryana, the suicide number of farmers is 4.8 per one lakh farmers [NCRB]. Therefore, the issue of farmers' indebtedness becomes a matter of intense debate for whole of the country and as well as for Haryana. In this background, the present study is conducted to assess the status of farmers' indebtedness in the State in detail. The results of the study indicate that the informal mechanism of credit delivery is playing an important role for marginal and small farmers in meeting their credit requirements in the State. Seventy one per cent loans to total loan were used in productive activities in Haryana, while in case of India the same ratio was 73.10 per cent. Marriage and other ceremonies were the major unproductive expenses in Haryana, which were higher as compared to aggregate India and it is more in SC and BC community in the State. In addition, maximum indebtedness was found to be ₹25289 on the 615-775 MPCE class farm households in the State and the status of Scheduled Caste and Backward Class farm households is not better, while on an average the status of farm households belonging to other social group of farming community is better in the State as compared to India as aggregate. The size of landholding is also negatively associated with informal borrowing. On the basis of foregoing analysis, we suggest that the State government should monitor the informal mechanism of credit, increase the awareness among farmers in general and marginal and small in particular, about the disadvantages of utilisation of loan in unproductive activities, and strengthen the cooperative movement in the State.*

### **Introduction**

In Haryana, the contribution of agriculture sector in total Net State Domestic Product [NSDP] decreased over the period due to high growth in manufacturing and service industry, and slower rate of growth in agriculture sector of the State. The Central Statistical Organisation [CSO] data indicate that the ACGR of agriculture NSDP of the State was 4.86 per cent during the period from 1983 to 1994 and decreased to 1.77 per cent from 1993 to 2004. The share of

agriculture employment also decreased due to expanding of non-farming activities<sup>1</sup> in the State. But, the absolute number of persons engaged in agriculture sector in the State increased significantly. The census of Haryana also shows that number of persons engaged in agriculture activity increased to 4322234 in 2001. Further, Situation Assessment Survey [SAS: 2003] revealed that in Haryana, aggregate 39 per cent farmer<sup>2</sup> [s] do not like farming due to many reasons such as- no-profitable, high risk, etc. In

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addition, National Crime Record Bureau [NCRB] indicates that the suicide rate among one lakh farmers in Haryana is 4.8 farmers. The proportion of farmers' suicide is 0.5 in comparison to general suicides of the State. The above symptoms indicate that the agriculture sector of the State has been shifting from accelerating to decelerating since 1990s. Although, there are a number of reasons [i.e., marketing, cost of cultivation, indebtedness, climate, surge in foodgrains prices, reduced per capita foodgrain availability, etc.] behind slow down in agriculture sector of the State, indebtedness of farmers in the State emerged as a central issue. This is because, the problem of indebtedness damaged the social status of farmers and triggered to commit suicide. In India, on an average, one farmer commits suicide every 30 minutes since 2002 [Sainath: 2008a], while in case of Haryana, the suicide rate of farmers is 4.8 per one lakh farmers [NCRB]. Therefore, the issue of farmers' indebtedness becomes a matter of intense debate for whole of the country as well as for Haryana. In this background, the present study is conducted to assess the status of farmers' indebtedness in the State in detail.

#### **Objectives of the Study**

1. To find out the status of indebtedness of farm households in Haryana in detail.
2. To study the contribution of different sources in farmers' indebtedness of the State along with India [as aggregate].
3. To study the relationship between size of landholding and farmers' indebtedness by informal source of credit.
4. To examine the utilisation pattern of loan by farm households in the State along with India [as aggregate].

#### **Hypotheses of the Study**

- \* There is a negative association between size of landholding and informal borrowing and
- \* There is no statistically significant difference in indebtedness among different MPCE Classes in Haryana and India [as aggregate].

#### **Research Methodology**

The nature of research is exploratory. The study was based on secondary data, which were collected from the Farmers Situation Assessment Survey [2003], Indebtedness of Farmer Households Survey [2003], National Crime Records Bureau [various issues], Census of India & Haryana [various issues], Economic Census of Haryana [1998 & 2005], and Agriculture Statistics at a Glance [2008].

The collected data have been transcribed into long sheets form, tables have been formulated and analysed using a wide range of appropriate techniques such as; mean, S.D., C.V and Regression Method.

#### **Simple Linear Regression Analysis**

The simple linear regression represents a logical extension of between two variables analysis. Under it one independent variable is used to estimate the values of a dependent variable. The simple regression equation describes the average relationship between two variables and this relationship is used to predict or control the dependent variable. The formula for calculating multiple regression is as follows

$$Y = a_0 + a_1X_1 + \epsilon \dots \dots \dots [1]$$

Where  $X_1$ , is regressor variable,  $a_1$  is the parameter to be estimated from the data, and  $e$  is the error term and it is based on following classical ordinary least square {OLS} assumptions i.e., the deviation  $e$  is assumed to be independent and normally distributed with mean 0 and standard deviation ( $\sigma$ )

Table 1 reveals that the rural and farm household<sup>3</sup> [s] in Haryana were 3147400 and 1944500 respectively, which was only 2.12 and 2.17 per cent of the total rural and farm households of India as a whole. The per cent share of farm households to total rural households in Haryana was 61.78 per cent, while the same ratio was 60.41 per cent in context of aggregate India in 2003. It means, the rural economy of the State is more dependent on farm activities as compared to aggregate rural economy of the country.

