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INDEBTEDNESS AMONG RURAL HOUSEHOLDS OF PUNJAB: AN ECONOMIC ANALYSIS

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ABSTRACT

Indebtedness among the rural people in India has always been an issue of great concern for the economists and the government and this problem is increasing day by day. The analysis shows that a major segment of the rural families of Punjab is reeling beneath indebtedness. The average volume of debt for each indebted household is maximum for large farm households and the least among the 'Other' households. Average amount of debt among all the households is the maximum among large farm households. Marginal and large farm households owe the highest amount of debt to primary agricultural cooperative societies/co-operative banks, whereas medium and small farm households owe it to commercial banks. Agricultural and non-agricultural labour families have taken the maximum volume of loans from large farmers, whereas artisan and 'Other' households have borrowed the same from commercial banks. Strengthening of co-operative sector is must for providing easy agricultural loans to marginal and small farm households. New institutional mechanism should be set like self help groups, village level cooperatives and other collective networks to cover the small or marginal producers more effectively.

Keywords: Indebtedness, Institutional sources, Rural households

Indebtedness among the rural people in India has always been an issue of great concern for the economists and the government. Punjab is one of those states which have adopted new technologies like modern agricultural machinery, chemical fertilizers, insecticides/ pesticides etc. in agriculture to achieve higher rate of agricultural development (Toor *et al*., 2016). Income of the farmers has increased but they have to invest a significant proportion of the income back into the agriculture on inputs such as HYV seeds, fertilizers and irrigation. The expenditure on crop production is increasing because of costly inputs needed to carry out their production operations. Farmers borrow money year after year to carry out the cultivation and also for consumption purposes. Most of the time farmers fail to repay the full amount or a part of loans either because the loans are large or his agricultural output is not large enough to pay off his debt (Tewari, 1969; Sidhu, 2002), so a major portion of such loans remains outstanding. Hence, farmers are not able to repay their loans mainly due to widening the gap between the prices of farm inputs and farm produce (Mahajan, 2015; Sharma, 2015). The income from various sources is insufficient to meet the customary household requirements of these households except large farmers. To meet the deficit between their minimum consumption level and income, they have to borrow money (Gian *et al., 2016*). This starts a never ending circle of debt for these households. This problem increases with illiteracy, small agricultural holdings and high spending on social ceremonies. Toor *et al.* (2016) found Rs. 108446 as an average amount of debt among rural households in Malwa region of Punjab, who paid higher rate of interest to informal sources, mainly depending on commission agents and professional money lenders for their credit needs. Singh *et al.* (2017) argued that more than four-fifths of the farming households and approximately four out of five agricultural labour houses in Punjab are underneath financial obligations. In this context, the present study tries to assess the overall debt position of the rural households in Punjab and identify the factors responsible for their indebtedness.

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MATERIALS AND METHODS

The present study empirically examines inequality of income and asset ownership, consumption expenditure and magnitude of indebtedness among the different household categories, viz. marginal, small, medium, large farm houses, agricultural labourers, non-agricultural labourers, artisan and 'Other' households in the rural areas of Punjab. The actual gathering of information is associated to the year 2015-16. Three-stage stratified sample technique has been used in the present study as follows: Selection of districts; Selection of villages; and Selection of households. The analysis is based upon the primary data, collected through a detailed schedule, of 591 sampled households involved from the 23 villages belonging to four districts

(Mansa, SAS Nagar Mohali, SBS Nagar Nawanshahr and Amritsar) of the Punjab state. Standard analytical instruments like mean and percentage, simple multiple linear regression have been used to support the findings.

RESULTS AND DISCUSSION

Category-wise extent of debt

The data showing the extent of debt among the different rural household categories in the study area has been shown in Table 1. This Table shows that 71.57 per cent of the rural households of Punjab are under debt which is slightly less than what Singh and Toor, 2005 found in their study. The percentage of indebted households is the uppermost (87.23 per cent) amid medium farm households, following this, small farm households (82.54 per cent), large farm households (82.35 per cent), agricultural labour households (75.81 per cent), non-agricultural labour households (73.79 per cent), marginal farm households (71.62 per cent), artisan households (68.42 per cent), and 'Other' households (48.04 per cent).

