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Agricultural Credit: Are There Two Distinct Classes of Borrowers?

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Since the nationalisation of banks in 1969, the share of commercial banks in agricultural credit has been steadily growing. But not many empirical studies on the class of borrowers who have migrated to these banks in the last three decades are available. An impressionistic view about the characteristics and qualities which distinguish a commercial bank borrower from a co-operative bank borrower exists amongst practitioners and academicians of rural finance. However, there is an absence of literature on the distinguishing features or characteristics of a co-operative bank borrower as compared to a commercial bank borrower. The existing literature discusses the issue from the supply side or the institutional angle. Even the Khusro Committee discusses the relative shares and role of the institutions in rural finance, their costs and margins and their systems and procedures. It does not discuss about the clients of these institutions. (Reserve Bank of India, 1989). While discussing the relative shares of different institutions in rural credit one need to go beyond the four walls of the institutions and examine the basic characteristics of the groups of the borrowers who prefer one institution to the other. One need to know the distinguishing features which characterise a typical commercial bank borrower or a typical co-operative bank borrower.

For a scientific analysis regarding the same, one needs to go beyond macro level impressions about the characteristics to examine the micro household level information on the distinguishing characteristics of the households. Such an analysis will not only be useful in enriching our insight into the reasons for groups of borrowers approaching one type of credit institution as opposed to another but also in empirically identifying the borrower groups so that the credit institutions can reorient their policies and programmes. Such micro household level information on the distinguishing characteristics of the borrower groups assumes even greater importance in the case of an agriculturally prosperous state like Punjab where despite the low level of incidence of poverty (Shergill and Singh, 1995) the level of indebtedness is relatively high (Shergill, 1998). This phenomenon was noticed even in pre-partition Punjab by Malcolm Darling who states in his monumental work, "the

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Punjab which is the most prosperous province in the country is also possibly the most indebted" (Darling, 1925).

The Methodology of the Study

The main focus of the present paper is to isolate and identify the characteristics that distinguish commercial bank and the co-operative sector borrowers. To ensure that the sample is representative of the state, two villages in each of the four agro-climatic zones of Punjab, one each in the districts of Hoshiarpur, Ropar, Ludhiana, Amritsar, Sangrur, Bathinda, Muktsar and Ferozepur, were selected. Purposive sampling was used to short-list the villages and stratified random sampling was used to short-list the sample households. A pre-tested questionnaire was administered to 20 households in each of the villages. These 160 households were equally divided among commercial bank and co-operative bank borrowers. The field studies were conducted after the transplantation of kharif crop in the year 2002.

The technique of regression model with dummy variables (to represent group membership) was used for analysing the differences in characteristics among commercial bank borrowers and the co-operative bank borrowers. Each of the characteristics is represented by one variable and the differences in each of such variables among the two types of borrowers are analysed by structuring it as a dependent variable in the following equation:

$$Y = a_0 + (a_1 - a_0) D + e$$

where

Y = dependent variable, i.e., the variable on which the two groups are being compared

D = 1 for co-operative bank borrower

= 0 for commercial bank borrower.

In this equation the dummy variable is entered as the regressor and commercial bank borrowers group acts as the control group. The estimated parameters for this equation have the following interpretation:

a_0 = Intercept = Mean of the control group, i.e., commercial bank borrowers.

$a_1 - a_0$ = Differential Intercept Co-efficient = Difference between Means/Proportions of the second group and the control group.

a_1 = Mean/Proportion of the other group, i.e., co-operative bank borrowers, where

$$a_1 = a_0 + (a_1 - a_0)$$

The differences in characteristics are discussed under six broad groups as under:

1. Land Ownership Characteristics:

Land is not only the most important means of production in rural areas but the ownership of other means of production also goes hand in hand with ownership and control of land. The extent of land owned is an indicator of physical asset endowment of a household. It is also because the larger the area of land owned the greater is the expected income of the household from agriculture and the greater is his status in the rural society. The land is also a collateral that finds favour with credit dispensing institutions which decide the credit limit of the borrower-cultivator on the basis of ownership of land. This gives the land owner greater access to formal institutions. Traditionally it is expected that a household with highly marketable collateral is able to leverage its credit in a proper manner and may be able to access credit from more sophisticated credit institutions at a lower cost. Table 1 enumerates the data under these characteristics. The differences are significant between both the