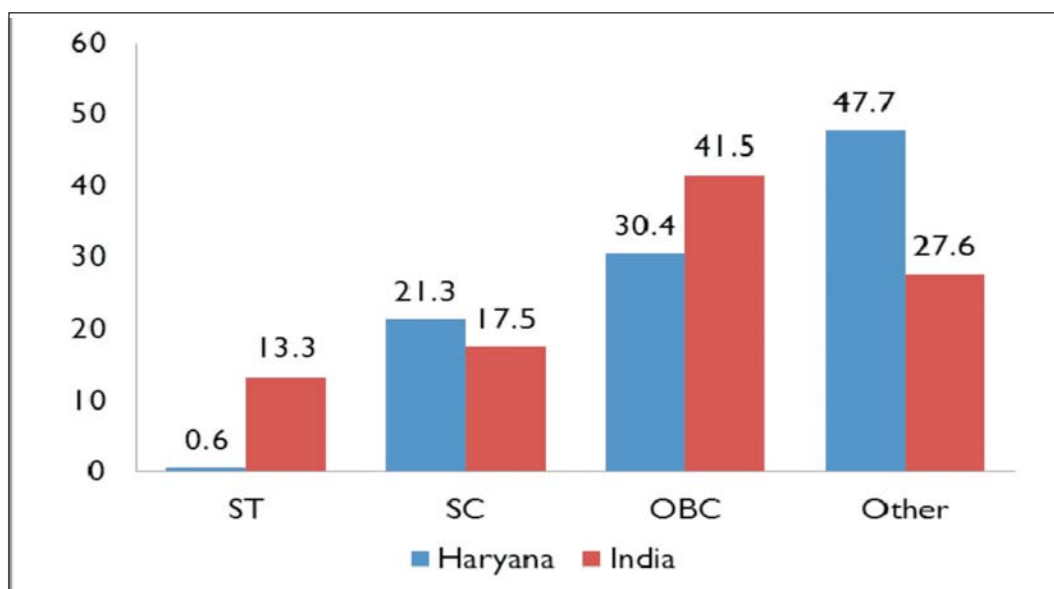
**Table 1 : Estimated No. of Rural Households and Farm Households**

Particulars	Estimated No. of Rural Households	Estimated No. of Farm Households
Haryana	3147400 [100]	1944500 [61.78]
India	147898800 [100]	89350400 [60.41]

Source: Calculated by Authors from the NSS Report No. 498: Indebtedness of Farmer Households, 2003.

**Figure 1 : Farmer Households According to Social Group in Haryana and India**

[In per cent]



Source: Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Figure 1 shows the farm households in Haryana and India according to the social groups. The figure clearly shows that only 0.60 per cent farm households belong to ST, 21.30 per cent to SC, 30.40 per cent to OBC and 47.70 per cent to Other category community in the State, while in case of India, these ratios

of farm households were 13.30, 17.50, 41.50 and 27.60 per cent, respectively. Moreover, farm households which belong to other category of social group form a major and dominant part of rural farm households in Haryana, while farm households belonging to ST category appear to be negligible in the State.

**Table 2 : Farm Households According to Size of Landholding**

[In per cent]

Size of Landholding [In ha.]	Haryana	India
<0.01	0.38	0.13
0.01 to 0.40	30.50	29.90
0.41 to 1.00	18.00	29.80
1.01 to 2.00	18.30	18.90
2.01 to 4.00	19.70	12.50
4.01 to 10.00	08.80	06.40
Above 10.00	09.00	12.00
All Size	100.00	100.00

Source: Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Table 2 represents the per cent share of farm households according to the size of landholding in Haryana and India. It is clear from Table 2 that majority of farm households have land size between 0.01 to 0.40 in Haryana and

India. In addition, 86.88 and 91.23 per cent farm households possessed the size of land below 4 ha. in Haryana and India, respectively. It is clear from Table 2 that the marginal farm households are in majority in Haryana as well as in India.

**Table 3: Indebted Farm Households**

Particulars	Estimated No. of Indebted Farm Households	Indebted Farm Households as per cent to Total Farm Households
Haryana	1033000	53.00
India	43424200	48.60

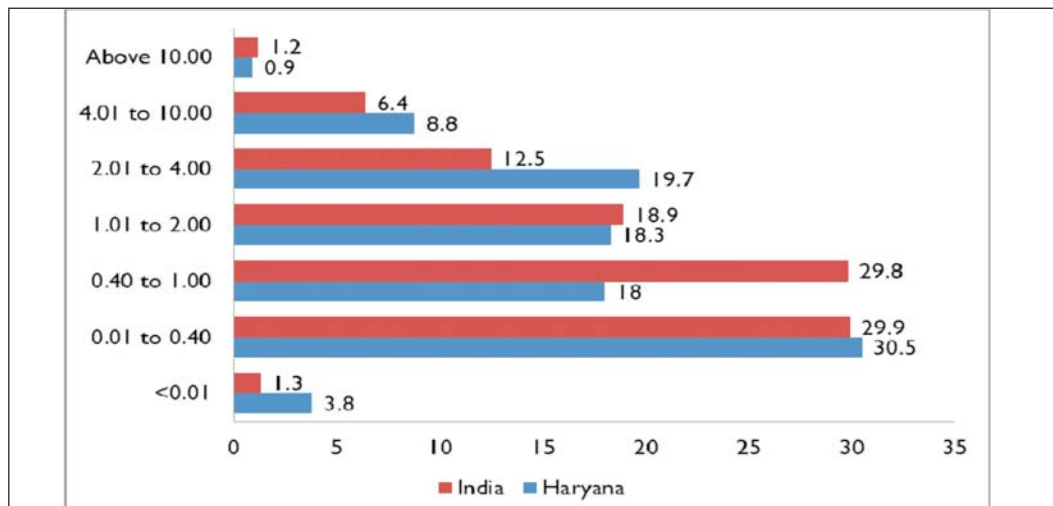
Source: NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Table 3 expresses the estimated number of indebted farm households' aggregate and indebted farm households as per cent to total farm households of Haryana and India. The ratio of indebted farm households as per cent to total farm households in Haryana was 53.00 per cent, while in case of India it was only 48.60 per cent. The NSSO Report No. 498 also shows that the incidence of indebtedness [proportion of households reporting debt] ranges from about

18 per cent in Assam to 82 per cent in Andhra Pradesh during the year 2003. The main cause for high indebtedness of farm households in Haryana is easy access of banking services as compared to other States and India [as aggregate]. The CMIE database [2010] shows that the population per bank office in Haryana is only 11145.07 as compared to 14107.23 of aggregate India.