The average amount of debt per indebted/sampled household is Rs. 266873 / Rs. 191011 in the rural areas of Punjab. The average amount of debt per indebted / sampled household is the highest i.e. Rs. 1988357 / Rs. 1637471 for large farm households. This amount is Rs. 880000/ Rs. 767660 for medium farm households, Rs. 403635 / Rs. 333159 for small farm households, Rs. 48439 / Rs. 36720 for agricultural labour households, Rs. 262528 / Rs. 188027 for marginal farm households, Rs. 78908 / Rs. 37907 for 'Other' households, Rs. 73500 / Rs. 50289 for artisan households and Rs. 43850 / Rs. 32359 for non-agricultural labour households.

Category-wise per acre debt

The data showing the amount of debt per operated and per owned acre is presented in Table 2. For an average farming household, the amount of debt per owned acre is Rs. 93339. The category-wise amount of debt per owned acre is the highest i.e. Rs. 116924 among marginal farm households, followed by small farm (Rs. 100667), medium farm (Rs. 98043) and large farm (Rs. 56236). The amount of debt per operated acre is Rs. 71121. The category-wise amount of debt per operated acre is the highest (Rs. 87820) among small farm households. This amount is Rs. 80428 for marginal farm households, Rs. 81814 for medium farm households and Rs. 51218 for large farm households. The weight of debt is larger on small farm households in comparison to large farm households as found by Gian *et al. 2016 and 2017*. Large farm households finance their crop production operations, to a great extent, from

Table 1. Category-wise extent of debt among rural households

Household categories	No. of households		Indebted households as percentage of sampled households	Average amount of debt (Rs.)	
	Sampled	Indebted		Per sampled household	Per indebted household
Marginal farm households	74	53	71.62	188027	262528
Small farm households	63	52	82.54	333159	403635
Medium farm households	47	41	87.23	767660	880000
Large farm households	17	14	82.35	1637471	1988357
Agricultural labour households	124	94	75.81	36720	48439
Non-agri. labour households	145	107	73.79	32359	43850
Artisan households	19	13	68.42	50289	73500
Other households	102	49	48.04	37907	78908
All sampled households	591	423	71.57	191011	266873

Source: Field Survey, 2015-16

Table 2. Category-wise Amount of Debt per Acre **(Mean values, in Rs.)**

Farm household categories	Debt per owned acre	Debt per operated acre
Marginal farm households	116924	80428
Small farm households	100667	87820
Medium farm households	98043	81814
Large farm households	56236	51218
All sampled farm households	83427	71121

Source: Field Survey, 2015-16

their own savings.

Category-wise pattern of debt according to source of credit

The data showing the proportional share of debt from the different sources is provided in Table 3. An average rural household incurred 74.82 per cent of the total debt from institutional agencies and 25.18 per cent from non-institutional agencies as supported by Gian *et al.* (2017). Proportional share of non-institutional agencies is inversely associated with the farm size in the case of farming community, also, this proportional share decreases with the shift from agricultural labour households to 'Other' households. The commercial banks are the most important source of credit for an average rural household, contributing almost fifty per cent of the total debt as found by Satish, 2006, Kaur and Kaur, 2018 and Singh and Kaur, 2018). This proportion is positively associated with the farm size in the case of farming community. The primary agricultural cooperative societies/co-operative banks are the second important source to which an average rural household owes 23.07 per cent of the total debt. The money-lenders/ commission agents are the third important source of debt for an average rural household, contributing 15.91 per cent of the total debt. This proportion is inversely associated with the farm size in the case of farming community, except for small farm households. At the fourth rank appears large farmers to whom an average rural household owes 4.58 per cent of the total debt. Though, marginal and small farm households have borrowed money from this source, but agricultural labour households (49.79 per cent), artisan households (39.25 per cent), non-agricultural labour households (29.05 per cent) and 'Other' households (13.45 per cent) are the ones who owe a major share of their debt to this source. All farm households and 'Other' households mostly borrow from commercial banks, primary agricultural cooperative societies/co-operative banks and money-lenders/commission agents. Agricultural labour, non-agricultural labour and artisan households owe major debt to primary agricultural cooperative societies/banks, private finance companies as well as large farmers as they are the major source of credit to these categories respectively. On the whole, agricultural and non-agricultural labour households are largely dependent on non-institutional sources to which they owe 84.84 and 80.67 per cent of the total debt, respectively. The share of money-lenders/commission agents for all categories except large farmers is sizable because they provide loans for consumption and other credit requirements of farm households, besides meeting the production requirements (Singh and Toor, 2005). Even so many years of planned economic development, the poor peasantry and labour households are still being exploited by non-institutional agencies which add more miseries to their lot.