TABLE 1. LAND AND CAPITAL ASSETS OWNERSHIP CHARACTERISTICS

Sl. No.	Name of the characteristic	Mean of the commercial bank group (a ₀)	Mean of the co-operative bank group (a ₁)	Difference in Means (a ₁ -a ₀) (t value)
(1)	(2)	(3)	(4)	(5)
1.	Land Ownership			
	Land owned (acres)	10.86	6.34	-4.518 (-3.785)**
	Owned irrigated land (per cent)	89.62	93.43	3.812 (1.148)
	Total operational land (acres)	12.91	7.41	-5.495 (-3.957)**
2.	Capital assets ownership			
	Tractor ownership @	0.63	0.41	-0.225 (-2.906)**
	Tubewell ownership@	0.80	0.65	-0.15 (-2.141)*
	Trolley ownership @	0.52	0.21	-0.312 (-4.302)**
	Ownership of farm vehicles@	0.08	0.02	-0.062 (-1.720)
	Area of house owned (kanal)	1.50	0.87	-0.630 (-3.955)**
	Value of house owned (Rs.)	4,49,562.00	2,62,625.00	-1,86,937.00 (-3.633)**
	Value of cattleshed owned (Rs.)	30,500.00	13,937.00	-16,562.00 (-1.713)*
	Ownership of motorcycle/scooter @	0.68	0.52	-0.162 (-2.119)*
	Ownership of car/jeep @	0.21	0.02	-0.187 (-3.806)**

Note: * and **: Significant at 5 and 1 per cent level respectively

@: If Yes=1, if No = 0.

groups of borrowers in respect of the size of own land. The mean land holding of co-operative bank borrower is 6.34 acres whereas that of commercial bank borrower is

10.86 acres. The differences are significant between both the groups of borrowers in the case of the total operational land also. The mean total operational land of co-operative bank borrower is 7.41 acres and that of commercial bank borrower is 12.9 acres.

2. Capital Assets Ownership Characteristics:

Capital assets in agriculture like tractors, tubewells, pumpsets, threshers, harvester combines, etc., add to the prosperity on the farm as well as marketable surplus of the household. Increase in farm productivity and profitability usually have a positive impact on farm investments. In Punjab per farm real investments increased from Rs.68,948 in 1971-72 to Rs.131,592 in 2000-01, a compound growth of 2.17 per cent per annum. Real investment per hectare also increased from Rs.4,400 in 1971-72 to Rs.7,956 in 2000-01 (Singh and Singh, 2002). The ownership of capital assets could also be an indicator of the qualitative level in the economic prosperity of the borrower. The analysis of data in Table 1 indicates that there are significant differences among the co-operative bank borrowers and the commercial bank borrowers in tractor ownership. The mean percentage of ownership of tractor is 63 per cent in the commercial bank group whereas it is 41 per cent in co-operative bank group. In the case of tubewell ownership also the differences are significant. The mean ownership is 80 per cent in the commercial bank group and 65 per cent in the co-operative bank group. The divide between both the groups is significant in case of trolley and farm vehicles ownership as also motorcycle/scooter and car/jeep ownership.

Along with these capital assets, dwelling units or the house and its area, its value, value of cattleshed, etc., are the characteristics, which distinguish the two groups of households and can have direct correlation to the economic prosperity of those households. The analysis reveals that there is significant difference in the area of house owned by the co-operative bank borrower group and the commercial bank borrower group. The average size of house of a co-operative bank borrower is 0.87 kanal whereas that of commercial bank borrower is 1.5 kanal. Even in respect of the value of house owned significant differences exist. The mean value of the house owned by co-operative bank borrower is Rs.2,62,625 while that of commercial bank borrower is Rs.4,49,562.