**Figure 2 : Incidence of Indebtedness [IOI] Across Landholdings: Formal and Informal Sources**

[In Per cent]



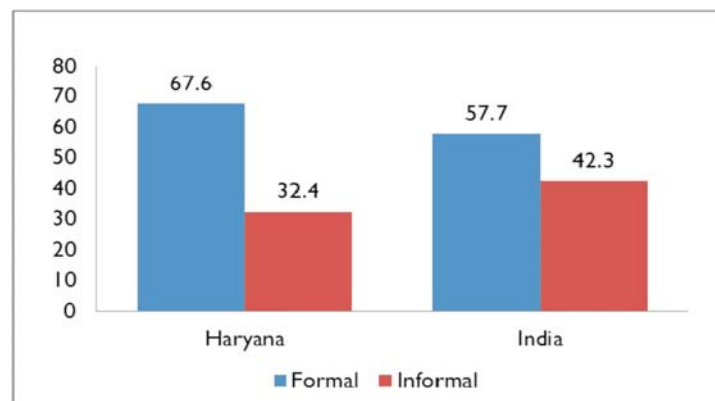
Source: Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Figure 2 depicts the association between IOI and size of landholding in Haryana and India. It is clear from the above figure that the IOI was very high in farmers who possessed land between '0.01 to 0.40' ha. in Haryana and India, while ratio was minimum in farmers who possessed land above 10.00 ha. Further, the major causes behind the high IOI in the owner

of low land size are 1] low productivity of land [due to the lack of implementation of modern technology in farming activities], 2] natural digesters, 3] lack of saving for future [due to lack of profit from farming activities], 4] high cost of borrowing<sup>4</sup> [the access of small and marginal to formal source of credit is very low], and 5] use of loan in unproductive activities [see Table 6].

**Figure 3 : Indebtedness of Farm Households by Source**

[In per cent]



Source: Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

**Table 4: Indebtedness of Farm Households by Different Sources**

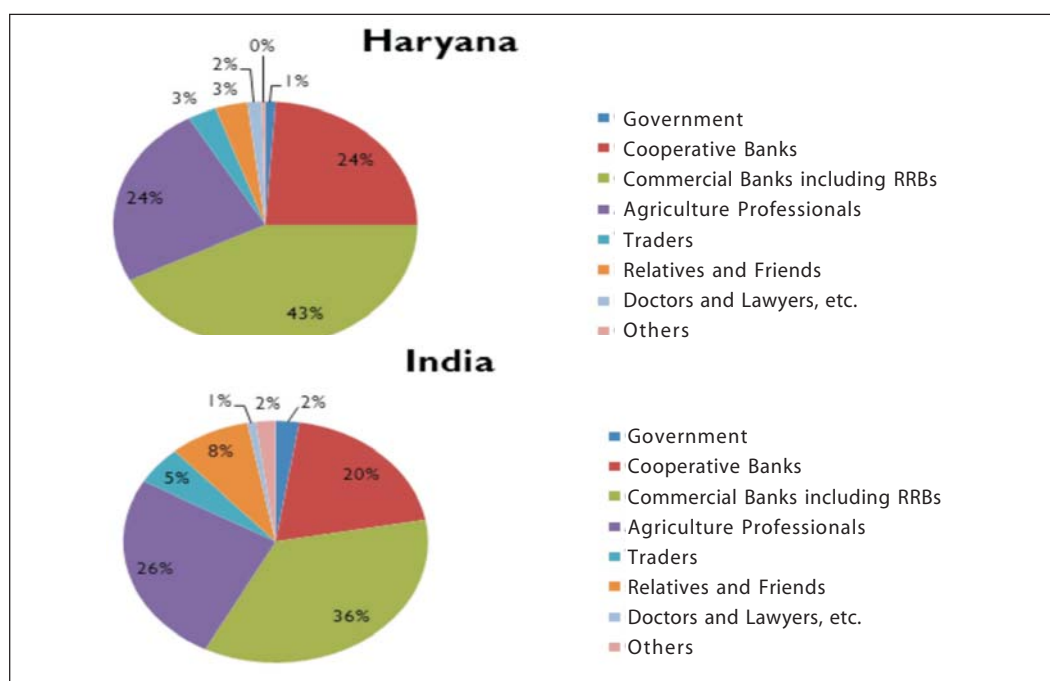
Source of Indebtedness	Haryana		India	
	Amount	%	Amount	%
Government	11	1.62	25	4.33
Cooperatives Banks	239	35.35	196	33.96
Commercial Banks including RRB's	426	63.01	356	61.69
Formal Total	676	100	577	100
Agriculture Professionals	241	74.15	257	60.61
Traders	31	9.53	52	12.26
Relative and Friends	34	10.46	85	20.04
Doctors and Lawyers, etc.	15	4.61	9	2.12
Others	4	1.23	21	4.95
Informal Total	325	100	424	100

Source : Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Note : Per 1000 rupees distribution of outstanding loan taken by farmer households in different States by source of loan.

**Figure 4 : Share of Different Source of Credit in Farmers Indebtedness**

[In Per cent]



Source : Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Figure 3 shows the contribution of formal and informal sources<sup>5</sup> of credit in indebtedness of farm households in Haryana along with India. It is clear from Figure 3 that the contribution of formal source of credit in farmers' indebtedness [Total] was 67.60 per cent in Haryana and 57.70 per cent in India in 2003.

Further, NSS Report No. 498 [Indebtedness of Farmer Households: 2003] also shows that the commercial banks are dominant in formal source of credit in Haryana as well as India, while agriculture professional moneylenders have also dominated in informal source of credit in both places. The contribution of commercial banks in total formal debt is 63.01 and 61.69 per cent in Haryana and India, respectively; while in case of informal debt the contribution of agriculture professional moneylenders is 74.38 per cent in Haryana and 60.75 per cent in aggregate India in total informal supply of credit in 2003.