Category-wise pattern of debt according to purposes

The data provided in Table 4 exhibits the pattern of debt according to the different purposes of debt. Debt has been incurred mainly for the purchase of farm inputs, machinery and implements, marriages and other socio-religious ceremonies, house construction, addition of rooms and major repairs, domestic needs, education, healthcare, repayment of debt and dairying. Purpose-wise, the highest borrowing is for purchase of farm inputs, machinery and implements and is positively associated with the farm size among the farming community (Gian *et al., 2017*). This proportion is as high as 39.63 per cent for small farm households, followed by for large farm households (34.78 per cent), medium farm households (27.38 per cent) and marginal farm households (25.00 per cent). Farm households, especially marginal and small farm households, have taken loans to convert traditional agriculture to depending on machines and mechanical tools one. But, they cannot afford this kind of investment on their own due to their low levels of income.

The second main purpose to incur debt is for the expenditure on fulfilling domestic needs (Gian *et al.,* 2016*,* Kaur and Kaur, 2018). This proportion is the highest for agricultural labour households; they spend 64.35 per cent on this purpose and lowest for artisan households (9.89 per cent). The average annual consumption expenditure of marginal farm, small farm, medium farm, agricultural labour, non-agricultural labour, 'Other' and artisan households exceeds their annual income and in trying to maintain the minimum level of consumption, they borrow. The third purpose to owe debt is for the expenditure on house construction, repair and enlargement, with highest (23.12 per cent) debt proportion for large farm households and lowest for non-agricultural labour households (3.84 per cent) for this purpose. The fourth purpose to owe debt is for the expenditure on marriages and other socio-religious ceremonies. The medium farm households have spent the highest (27.55 per cent) proportion of their debt on this purpose, while the same is least in case of small farm households (1.19 per cent). A small proportion i.e. 2.66 per cent of the total debt is incurred on health care services. This proportion is the highest (26.37 per cent) for artisan households and the lowest (0.94 per cent) for medium farm households. An average farming household spends 2.31 per cent of the total debt on immigration. This proportion is the highest (12.04 per cent) for marginal farm households and the lowest (0.50 per cent) for medium farm households. Non-agricultural labour households have also spent a sizable proportion

Table 3. Category-wise Pattern of Debt Incurred from Different Credit Agencies **(in Per cent)**

Source of debt	Marginal farm households	Small farm households	Medium farm households	Large farm households	Agricultural labour households	Non-agri. labour households	Artisan households	Other households	All sampled households
Institutional sources									
Primary agri. cooperative societies/ banks	25.89	20.43	27.83	23.75	8.90	7.69	6.86	17.22	23.07
Commercial banks	40.42	41.97	54.99	59.76	6.26	11.64	48.67	50.99	47.99
Land development banks	4.20	3.05	2.61	2.95	0.00	0.00	0.00	0.00	2.65
Regional rural banks	2.01	1.58	0.83	1.26	0.00	0.00	0.00	0.00	1.12
Sub-total	72.53	67.03	86.25	87.71	15.16	19.33	55.52	68.21	74.82
Non-institutional sources									
Money-lenders/ commission agents	24.59	26.92	13.75	12.29	0.00	5.54	0.00	6.34	15.91
Traders/ shopkeepers	0.00	0.00	0.00	0.00	27.76	18.18	0.52	1.42	1.93
Large farmers	1.80	1.91	0.00	0.00	49.79	29.05	39.25	13.45	4.58
Relatives and friends	1.08	0.00	0.00	0.00	2.20	5.54	0.00	0.52	0.47
Private finance companies	0.00	4.15	0.00	0.00	5.10	22.36	4.71	10.06	2.29
Sub-total	27.47	32.97	13.75	12.29	84.84	80.67	44.48	31.79	25.18
Total	100	100	100	100	100	100	100	100	100

