



Burden of Debt on Peasantry: A Case Study of Punjab

Shaveta Kohli¹ and Amarjeet Singh²

¹Assistant Professor, Department of Economics, Central University of Jammu, Samba-181143

²Finance Manager, ZTM & BPD Unit, ICAR-LARI, Pusa, New Delhi- 110012

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Abstract: This study investigates the issue of debt on Punjab farmers. We have conducted survey of two districts of Punjab to examine the debt scenario. A composite development index has been generated to rank all the districts of Punjab then district with the highest index value and with the least has been chosen for the survey. As observed that 66.7 per cent farmers were under debt in sampled households. Marginal and Small farmers per acre intensity is much higher compared to the upper category. Nevertheless, the amount of debt was increased with land holding size. The higher rate of interest charged by non-institutional is pushing the farmers into debt trap.

Keyword: Debt, Peasantry, Punjab

Introduction

Agriculture is indispensable part of our economy. It's playing a significant role in generating employment opportunities and contributing around 17% of GDP in India (CSO, 2020-21). The countryside population is sustaining their livelihood through agriculture & allied activities. Green revolution practices have introduced during 1960, in the initial stage the gain of yield was supported to compensate the increasing cost of inputs. Over the period, the impact of green revolution has petered out. It means that the productivity per hectare reached at its stagnant stage. Even negative growth (-0.50) has estimated for crop sector from 2011-12 to 2015-16 at 2011-12 prices. The cost of cultivation has shown an increasing trend and comparatively the returns were not sufficient and ultimately it turned to increase the debt on farmers household as well as per hectare. Subsequently, the penetration of machinery has increased with other input practices. The Punjabi farmers harnessed the practices of higher yielding varieties with high dose of NPK as a result; high cost of cultivation per acre further pushed the farmers into agrarian crisis. It is important to mention that farmers have applied the input practices with high potential to increase the maximum yields of the crops. This in turn has increased the cost per acre to a large extent, which reduces the return of a farmer and not even covers the basic need of farmers.

The fact can't be denied that in India agriculture is still depended on natural calamity. Farmers take huge loans for inputs like machinery, chemical fertilizer, high yielding varieties of seed or to repay the old debt etc. This accumulation of debt further enhances the burden of debt per acre on farmers. The study investigates the debt stipulation of Punjab peasantry.

Data and Analysis

The study is based on primary data which has been conducted in 2 districts of Punjab in 2012 to examine the issue of indebtedness among farmers. The estimates have been drawn on the basis of a sample of 300 farmer households. The index value was formulated for the 22 districts of Punjab with the help of taxonomic methodology to select the two districts. On the basis of the ranking of all the 22 districts, two districts were chosen for the survey namely Saheed Bhagat Singh Nagar (SBN) and Gurdaspur. Furthermore, the same methodology followed to choose the moderately developed block from each district, and finally selected 3 villages from each block. The household has chosen with stratified random sampling method and similar methodology applied to catch the size of land-holding. Indebtedness of the different categories of farmers viz. marginal (<1 acre), small (1-2 acres), semi-medium (2-5 acres), medium (5-10 acres) and large (>10 acres) in the rural areas of Punjab has been examined. To describe the results descriptive statistics has been employed.

Moreover, Tobit model has been castoff to identify the determinants which were causing debt trap. Tobit model is a censored regression model that is generally fit and there is censored number in depended variable. As observed that some of households were free from debt. Therefore, at that condition to capture the relationship of dependent and independent variable this model is well suited. The dependent variable is total debt amount on per household and independent variables are Household Size, Age, Age Square, Land Possessed, Tractor, Tubewell, Two-Wheeler, Four-Wheeler, Education-Secondary and Above, Family Member Involved in Non-Farm Activities, Members having their Wards Abroad, Rate of Interest, yield per Acre, Distance from Town, Information Accessed from KVK, Information Accessed from TV, Attended Training Programme has been considered.

The Tobit model is given by the following:

$$Y_i = \begin{cases} Y_i^* \\ 0 \end{cases} \quad \text{if } Y_i > 0$$

If $Y_i^* < 0$

Where $Y_i^* = X_i \beta + \varepsilon_i^*$

$$\varepsilon_i, Y_i^* \sim N(0, \sigma^2)$$

β is a $k \times 1$ vector of unknown parameters; X_i is a vector of known constants; ε_i are residuals that are independently and normally distributed with mean zero and a common variance σ^2 . Censoring is a common mechanism that restricts the range of dependent variables.

Results and Discussion

Various factors have been considered to know the debt scenario in Punjab. The socio-economic indicator has been examined i.e., education, age, land holding size, source of loan, expenditure on various activities, per household debt, per acre debt. etc. The banking habit was not familiar in countryside, mostly farmers linked with conventional source. Farmer hesitated to get loan from banking sector. With the passage of time education motivate the farmers to get loan from institutional source. Table 1 shows the education level of the head of the household. As observed that 47 per cent farmers have completed their secondary and 22 per cent passed middle school. Education promotes the farmer to get a loan from Institutional source and helps in generating aware about new technology.