Table 4 shows that the share of government, cooperative banks and commercial

banks [including RRB's] was 1.62, 35.35 and 63.01 per cent, respectively in farmers' [only formal sources] indebtedness in the State, while in case of India as aggregate the same ratios were 4.33, 33.96 and 61.69 per cent, respectively in the year of survey. Further, the contribution of agriculture professionals, traders, relatives and friends, doctors and lawyers and others was 74.15, 9.53, 10.46, 4.61 and 1.23 per cent, respectively [in case of informal indebtedness] in the State and in case of India as aggregate the same ratios were 60.61, 12.26, 20.04, 2.12 and 4.95 per cent, respectively in reference period.

Figure 4 depicts that the contribution of government, cooperative banks, commercial banks [including RRB's], agriculture professionals, traders, relatives and friends, doctors and lawyers, etc., and others in farmers' indebtedness was 1.10, 23.90, 42.60, 24.10, 3.10, 3.40, 1.50 and 0.40 per cent, respectively in Haryana, while in case of India as aggregate the ratios were 2.50, 19.60, 35.60, 25.70, 5.20, 8.50, 0.90 and 2.10 per cent, respectively in the same period.

**Table 5 : Size of Landholdings and Indebtedness by Source**

[In per cent]

Size of Landholding	Haryana			India		
	Formal	Informal	Total	Formal	Informal	Total
<0.01	14.60	85.4	100	22.60	77.4	100
0.01 to 0.40	46.50	53.5	100	43.30	56.7	100
0.40 to 1.00	71.00	29.0	100	52.80	47.2	100
1.01 to 2.00	62.00	38.0	100	57.60	42.4	100
2.01 to 4.00	86.40	13.6	100	65.10	34.9	100
4.01 to 10.00	59.40	40.6	100	68.80	31.2	100
Above 10.00	74.70	25.3	100	67.60	32.4	100
Average	59.23	40.77	100	53.97	46.03	100
Minimum	14.60	13.60	100	22.60	31.20	100
Maximum	86.40	85.40	100	68.80	77.40	100
C.V.	39.46	57.33	0.00	30.65	35.94	0.00

Source: Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Table 5 depicts the loan taken by different size of landholder farm households by different sources [i.e., formal and informal] in terms of per cent. It is clear from Table 5 that the informal mechanism of credit supply is playing a significant role for the farm households having size of landholding up to 0.40 acre in Haryana as well as India. Jointly, both categories [i.e., <0.01 and 0.01 to 0.40] farm households fulfil their 70 [Haryana] and 67 [India] per cent credit requirements<sup>6</sup> by informal mechanism of credit supply in general and agriculture/professional moneylender in particular [54.25 per cent in Haryana and 39.55 in aggregate India].

To know the impact of average size of landholding on indebtedness by informal source, we have applied simple regression equation model. A log-linear regression model<sup>7</sup> has been designed to explain it. The model is

$$Y = a + \beta_1 X_1 + \varepsilon \dots\dots\dots [2]$$

Where

Y = (Informal borrowing as per cent to total borrowings)

X<sub>1</sub> = average size of landholding, and

ε : stands for error term

### Box : 1 Association Between Informal Borrowing and Size of Landholding

Dependent Variable: Ratio of Informal Borrowing			
Independent Variable: Size of Landholding in Ha.			
Sample Period: 2003			
Type of Data: Cross Sectional			
Sample: 7 Categories of Land Size			
Particulars	Coefficient	t-Statistics	p-value
Constant	1.541*	21.75	.000
IFI	-0.180*	-02.447	.058
R-Square	0.545/54.50		
Adj. R-Square	0.454/45.40		
F-Statistics	5.987		.058
SE of the Estimate	0.18702		

The regression equation reveals that the average size of landholding is negatively associated with informal borrowings in the State. The value of R<sup>2</sup> is 0.545 or 54.50 per cent. It means 54.50 per cent variation in informal borrowing is arising due to the average size of landholdings. So, for popularising the formal borrowing the State should reduce the value of collateral security, develop the low cost financial products for marginal and small farmers [Chhikara and Kodan: 2011]; and reduce paper work and lowering the costs of access {transaction costs, especially in terms not only of fee and charges but also requirements for documentation are the main area for attention

in the context of formal financial exclusion} [Johnson and Zarazua: 2011]. In short, we can say that the informal credit in general and agriculture professional moneylenders in particular, play a significant role to farmer community in general and marginal and small farmers in particular for lending in India as well as Haryana. In this context, strengthening of the Cooperatives may be a possible step. Because, on one hand Cooperatives will fight against professional moneylenders in villages and it will also increase the supply of formal credit in villages on the other. Moreover, the rate of interest of Cooperative loan/advances is less by 1 per cent as compared to commercial banks loan.



**Table 6 : Loan Utilisation Pattern of Farm Households in Haryana**

[In Per cent]

Size of Landholding	Source of Credit		Purpose of Usage	
	Formal*	Informal	Productive**	Unproductive
<0.01	14.60	85.40	26.50	73.50
0.01 to 0.40	46.50	53.50	26.60	73.40
0.40 to 1.00	71.00	29.00	76.00	24.0
1.01 to 2.00	62.00	38.00	67.50	32.50
2.01 to 4.00	86.40	13.60	83.00	17.00
4.01 to 10.00	59.40	40.60	77.20	22.80
Above 10.00	74.70	25.30	98.60	1.40
Average	59.22	40.77	65.05	34.94
Minimum	14.60	13.60	26.50	1.40
Maximum	86.40	85.40	98.60	73.50
CV	39.46	57.32	42.95	79.97

Source: Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Note: \* Percentage of amount of formal loan outstanding of total amount of loan outstanding.

\*\* Percentage of total amount of loan used for income generating purposes out of total loan amount outstanding.