3. Farm Expenditure Characteristics:

The expenditure incurred on various types of farm activities, while indicating the investments being made by the farmer is also a proxy for progressiveness as well as levels of economic prosperity. It also indicates the degree of specialisation attained in production and of the monetisation of the input basket used. The analysis of data in Table 2 reveals that 61 per cent of commercial bank borrowers hire permanent farm

servants while only 31 per cent of co-operative bank borrowers hire them. The average wages paid per acre to permanent farm servants by the commercial bank borrower is Rs.1,459.66 and that by the co-operative bank borrower is Rs.807.50. The levels of differences are significant. In contrast to the permanent farm servants, whom only the well off farmers can afford to employ, all farmers need to employ casual labour for some part of their farming activity or the other. In this aspect there are no significant differences. While hiring of a tractor indicates the non-ownership of that farm machinery, it is also an indication that the farmer is willing to incur expenditure for hiring farm machinery. The analysis reveals that 55 per cent of the co-operative bank borrowers hire tractor whereas only 29 per cent of commercial bank borrowers do so. The mean expenditure on tractor hiring per acre by the borrowers of commercial bank group is Rs.537.39 whereas it is Rs.1,068.75 for the co-operative bank group. The difference in the means of the groups is significant in both these aspects.

TABLE 2. FARM EXPENDITURE AND TECHNOLOGY ADOPTION CHARACTERISTICS

Sl. No.	Name of the Characteristic	Mean of the commercial bank group (a_0)	Mean of the co-operative bank group (a_1)	Difference in Mean levels ($a_1 - a_0$) (t value)
(1)	(2)	(3)	(4)	(5)
1.	Farm Expenditure *			
	Hiring of permanent farm servants @	0.61	0.31	-0.30 (-3.965)**
	Wages paid to permanent farm servants (Rs. per acre)	1,459.66	807.50	-652.16 (-3.290)**
	Wages paid to casual labour (Rs. per acre)	2,686.52	2,583.70	-102.82 (-0.735)
	Hiring of tractor @	0.29	0.55	0.262 (3.469)**
	Expenditure on hiring of tractor (Rs. per acre)	537.39	1,068.75	531.36 (3.511)**
2.	Technology Adoption			
	Age of tractor (yrs)	4.73	2.70	-2.037 (-2.037)*
	No of years since the first purchase of tractor	10.73	6.58	-4.162 (-3.058)**
	Age of tubewell (yrs)	11.10	8.38	-2.712 (-2.229)*
	No. of years since first purchase of tubewell	14.81	11.79	-3.025 (-2.188)*
	Value of fertiliser used (Rs. per acre)	2,552.18	2,524.92	-27.26 (-0.187)
	Value of pesticides/insecticides used (Rs. per acre)	4,508.17	4,341.66	-166.51 (-0.262)
	Value of seed purchased (Rs. per acre)	2,322.13	965.90	-1,356.23 (-1.783)*

Note: * and ** Significant at 5 and 1 per cent level respectively; @: If Yes=1, if No = 0

4. Technology Adoption Characteristics:

The adoption of modern technologies in farming indicates the levels of prosperity as well as progressiveness of a class of borrowers. Of a gamut of technology adoption characteristics, the co-operative and commercial bank borrowers are compared on the basis of certain selected variables. In the analysis of data presented in Table 2 it is observed that the commercial bank borrower has been an early user of tractor where the mean year works out to 10.75 years, while that of co-operative bank borrower is 6.58 years. The difference in means of both the groups of borrowers is significant. In respect of the age of the existing tractor also, there are significant differences between both the borrower groups. In the case of tubewell, again the commercial bank borrower has been an early adopter with the mean age of tubewell being 14.81 years and that of the co-operative bank borrower being 11.79 years. The difference in means is significant.

Value of the fertiliser used per acre by a farmer is again an indicator of the usage of technology by a farmer. There are no significant differences between the co-operative bank borrower group and the commercial bank borrower group as far as this indicator is concerned. Similar to the usage of fertilisers on the farm the value of pesticides/insecticides used per acre is also an indicator of technology adoption. While the mean value of pesticides/insecticides used per acre by the commercial bank group borrower is higher at Rs.4,508.17 as compared to co-operative bank borrower, that is, at Rs. 4,341.66, the level of difference is not significant. The value of seed purchased per acre by the farmer is a better measure of agricultural technology adoption characteristic, as an average farmer tends to use his own seed resources for the next season's sowing. Only a progressive farmer goes in for seed purchase every season to maintain higher yields. The analysis reveals that there are significant differences in the means of co-operative bank and commercial bank borrower groups. The mean value of seed purchased per acre by the commercial bank borrower is Rs. 2,332.13 while that of the co-operative bank borrower is only Rs. 965.90.