Table 1: Education level of the Head of Sampled Households

<i>Category</i>	<i>Frequency</i>	<i>Percentage</i>
Illiterate	2	6.3
Primary	4	1.3
Middle	67	22.3
Secondary	142	47.3
Higher Secondary	31	10.3
Diploma/ Certificate Course	6	2.0
Graduate	29	9.7
Post Graduate and Above	2	0.7
Total	300	100.0

Source: Field Survey, 2012

The agrarian distress of Punjab farmers can be measured from their situation of debt. Table 2 portrays the category wise debt stipulation of farmers, through the random sampling and around 25.3, 27.0, 28.0, 19.0 and 0.7 % marginal,

small, semi-medium, medium and large farmers respectively have been considered. As observed that 66.7% farmers were under debt. Only 33.3 percent farmers were free from debt. It is important to mention that around 71.4% semi-medium and 87.7% medium farmers were under debt. It means these categories were investing higher amount on machinery with other practices of inputs owing to tenacious involved in agricultural activities. The marginal and small farmers were getting loan to sustain their daily routine consumption. The small farmers relied on family labour more as compared to semi-medium, medium and large farmers. A medium and large farmer requires more of outside labour for agricultural activities. As table discern that as the land size increases consequently incidence of debt is also swelling. Nonetheless, burden of debt is high on marginal and small farmers because of lack of repaying capacity.

Table 2: Category-wise Proportion of farmers Indebted and free from debt

<i>Category</i>	<i>Percentages farmers</i>	<i>Indebt Farmers</i>	<i>Free from debt</i>
Marginal	25.3	55.3	44.7
Small	27.0	56.8	43.2
Semi-medium	28.0	71.4	28.6
Medium	19.0	87.7	12.3
Large	0.7	100.0	0.0
Total	100.0	66.7	33.3

Source: Field Survey, 2012

District wise debt condition has been examined and it is found that debt increases with the size of landholding. In case of first three land size categories, it is found that in district Gurdaspur farmers were more burdened with debt as compared to SBN. Medium and Large farmers were found to be more indebted in SBN.

Table 3: Category wise Average Outstanding Debt on Sampled Household

<i>Farm Size</i>	<i>Gurdaspur (Rs.)</i>	<i>SBN (Rs.)</i>
Marginal	106891.55	98606.53
Small	146976.04	118912.65
Semi-medium	185847.25	148793.03
Medium	381719.58	289533.76
Large	636750.00	963000.00
Overall	180311.00	261015.30

Source: Field Survey, 2012

Moreover, debt amount has been correlated with per acre, as noticed that per acre outstanding debt on marginal farmers is around ₹79109 (table 4) followed by small, semi-medium, medium and large farmers. The per acre debt amount was decreasing with increase the size of land holding. Ultimately the marginal and small farmers were under deep debt crisis. Debt amount is also calculated on operated land because of marginal and small farmers were engaged leased-in land to sustain their livelihood in addition to enhance their income, as observed that calculated share has distributed and less amount recorded as describe in table 4.

Table 4: Category wise distribution of Debt per Acre on Sampled Household

<i>Category</i>	<i>Debt Per Acre (Owned) (Rs)</i>	<i>Debt Per Acre (Operated) (Rs.)</i>
Marginal	79109.16	24752.28
Small	43478.44	30165.75
Semi-medium	31104.14	22873.51
Medium	29363.04	27168.65
Large	15343.37	13405.26

Source: Field Survey, 2012

It is observed that 74 % farmers were linked with institutional source to obtain the debt and 24 % (table 5) farmers approached to non-institutional source. It is important to mention that marginal, small and semi-medium farmers were showed their interest on co-operative society. It is a truth that cooperative societies are famous to provide the small debt amount at low rate of interest with easy term and conditions in countryside. As per the survey, these co-operatives were trying to achieve a goal to release the farmers from the clutches of non-institutional source of obtaining credit, which were charging higher rate of interest.

Table 5: Category-wise Source of Debt (In percentage)

	<i>Marginal</i>	<i>Small</i>	<i>Semi-Medium</i>	<i>Medium</i>	<i>Large</i>	<i>Overall</i>
Institutional						
PACS	40.5	39.1	50	34		41
Commercial Banks	21.5	32.6	25	52	50	33
Non-Institutional						
Money-lender	19	4.35	3.33	6		8
Friends & Relatives	19	23.91	21.7	8	50	19
Total	100	100	100	100	100	100

Source: Field Survey, 2012

As recorded that non-institutional source was charging at the rate of interest from 24 % to 48 % per annum. This is an exploitative rate of interest which hard-pressed the farmers as a result pushed them into vicious circle of debt. To get rid from the clutches of non-institutional source, farmers approached to institutional source to repay the debt. Awareness and easy availability of debt from institutional source will help the farmers to get rid from the clutches of money lender. Still there is need to improve the functioning of commercial banks and make credit available to the farmers on easy terms and conditions.