**Table 7 : Loan Utilisation Pattern of Farm Households in India**

[In Per cent]

Size of Landholding	Source of Credit		Purpose of Usage	
	Formal*	Informal	Productive**	Unproductive
<0.01	22.60	77.40	28.50	71.50
0.01 to 0.40	43.30	56.70	35.10	64.90
0.40 to 1.00	52.80	47.20	57.10	42.90
1.01 to 2.00	57.60	42.40	69.20	30.80
2.01 to 4.00	65.10	34.90	78.20	21.80
4.01 to 10.00	68.80	31.20	83.20	16.80
Above 10.00	67.60	32.40	81.40	18.60
Average	53.97	46.03	61.81	38.19
Minimum	22.60	31.20	28.50	16.80
Maximum	68.80	77.40	83.20	71.50
CV	30.65	35.94	36.23	58.65

Source: Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Note: \* Percentage of amount of formal loan outstanding of total amount of loan outstanding.

\*\* Percentage of total amount of loan used for income generating purposes out of total loan amount outstanding.

The study of loan utilisation pattern is a very important aspect in the context of indebtedness measurement since, the level of indebtedness on a person depends on the utilisation pattern of debt. Tables 6 and 7 reveal the loan utilisation pattern of farmers in Haryana. These Tables clearly show that jointly on an average 65.05 per cent loan amount was used in farm activities [including capital, current expenditure and non-farm activities] by the farm households in the State, while in case of India the ratio was 61.81 per cent in 2003. Additionally, through the Table we can also observe that the size of landholding is positively associated to the productive use of loan in Haryana and India. The farm expenditure [capital and current] was the common purpose of loan taken by different sizes of landholding farmers in Haryana along with India. The next important purpose of loan taken by marginal [23.70 per cent], small [20.70 per cent] and large [8.50 per

cent] farmers was marriage and other ceremonies, while other expenses [9.70 per cent] was important purpose of loan taken by medium farm households in Haryana in 2003. In case of India, the next important purpose of loan taken by marginal [18.60 per cent], small [90.90 per cent] and medium [8.90 per cent] farmers was also marriage and ceremonies except large farmers [5.35 per cent to total loan was taken for consumption] in the same period [See detailed NSS Report No. 498: Indebtedness of Farmer Households, 2003 ].

Further, the NSSO Report reveals that jointly 18.80 and 19.10 per cent amount of loan was used in consumption and marriage & other ceremonies by the farmers of the State and aggregate Indian farmers, respectively during the same period. At aggregate level of India, 8 per cent amount of loan was used on education, while in case of Haryana the expenditure was nil during the period under consideration.

**Table 8: Link Among Formal & Informal Loans, Productive & Unproductive Usages in Haryana**

Particulars	Formal Loan	Informal Loan	Productive	Unproductive
Formal Loan	1	-1.000**	.856**	-.856**
Informal Loan	-1.000**	1	-.856**	.856**
Productive	.856**	-.856**	1	-1.000**
Unproductive	-.856**	.856**	-1.000**	1

Source: Authors Calculations.

Note: \*\*. Correlation is significant at the 0.01 level (1-tailed).

**Table 9 : Link Among Formal & Informal Loans, Productive & Unproductive Usages in India**

Particulars	Formal Loan	Informal Loan	Productive	Unproductive
Formal Loan	1	-1.000**	.958**	-.958**
Informal Loan	-1.000**	1	-.958**	.958**
Productive	.958**	-.958**	1	-1.000**
Unproductive	-.958**	.958**	-1.000**	1

Source: Authors Calculations.

Note: \*\*. Correlation is significant at the 0.01 level (1-tailed).

To study the link among formal & informal loan, productive & unproductive usages in Haryana and India, Pearson correlation was used

and the results of the test are presented in Tables 8 and 9. It is clear from the Tables that formal loan is positively linked to productive usage,

while informal loan is positively linked to the unproductive usage in Haryana and India. Further, the Pearson correlation coefficient reveals that the formal loan is more productive in aggregate India as compared to Haryana.

**Table 10 : Indebtedness on Farm Households: According to the Different Monthly Per Capita Expenditure Classes**

MPCE Class	Haryana		India		Col. [2] - Col. [4]
	Col. [2] [In. ₹]	Col. [3] [In %]	Col. [4] [In ₹]	Col. [5] [In %]	Col. [6] [In ₹]
0-225	4489	1995.11 [11]	4446	1976.00 [12]	43
225-255	2701	1125.42 [12]	6127	2552.92 [9]	-3426
255-300	14812	5337.66 [4]	8591	3095.86 [3]	6221
300-340	23237	7261.56 [1]	8544	2670.00 [8]	14693
340-380	16629	4619.17 [6]	9100	2527.78 [10]	7529
380-420	10764	2691.00 [10]	9510	2377.50 [11]	1254
420-470	25159	5653.71 [3]	12873	2892.81 [7]	12286
470-525	32248	6482.01 [2]	15178	3050.85 [4]	17070
525-615	20195	3542.98 [8]	16529	2899.82 [6]	3666
615-775	35289	5081.21 [5]	20537	2957.09 [5]	14752
775-950	34586	4012.30 [7]	27630	3205.34 [2]	6956
950+	26109	2748.32 [9]	39058	4111.37 [1]	-12949
Average	13970.14	4097.66	8455.86	2584.70	5514.29
Minimum	2701.00	1125.42	4446.00	1976.00	-3426.00
Maximum	25159.00	7261.56	12873.00	3095.86	14693.00
C.V.	61.72	54.09	31.50	13.96	119.99

Source: NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Note: In % = Indebtedness in ₹ /Average MPCEC and Rank also assigned and shown in brackets.

Table 10 expresses the indebtedness on farm households in ₹ and in per cent of according to Monthly Per Capita Expenditure<sup>8</sup> [MPCE] classes of farmers in Haryana along with India. Obviously, the indebtedness was low on farmers who belonged to '225-255' and '950+' MPCEC in the State as compared to India, while in remaining MPCE C's indebtedness was high as compared to same in 2003.