Source: Field Survey, 2015-16

Table 4. Category-wise Pattern of Debt Incurred for Different Purposes **(Percentage)**

Purpose of debt	Marginal farm households	Small farm households	Medium farm households	Large farm households	Agricultural labour households	Non-agricultural labour households	Artisan households	Other households	All sampled households
Farm inputs, machinery & implements	25.00	39.63	27.38	34.78	0.00	0.00	0.00	0.00	27.78
Rent of land	0.00	0.00	4.85	4.31	0.00	0.00	0.00	0.00	2.61
Dairying	3.77	0.00	0.28	0.00	6.26	2.28	0.00	2.35	0.98
Education	8.51	5.15	4.68	4.60	6.06	6.27	16.75	16.06	5.83
Other productive works	0.11	1.48	0.00	1.44	0.60	3.07	9.42	13.42	1.33
House construction, addition of rooms and major repairs	7.30	6.12	15.38	23.12	0.00	3.84	10.47	6.21	13.12
Marriages and other socio-religious ceremonies	6.47	1.19	27.55	0.00	14.28	10.32	27.11	26.38	11.96
Domestic needs	30.65	36.30	11.09	11.14	64.35	58.14	9.89	32.99	23.04
Health care	1.98	3.05	0.94	1.69	8.46	11.57	26.37	2.59	2.66
Repayment of debt	4.17	5.53	7.34	18.14	0.00	0.00	0.00	0.00	8.36
Foreign	12.04	1.55	0.50	0.79	0.00	4.52	0.00	0.00	2.31
Total	100	100	100	100	100	100	100	100	100

Source: Field Survey, 2015-16

(4.52 per cent) for this purpose. The share of repayment of debt is the highest for large farm households (18.14 per cent) and the lowest for marginal farm households (4.17 per cent).

Category-wise pattern of debt according to rate of interest

The relative shares of the different ranges of interest rates are shown in Table 5. The Table reveals that an average rural household owe 40.01 per cent of the total debt at the rate of interest less than 6 per cent, highest in case of large farm households. Another substantial proportion of debt, 22.56 per cent of an average rural household falls in the interest range of 12-18 per cent per annum, highest in case of artisan households. About 20 per cent of the total outstanding debt is between 6-12 per cent per annum interest rate, highest in case of medium farm households and lowest by artisan households. The Table 5 also shows that 14.14 per cent of the total debt has been outstanding at the rate of interest in the range of 18-24 per cent per annum, highest (38.36 per cent) for non-agricultural labour households.

The Primary Agricultural Cooperative Societies/ Cooperative Banks and Commercial Banks which charge 4-18 per cent rate of interest are the main source of credit for the rural households. The commission agents, money-lenders, traders and large farmers charge between 18-40 per cent rate of interest; and they are the main source of credit for agricultural labour and non-agricultural labour households. Even though interest rates charged by the non-institutional agencies are quite high, but, still the marginal and small farm households, agricultural and non-agricultural labour households depend upon them. Mainly due to non-availability of loans to them from the institutional agencies for consumption, marriages and other socio-religious ceremonies.

Category-wise determinants of indebtedness

The amount of debt at a point of time is influenced by several economic and non-economic factors. It is hypothesized that indebtedness depends upon family size, proportion of earners, total income, educational level of head of the family, average propensity to consume, farm size and ratio of credit from non-institutional sources to institutional sources. Multiple regression model results obtained in this context are presented in Table 6.

Marginal farm households

The regression coefficient for educational level of head of the family is negative and statistically significant at 1 per cent level of significance, explaining that indebtedness decreases as educational level of head of the family increases. The regression coefficient for average propensity to consume is positive and significant at 1 per cent level of significance, which explains indebtedness increases as average propensity to consume increases. The regression coefficient for farm size is positive and significant at 10 per cent level of probability, which indicates that indebtedness increases as farm size goes up. The regression coefficient for ratio of credit from non-institutional sources to institutional sources is positive and significant at 1 per cent level of significance, which explains indebtedness increases as ratio of credit from non-institutional sources to institutional sources increases. The coefficient of multiple determinations is 0.43, thereby explaining 43 per cent variation in dependent variable.