Furthermore, purposively the data has been collected to know the purpose of loan. As noticed through survey the major part of debt is invested to purchase machinery & fertilizers and 6 per cent (table 6) for other farm implements (capital expenditure).

Table 6: Purpose of Debt

<i>Purpose</i>	<i>Percentages</i>
Capital Expenditure in Farm Business	6.0
Current Expenditure in Farm Business	78.5
Consumption Expenditure	3.5
Marriages and Ceremonies	1.5
Education	2.0
Medical Expenditure	0.5
Other Expenditure (for sending son abroad, repay to ML, House Construction)	8.0

Source: Field Survey, 2012

It is pertinent to mention that the institutional loan is usually used for agriculture assets and non-institutional loan obtained to fulfill the daily routine consumption as well as to support at time interval from sowing to harvest by farmers.

Determinants of Indebtedness

Various factors have been identified which were pushing the peasantry into debt crisis. To regress the regressor the Tobit Model has been fitted. Debt amount is a dependent variable which is affected by various independent variables. In the earlier stage of lifespan, there is a lesser requirement of debt. The coefficient of age and age square variables shows that at the initial stage as the age of a farmer increases, the burden of debt reduces. The possession of a land is a

symbol of prosperity for farmers. Outcome shows that size of land holding has a significant impact on debt because the capacity of loan borrowers increases with large size of holding. Possession of a tractor significantly reduces the burden of debt on a farmer as it gives them additional benefits as well.

Table 7: Results of Tobit Model

<i>Debt is Dependent Variable</i>		<i>Estimated Co-efficient</i>	<i>Standard Error</i>
<i>Sr. No.</i>	<i>Independent Variables</i>		
1.	Ln* Household Size	0.8473	0.5852
2.	Ln Age	-5.096	6.087
3.	Age Square	0.0025***	0.0013
4.	Ln Land Possessed	0.8759**	0.3462
5.	Tractor	-1.0039***	0.5695
6.	Diesel Tubewell	1.1565***	0.6546
7.	Two-Wheeler	2.0582***	1.1837
8.	Four-Wheeler	0.7732	0.5798
9.	Education -Secondary and Above	0.2272	0.5365
10.	Family Member Involved in Non-Farm Activities	-2.1969	0.5931
11.	Members having their Wards Abroad	-0.3290	0.5689
12.	Ln Rate of Interest	4.4812	0.2395
13.	Ln Yield per Acre	0.8558	0.5927
14.	Ln Distance of Nearest Town	-0.4768	0.4749
15.	Information Accessed from KVK	0.3606	0.5755
16.	Information Accessed from TV	0.6738	0.6537
17.	Attended Training Programme	-0.3855	0.9426
	Constant	9.37188	20.99808
Diagnostic Tests			
	Log likelihood	594.9558	
	LR chi2(17)	404.53	
	Pseudo R ²	0.2537	
	No. of Observations	300	

Source: Author's own Calculations

Note: *,**& *** indicate that the values are significant at 1, 5 and 10 % level of significance

Ln Refers to Log form of a Variable

They cultivate the land of other farmers who do not possess their own tractor for cultivation and charge money for that which gives them additional income.

The use of diesel tubewell showed a significant impact on indebtedness which increases by 1.15 per cent.

Conclusion

Punjab agricultural sector is reached at deplorable condition which is one of important sectors for Punjab economy. The farmers effected by deep crisis as outcome is committing suicides (Singh Amarjeet, 2011, Singh Amarjeet and Singh Jaspal, 2016, Singh Amarjeet. *et. all.* 2021). To sustain the crop sector yield, farmers applying affluent input practices for which they were paying high cost, therefore, they need more debt to invest on expensive agricultural inputs as well as for fulfilling their routine obligations, which not be able to fulfill with only agricultural income because farmer unable to get remunerative price of their produce. As noticed that marginal and small farmers per acre debt is severe. It is observed that non-institutional source is still exit in countryside and popular because of easy availability of credit. Nevertheless, the evil consequence is charging high rate of interest which is pushing them into debt trap. It is difficult for famers to get rid from the clutches of the non-institutional source. It cannot be denied from the fact that non-institutional source is highly beneficial for fulfilling the immediate requirement of farmers which in turn exploit the farmers with exploitative rate of interest. There is need to improve the banking sector credit availability at low rate of interest with the condition of easy process. The input practices cost has climbed comparatively profitability has declined. As observed that productivity per hectare is stagnant and there is need to improve the research and technology to increase the yield per acre. The improvement of seed technology would be healthier to increase the yield with other input practices. It is suggested that farmers need to be attached with processing unit as it will solve the problem of market as well as can motivate and shift the farmers to cultivate high value crop. Processing unit could be helping in improving the market efficiency. Government interference is inevitable to provide remunerative price to farmers. It is suggested that there is need to implement the whole process precisely.

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