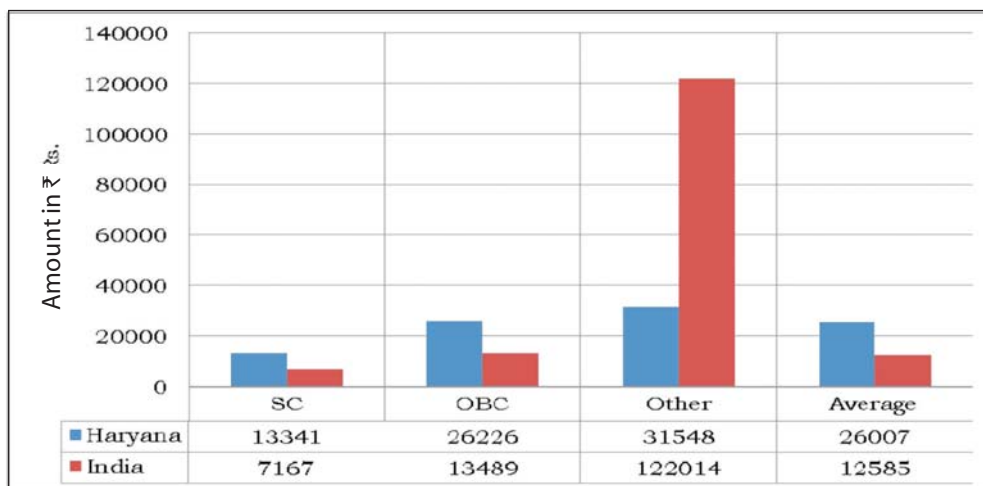
Further, Table 10 also shows that the indebtedness was high on farmers who belonged to '300-340' followed by '470-525', '420-470' and minimum on '225-255' in the State, while in case of India it was high on '950+', followed by '775-950, 225-300 and minimum

on '0-255' MPCE Class during the reference period.

The Pearson correlation coefficient was found positive and significant between high debt burden on farmers and high MPCE class in India as well as in Haryana. To compare the status of farmers' debt burden in Haryana and India, t-test was applied. The calculated value of t-test is 2.226, while tabulated value is 2.09. Therefore, to conclude, we can say that there is no statistically significant difference in debt burden among different MPCE Classes in Haryana and India [as aggregate], but the problem of indebtedness of Haryana farmers is somewhat worse as compared to India as aggregate.

**Figure 5 : Average Indebtedness on Farm Households: According to the Social Groups**

[Amount in ₹]



Source: NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Figure 5 illustrates the average indebtedness [in ₹] on various social groups' farmers of the State along with India. It is clear from Figure 5 that the status of Scheduled Caste [SC] and Backward Class [BC] farmers was not better, while in case of Other Class farmers was better as compared to the same social group of Indian as aggregate farmers in the context of indebtedness. The major explanation behind the worse status of SC and BC farmers was misutilisation of loan [i.e. marriage, consumption, etc.] and possession of low size of landholding.

The SAS [2003] data show that 19.00 and 21.10 per cent loan was used in marriages and

other ceremonies by SC and BC farmers, respectively of the State, while in case of aggregate India, 17.30 and 12.10 per cent, respectively loan was used in the same head by the same social groups of farmers.

Further, SAS [2003] also reveals that 26.40 and 62.0 per cent loan was used by SC and BC farmers in productive activities [either farm business or non-farm business] in Haryana, while in case of aggregate India, the same ratio of SC and BC farm households was 50.0 and 62.20 per cent, respectively during the period under consideration.

Moreover, the SAS [2003] depicts that the maximum indebtedness was on SC, BC and Other social group of farmers belonging to 470-525, 775-950 and 0-225 MPCE class, respectively, while minimum indebtedness was on SC, BC and Other social group of farmers belonging to 470-425, 775-950 and 615-775 MPCE class,

respectively in the State. In case of India, the maximum and minimum indebtedness on farmers, according to the same social groups belonging to 225-255, 0-225 & 0-225, respectively and 950+, 950+ and 775-950 MPCE Classes, respectively.

**Table 11: Status of Indebtedness of Farm Households in Haryana as Compared to India [According to the Different Monthly Per Capita Expenditure Classes and Caste]**  
[In Per cent]

MPCE Cs	SC Farmers	BC Farmers	Other Farmers
0-225	-39.80 [12]	69.56 [1]	-49.90 [12]
225-255	-5.68 [9]	-11.60 [10]	-27.10 [10]
255-300	-5.20 [8]	68.53 [2]	2.40 [6]
300-340	35.32 [1]	37.72 [5]	55.50 [1]
340-380	33.41 [2]	42.63 [3]	-12.70 [9]
380-420	6.92 [6]	12.23 [8]	-27.30 [11]
420-470	13.06 [5]	-11.00 [9]	50.89 [2]
470-525	30.50 [3]	42.60 [4]	14.00 [3]
525-615	15.86 [4]	-16.60 [12]	2.32 [7]
615-775	-0.40 [7]	15.13 [7]	10.46 [5]
775-950	-6.37 [10]	15.33 [6]	-7.75 [8]
950+	-7.49 [11]	-15.90 [11]	11.27 [4]
Average	5.84	20.72	1.84
Minimum	-39.80	-16.60	-49.90
Maximum	35.32	69.56	55.50
C.V.	21.52	31.39	30.55

Source: Calculated by Authors from NSS Report No. 498: Indebtedness of Farmer Households, 2003.

Note: The following procedure was adopted to calculate the status of indebtedness of Haryana farm households: [Concern Average MPCE Classes of Haryana – Concern Average MPCE Classes of India]/ Concern Average MPCE class \*100.

Table 11 expresses the status of indebtedness of different communities' farm household in Haryana [as compared to India] in term of percentage. It is clear from the above Table that the status of indebtedness of SC farmers were better [as compared to India] who belonged to '0-225', '225-255', '255-300', '615-775', '775-950' and '950+' MPCE Cs, while in case of BC farming community, '225-255', '420-470', '525-615', and '950+' MPCE Cs farm households in 2003. While, in case of other community farm households of the State, the status of indebtedness was better, who belonged to '0-225', '225-255', '340-380', '380-420' and '775-950' MPCE Cs in same time.