Small farm households

The regression coefficient for educational level of head of the family is negative and statistically significant at 1 per cent level of significance, which explains that indebtedness decreases as educational level of head of the family increases. The regression coefficient for ratio

Table 5. Category-wise Pattern of Debt according to the Rate of Interest **(Percentage)**

Household categories	Rate of interest (per cent, per annum)						
	< 6	6-12	12-18	18-24	24-30	30 & above	Total
Marginal farm households	48.10	11.20	30.95	8.27	1.47	0.00	100
Small farm households	39.20	6.38	41.91	10.01	2.50	0.00	100
Medium farm households	32.76	33.54	15.05	18.65	0.00	0.00	100
Large farm households	57.92	24.41	8.62	7.62	1.44	0.00	100
Agricultural labour households	14.66	2.20	15.11	25.54	22.84	19.66	100
Non-agricultural labour households	12.08	2.45	26.64	38.36	12.87	7.59	100
Artisan households	6.86	0.52	77.45	15.18	0.00	0.00	100
Other households	25.95	5.41	48.11	19.55	0.98	0.00	100
All sampled households	40.01	19.69	22.56	14.14	2.49	1.11	100

Source: Field Survey, 2015-16

Table 6. Category-wise Factors Determining Indebtedness among Rural Households

(Results of multiple regression analysis)

Factor	Marginal farm households	Small farm households	Medium farm households	Large Farm households	Agricultural labour households	Non-agricultural labour households	Artisans households	Other households	All sampled households
Family size	-12881.76 (-1.13)	-11511.07 (-0.77)	27287.38 (0.44)	-55881.63 (-0.63)	-1224.52 (-0.51)	-4082.90 (-1.57)	6188.29 (1.18)	2383.21 (0.56)	19621.60 (2.17**)
Proportion of earners	1480.55 (1.26)	53.11 (0.05)	5521.57 (0.70)	-15707.19 (-0.95)	134.00 (0.82)	113.90 (0.71)	-1124.07 (-1.37)	-109.52 (-0.36)	1316.52 (1.61)
Total income	0.47 (1.25)	0.88 (1.29)	0.48 (0.26)	-0.11 (-0.05)	-0.06 (-0.27)	0.73 (4.40*)	0.71 (1.81***)	0.01 (0.30)	-0.27 (-1.40)
Educational level of head of the family	-180606.02 (-3.83*)	-180549.44 (-3.54*)	-613482.10 (-1.68***)	-590776.73 (-0.79)	-13413.55 (-2.28**)	4023.30 (0.61)	-88312.50 (-3.54*)	-72547.95 (-4.77*)	-193497.14 (-5.43*)
Average propensity to consume	85102.11 (3.97*)	86076.03 (1.47)	1142206.02 (2.96*)	4229215.36 (2.79*)	-2393.88 (-0.31)	47371.96 (5.56*)	10830.31 (1.07)	-6992.67 (-1.17)	59610.21 (2.82*)
Farm size	77996.42 (1.83***)	51107.42 (1.14)	22856.19 (0.25)	78539.07 (0.65)	-	-	-	-	62585.31 (7.79*)
Ratio of credit from non-institutional sources to institutional sources	366.73 (2.30**)	1952.92 (4.33*)	-767.77 (-0.23)	143997.03 (1.27)	214.97 (6.63*)	97.55 (2.95*)	-	96.18 (0.94)	229.56 (1.20)
R^2	0.43	0.47	0.40	0.67	0.36	0.28	0.79	0.25	0.39

Source: Field Survey 2015-16
Note: Figures in parentheses indicate t-values.
* Significant at 1 per cent
** Significant at 5 per cent
*** Significant at 10 per cent

of credit from non-institutional sources to institutional sources is positive and significant at 1 per cent level of significance, which explains indebtedness increases as ratio of credit from non-institutional sources to institutional sources increases. The coefficient of multiple determinations is 0.47, explaining 47 per cent variation in the dependent variable is due to these variables.