### Major Findings of the Study

1. Through the study, we analysed the problem of farmers' indebtedness/debt burden in Haryana in detail and also compared the status of Haryana farmers to Indian [as aggregate] farmers in the milieu of indebtedness with the help of Situation Assessment Survey [2003] data along with appropriate statistical tools and techniques.
2. The data show that jointly 62.20 per cent loan amount was used in farm activities [either capital or current expenditure], while total 71 per cent loan to total loan taken was used by Haryana farmers in productive activities [i.e., farm and non-farm activities]. But, the ratio was low as compared to aggregate India [73.10 per cent]. Definitely, farm expenditure [capital and current] was the common purpose of loan taken by different sizes of landholding farmers in Haryana, but, marginal and small farmers used a significant amount of loan in marriages and ceremonies expenditure, that was 23.70 and 20.70 per cent, respectively to total amount of loan taken.
3. The IOI was very high in farmers who have possessed land between '0.01 to 0.40' ha. in Haryana and India, while ratio was minimum in farmers who have possessed land above 10.00 ha.
4. The contribution of commercial banks [including RRB's] was 63.01 per cent in Haryana and 61.69 per cent in aggregate India, while the contribution of cooperative banks was 35.35 and 33.96 per cent in Haryana and India, respectively in total formal indebtedness of farm households in 2003. Further, the share of agriculture professionals was 74.15 and 60.61 per cent in Haryana and India in total informal indebtedness of farm households during the same period. Moreover, the contribution of commercial bank was 43, cooperative was 24 and agriculture professionals was 24 per cent in total farmer indebtedness [formal and informal] in Haryana, while in case of aggregate India the contribution of same institutions were 36, 20 and 26 per cent during the period under consideration.
5. On an average 65.05 and 61.80 per cent loan was utilised in productive activities in Haryana and India during the period of survey. Further, 73.50 and 71.50 per cent was utilised in unproductive activities by the farmers who possess the land size up to 0.01 ha. in Haryana and India, respectively. Maximum loan [98.60 per cent] was utilised by farmers who possess the land size above 10 ha. in Haryana, while in case of India maximum [83.20 per cent] loan was used in productive activities who possess the land size between 4.01 to 10 ha.
6. The study also found that the average size of landholding and informal credit lending are negatively associated, while due to population growth and single family trends, the average size of landholding has been decreasing in the State as well as in aggregate India, which is a matter of concern.
7. The majority of formal borrowing is skewed towards large land holders' farm households in Haryana and India.
8. Further, the debt burden on farm households which belong to 950 + MPCE Classes in India

was more, while in case of Haryana, it was high in 615 to 775 MPCE Class farmers. The Pearson correlation co-efficient confirmed a positive and significant relationship between high indebtedness on farmers and high MPCE classes in India as well as in Haryana, although no significant difference was found between indebtedness on farmers of Haryana and India according to the different MPCE Classes. The status of Scheduled Caste [SC] and Backward Class [BC] farmers are not better, while Other Classes [OC] farmers of Haryana were found to be better as compared to the same social group of aggregate Indian farmers in case of debt burden.

9. The status of indebtedness of SC farmers were better [as compared to India] which belonged to '0-225', '225-255', '255-300', '615-775', '775-950' and '950+' MPCE Cs, while in case of BC farming community, '225-255', '420-470', '525-615', and '950+' MPCE Cs farm households in 2003. While, in case of other community farm households of the State, the status of indebtedness was better, which belonged to '0-225', '225-255', '340-380', '380-420' and '775-950' MPCE Cs in same time.

### Suggestions

1. The State government should monitor the informal mechanism of credit, because the contribution of the mechanism is 32.50 per cent in Haryana and 42.40 per cent in India in total indebtedness. Further, the involvement of agriculture professionals in total informal lending is 74.15 and 60.61 per cent in Haryana and India, respectively.
2. Increase the awareness among farmers in general and marginal and small in particular, about the disadvantages of utilisation of loan in unproductive activities and motivate them for use of loan in productive purposes.
3. The NSSO Report No. 498 [Indebtedness of Farmer Households, 2003] also reveals that

62 per cent rural households are not the member of cooperatives societies and further, only 9 per cent members of the same do not use the services of the same institutions in the State. Moreover, seeds and fertiliser services are most commonly availed by the cooperatives societies in the State. Therefore, strengthening the cooperative movement in the State is the need of the hour.

4. In addition, the government should also strengthen the self-help group movement in the State, as only one per cent of farmer households belong to a self-help group [SHG] while, indebted farmer households holding land up to 2 hectare are 70 per cent in the State.
5. The government should boost the dairy farming in the State as it is more suitable to marginal and landless farmers in support of income generation.
6. Banks should implement low-cost financial products through the generalised use of electronic payment methods, which enable financial institutions to improve their efficiency ratios, facilitate the use of low-cost distribution channels and enable application of credit risk monitoring system that decrease the default rate.
7. The RBI should take strict action against banks that do not achieve the prescribed target of agriculture sector each year. For this, RBI should make the provision of penalty on those banks that do not fulfill the prescribed target of agriculture credit in specific time.
8. The State government should also set up credit counseling centres with the help of commercial banks for advising public on gaining access to financial systems.
9. Income, Expenditure and Productive Assets of Farmer Households Survey [2003] reveals that farmers belonging to the lowest

monthly expenditure class or the poorest category have only 31 buffaloes per 100 households, whereas the highest monthly expenditure class has 113 buffaloes per 100 households in India. Therefore, the government of the State should also boost the animal husbandry as a profession among poorest people through providing better atmosphere, subsidised cattle feed, better health treatment for animals, better training of animal husbandry, etc. in the State. Because, dairy farming activities will generate some income for farmers and farmers could use this income for removal of the debt burden.