Medium farm households

The regression coefficient for educational level of head of the family is negative and statistically significant at 10 per cent level of significance, which explains indebtedness decreases as educational level of head of the family increases. The regression coefficient for average propensity to consume is positive and significant at 1 per cent level of significance, which explains indebtedness increases as average propensity to consume increases. Taken together, all the variables explain 40 per cent variations in the dependent variable, the coefficient of determinants being 0.40.

Large farm households

The regression coefficient for average propensity to consume is positive and significant at 1 per cent level of significance, which explains indebtedness increases as average propensity to consume increases. The coefficient of multiple determinations is 0.67, suggesting that explanatory variables explain 67 per cent variation in the dependent variable.

Agricultural labour households

The regression coefficient for educational level of head of the family is negative and statistically significant at 5 per cent level of significance, which explains indebtedness decreases as educational level of head of the family increases. The regression coefficient for ratio of credit from non-institutional sources to institutional sources is positive and significant at 1 per cent level of significance, which explains indebtedness increases as ratio of credit from non-institutional sources to institutional sources increases. Taken together, all the variables explain 36 per cent variations in the dependent variable, as the co-efficient of determination is 0.36.

Non-agricultural labour households

The regression coefficient for total income, average propensity to consume and ratio of credit from non-institutional sources to institutional sources are positive and statistically significant at 1 per cent level of probability, which explains indebtedness increases as total income, average propensity to consume and ratio of credit from non-institutional sources to institutional sources increases. The coefficient of multiple determinations is 0.28, suggesting that explanatory variables explain 28 per cent variation in the dependent variable.

Artisan households

The regression coefficient for total income is positive and statistically significant at 10 per cent level of probability, explaining that the capacity to avail loans increases with the increase in income and hence, the indebtedness. The regression coefficient for educational level of head of the family is negative and statistically significant at 1 per cent level of significance, which explains indebtedness decreases as educational level of head of the family increases. Kaur and kaur also found the regression coefficient for education level negative and significant. Taken together all the variables explain 79 per cent variations in the dependent variable, the co-efficient of determination being 0.79.

'Other' households

The regression coefficient for educational level of head of the family is negative and statistically significant at 1 per cent level of significance, which explains indebtedness decreases as educational level of head of the family increases. The explanatory variables explain 25 per cent variation in the dependent variable, the coefficient of multiple determinations being 0.25.

All sampled households

The estimates of regression coefficient suggest that the variations in the magnitude of indebtedness of all the sampled households are explained to a large extent by family size, educational level of head of the family, average propensity to consume and farm size. The regression coefficient for family size is positive and statistically significant at 5 per cent level of significance, which explains indebtedness increases as family size increases (Singh and Toor, 2005). This may be due the increase in total expenditure of the households on maintenance of house, marriages, religious ceremonies and other social ceremonies. The regression coefficient for proportion of earners is positive but statistically insignificant. This may due the reason that, as proportion of earners increases capacity to avail loans also increases. The regression coefficient for ratio of credit from non-institutional sources to institutional sources is positive but statistically insignificant. The regression coefficient for educational level of head of the family is negative and statistically significant at 1 per cent level of significance, which explains indebtedness decreases as educational level of head of the family increases. The regression coefficient for average propensity to consume and farm size is positive and significant at 1 per cent level of significance, which explains indebtedness increases as average propensity to consume and farm size increases. Taken together all the variables explained 39 per cent variations in the dependent variable.

To conclude, indebtedness among the rural people in India has always been an issue of great concern for the economists and the government. In this context, the present study tries to assess the overall debt position of the rural households in Punjab and indentify the factors affecting their indebtedness. The analysis is based upon the primary data, collected through a detailed schedule for 591 sampled households selected from the 23 villages belonging to four districts of the Punjab state. The analysis shows that a major segment of the rural households in the state of Punjab is reeling under indebtedness which is the highest among medium farm households, followed by large farm, small farm, marginal farm, artisan, non-agricultural labour, agricultural labour and 'Other' households. Marginal and large farm households owe the highest amount of debt to primary agricultural cooperative societies/co-operative banks, whereas medium and small farm households owe it to commercial banks. Agricultural and non-agricultural labour households have taken the highest amount of loans from large farmers, whereas artisan and 'Other' households have borrowed the same from commercial banks. Agricultural labour, non-agricultural labour and artisan households also depend upon non-institutional agencies for their household requirements. Purpose-wise, the highest share of debt taken is for purchase of farm inputs, machinery and implements; and this proportion is positively associated with the farm size. Fulfilment of consumption needs, house construction, repair & enlargement, as well as marriages and other socio-religious ceremonies are other important purposes for taking loans. An average rural household has incurred major share of the total debt at the rate of interest less than 6 per cent, followed by that in the interest range of 6-12 per cent per annum. Regression results show that the indebtedness increases as family size increases. The proportion of earners and ratio of credit from non-institutional sources to institutional sources are positively but insignificantly related to indebtedness. Total income of household has negative and insignificant impact on indebtedness. Also, indebtedness decreases as educational level of head of the family increases. Average propensity to consume and farm size have a positive and significant impact in reducing indebtedness.

Even more strengthening of co-operative sector is needed for providing easy agricultural loans to marginal and small farm households. Sale of quality seeds, fertilizers, insecticides and pesticides, etc. through village level primary agricultural co-operative societies should be insured. New institutional mechanism such as self help groups, village level cooperatives and other collective networks should be set up to cover the small or marginal producers more effectively. Provision of easy and low interest institutional loans to agricultural labour households, non-agricultural labour households, artisan households and 'Other' households is desirable to help them come out of the clutches of non-institutional lenders. Developing a system wherein there should be no cost of borrowing except interest. These are some of the suggestions for reducing the problem of indebtedness.

Authors' contribution

Conceptualization of research work and designing of experiments(JST, GS); Execution of field/lab experiments(NK); Data analysis and interpretation of results(NK, JST): Preparation of manuscript(NK, JST).

LITERATURE CITED

Fahimuddin 1983. Indebtedness among tribals: A study. *Kurukshetra* **31**: 15-18.

Kaur R and Kaur G 2018. Indebtedness among rural households-A case for Bathinda district of Punjab. *Indian J Econ Dev* **14**: 314-23.

Mahajan R K 2015. Dwindling agricultural performance and lifeless rural economy in India. In *Agriculture Performance and Rural Development in India*, Gian Singh (eds.). Publication Bureau, Punjabi University, pp. 20.

Narayanamoorthy A and Kalamkar S S 2005. Indebtedness of farmer households across states: Recent trends, status and determinants. *Indian J Agric Econ* **60**: 289-301.

Satish P 2006. Institutional credit, indebtedness and suicides in Punjab, *Econ Politi Weekly* **41**: 2754-61.

Sidhu H S 2002. Crises in agrarian economy in Punjab: Some urgent steps. *Econ Politi Weekly* **37**: 3132-338.

Singh G, Anupama, Kaur G, Kaur R and Kaur S 2016. Inter-regional analysis of indebtedness among farmers and agricultural labourers in rural Punjab. *Res J Social Scie* **24**: 112-42.

Singh G, Anupama, Kaur G, Kaur R and Kaur S 2017. Indebtedness among farmers and agricultural labourers in rural Punjab. *Econ Politi Weekly* **52**: 51-57.

Singh G, Anupama, Kaur G, Kaur R and Kaur S 2017. Levels, pattern and distribution of income of farmers and agricultural labourers in rural Punjab: Inter-regional analysis. *Indian J Agric Econ* **13**: 39-51.

Singh S and Toor M S 2005. Agrarian crisis with special references to indebtedness among Punjab farmers. *Indian J Agric Econ* **60**: 345-47.

Singh L and Kaur A 2018. Extent of credit availed by rural households in Punjab: Purpose-wise and source-wise analysis. *Indian J Econ Dev* **14**: 264-71.

Sharma N 2015. Agrarian crises and diversification strategy for sustainable agricultural development in Punjab. *Indian J Econ Dev* **11**: 31-40.

Tewari S C 1969. Agriculture indebtedness in hilly farms of Uttar Pradesh. *Indian J Econ* **49**: 1449-52.

Toor J S, Tiwana B S and Singh S 2016. Rural indebtedness in Malwa region of Punjab. *Indian J Econ Dev* **12**: 431-38.