10. In this study, we also found inverse relation between size of landholding and informal lending. In this context, Joint Liability Groups °[JLG's] may be a possible step. Because, under JLG's programme, marginal and small farmers can present more land in banks as collateral against loan, and thus bank will not feel any hesitation in sanction of more credit for the marginal and small farm households. Therefore, the governments [i.e., Central and State] should motivate farmers to join the Joint Liability Groups [JLG's].
11. The State government should also boost the Non-Farming Activities in the State for enhancing the income of farmer-households for sustainable livelihood.
12. The NSS Report No. 496: 'Some Aspects of Farming' [2003] also reveals that 41 per cent farmers are not aware about crop insurance and 42 per cent said that the facility of crop insurance has not been available. Therefore, the government should provide the crop insurance facility for the farmers in general and marginal and small in particular without delay.
13. High administrative cost, lack of economics of scale in lending activities and invertebrate database of potential rural borrowers in general and farmers in particular are the

major problems in delivery of rural credit system in the country and the State. For popularising the formal borrowing, the State government, Central government and RBI should make sincere efforts for reducing the value of collateral security, develop the low cost financial products for marginal and small farmers [Chhikara and Kodan: 2011]; and reduce paper work and lowering the costs of access {transaction costs, especially in terms not only of fee and charges but also requirements for documentation are the main area for attention in the context of formal financial exclusion} [Johnson and Zarazua:2011]. Further, in this context, banks can also hire a local person for collection of the information of potential borrower/ farmers and monitoring the use of loan by the same. Thus, a sound database will be generated in one hand and NPLs also reduced in other hand.

#### **Concluding Remark**

Today, the farmer community faced many challenges i.e., marketing, high cost of cultivations, indebtedness, an adequate supply of money at affordable cost, climate, etc., and out of these factors, provision of proper supply of credit is one of the most critical issues for the sustainable development of the sector [Chhikara and Kodan: 2011; Golait: 2007]. Because, in case of agriculture, credit provides control over resources and facilitates the needed liquidity to the farmers.

The access to credit affects households welfare through two key channels [1] alternative capital constraints on households in general and farm households in particular. This can significantly improve the ability of households to procure need agriculture input and will also reduce the opportunity cost of capital incentive assets encouraging labour saving technology and raising labour productivity<sup>10</sup>, and [2] credit access increase the risk bearing capacity of households to pursue promising but risky technologies and will be



better able to avoid risk reducing but insufficient livelihood strategies. Moreover, it capitalises farmers to undertake new investments as an adaptation of new technologies in practice of farming.

Additionally, the Reserve Bank of India [2012] has also made a quick assessment to find out the relationship between institutional credit and agriculture growth. The study found that positive and statistically significant elasticity—every 1 per cent increase in real agriculture credit results in an increase in real agriculture GDP by 0.22 per cent with one year lag. Further, the Granger casualty test [based on lag length

of 1] also indicates that the casualty was unidirectional from agriculture credit to agriculture GDP. Thus, credit is one of the critical inputs for agricultural development.

Further, the provision of timely, affordable and adequate quantity of credit to the farming community is also important for the purpose of food security of the country. Because, the food security of the country depends to a large extent on the output generated by the farmers of the country.

In nutshell, the rural credit delivery system must be compatible with the goal of higher growth with better equity.

### Notes

1. Rural Non-Farm Activities: The rural non-farm activities [RNFA] are generally defined as comprising all those non-agricultural activities, which generate income to rural households [including income in kind and remittances], either through wage work or in self-employment. In other words, it includes all economic activities in rural areas except agriculture, hunting and fishing [*Lanjouw and Lanjouw: 2001*]. Since it is defined negatively, as non-agriculture, it incorporates a wide range of activities including manufacturing, petty trading, services, as well as transfer payments and remittances from temporary or seasonal migration to rural areas [*Davis and Pearce, 2001*]. The census of Haryana indicates that only 2.60 per cent of total main workers were engaged in non-farm sector in 1971 which increased from 23.52 in 1981, 26.23 in 1991 to finally 35.00 per cent in 2001].
2. Farmer may be defined as a person who operates some land [owned or taken on lease or otherwise possess] and also engaged in agricultural activities on that land in the last 365 days.
3. Generally, a farm household can be defined as a household having a farmer as its member.
4. The Report for the Technical Group to Review of Legislation on Money Lending and the Survey of Small Borrower Accounts (RBI:2004] shows that the rate of interest in informal lending is 18 to 36 per cent. While in case of formal lending it lies between 6 to 20 per cent.
5. The formal sector of rural credit is the sector in which loan transactions are regulated by legislation and other public policy requirements. The institutions in this sector include commercial banks, cooperative banks, RRBs and other registered financial institutions. The informal sector of credit is not regulated by public authorities, and the terms and conditions attached to each loan are personalised and therefore, it differs according to the bargaining power of borrowers and lenders in all cases.
6. In this study we have assumed that outstanding debt on farm household was the debt requirement of the farm households in Haryana and India.
7. Both variables [i.e., ratio of informal borrowing to total borrowing and average size of landholding] have been taken in the form of natural logarithm for econometric estimation. Because, on theoretical and empirical grounds the log linear form is superior to the linear form. A log-linear

form is more likely to find evidence of a restraint than linear form. So, the transformed natural log form of the model is i.e.,  $\text{Log } IB = a + b \log [ASLH] + \hat{a}$

8. Typically, Monthly Per Capita Expenditure [MPCE] class expresses as the level of total consumption expenditure of a household for one month.
9. The National Bank for Agriculture and Rural Development (NABARD) has launched a Joint Liability Group (JLG) scheme to provide access to institutional credit to small, marginal, tenant farmers, oral lessees and share-croppers. The JLG is an informal group comprising 4 to 10 individuals coming together for the purpose of availing of bank loan on individual basis through group mechanism against mutual guarantee, a press here said.
10. Productivity is construed as the ability and willingness of an economic unit to produce maximum possible output with given inputs and technology. Higher the output per unit of input, higher is the productivity.

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