5. Financial and Other Assets Ownership Characteristics:

The analysis of the ownership of financial and other assets by the two borrower groups are depicted in Table 3. The financial assets owned by a borrower group, while being an indicator for the levels of prosperity also have a relationship with indebtedness characteristics of that group. The ownership of various household assets of a family including various consumer goods, indicates the level of prosperity among a group of borrowers as also to the level of social development of the families in that group. In the matter of level of savings, the differences are significant among both these borrower groups with the mean savings of commercial bank borrowers being higher at Rs.6703.50 compared to the mean of co-operative bank group borrower at Rs.1,125. The analysis also reveals a very significant fact that 75 per

cent of the commercial bank group borrowers are the borrowers from arhatiya also. This percentage is 78 for the borrowers of the co-operative bank group. While the difference is not significant it indicates the fact that among both the groups of institutional borrowers, the non-institutional lender is still persisting.

TABLE 3. FINANCIAL AND OTHER ASSETS OWNERSHIP AND SUBSIDIARY/ALLIED OCCUPATION/EMPLOYMENT CHARACTERISTICS

Sr. No.	Name of the characteristic	Mean of the commercial bank group (a_0)	Mean of the cooperative bank group (a_1)	Difference in Means ($a_1 - a_0$) (t value)
(1)	(2)	(3)	(4)	(5)
1.	Financial and other assets ownership			
	Savings of the respondent (Rs.)	6703.50	1125.00	-5578.50
	FD/RD/NSC etc. of the respondent @	0.812	0.50	(-2.086)*
	Respondent-borrower of arhatiya @	0.75	0.78	-0.312
	Ownership of refrigerator @	0.82	0.67	(-4.378)**
	Ownership of room cooler @	0.63	0.35	0.037
	Ownership of cooking gas @	0.85	0.65	(0.559)
	Ownership of TV @	0.83	0.77	-0.15
	Ownership of radio @	0.11	0.03	(-2.210)*
	Ownership of furniture @	0.76	0.71	-0.287
	Ownership of bicycle @	0.70	0.73	(-3.773)**
	Total value of consumer goods owned (Rs.)	56,396.00	23,356.00	-2.20
	Subsidiary/allied occupation/employment			(-2.983)**
2.	Ownership of dairy @	0.91	0.92	-0.062
	No. of milch animals owned	3.42	2.75	(-0.996)
	Ownership of kirana/fertiliser/pesticide business @	0.062	0.025	-0.075
	Total investment in subsidiary/allied activity (Rs.)	36,137.00	30,211.00	(-1.808)
	Family members in non-farm employment @	0.20	0.33	0.05
	No. of family members in non-farm employment	0.20	0.37	(-0.715)
	Income from other sources @	0.37	0.43	0.037
				(0.524)
				-33,580.00
				(-3.102)**

Note: * and ** : Significant at 5 and 1 per cent level, respectively

@: If yes=1, if no = 0

The analysis of data also reveals that the differences are significant between both the groups of borrowers with regard to the ownership of refrigerator and room cooler. As far as the ownership of cooking gas is concerned again the percentage of ownership among the commercial bank borrowers is higher at 85 per cent whereas for co-operative bank borrower it is at 65 per cent. The differences in mean levels for both the groups are significant. As far as ownership of TV is concerned the differences between both these groups are not significant, but while 83 per cent of the commercial bank borrowers own TV, it is only 77 per cent in the case of co-operative bank borrowers. Concerning the ownership of radio, furniture and bicycle there are no significant differences between both the groups of borrowers. An analysis of the total value of consumer goods owned by the commercial bank borrowers and the co-operative bank borrowers reveals significant levels of differences between both these groups. The mean value of consumer goods owned by the commercial banks borrower is Rs.56,396 whereas the co-operative bank borrower owns only Rs.23,356 worth of consumer goods.

6. Subsidiary/Allied Occupation/Employment Characteristics:

Non-agricultural occupation of a household, as well as allied agricultural occupation of the household adds up substantially to the total income. The farm households engaged in some other occupation even if it is selling milk have a regular flow of income throughout the year which helps it to a great extent in meeting family expenses. Income from agriculture is obtained only twice a year whereas income from subsidiary/allied occupation comes to the rescue of households, as expenditure has to be incurred on a day-to-day basis. Data reveals that the ownership of dairy animals by respondents is at a level of 92 per cent for co-operative bank borrowers and 91 per cent for commercial bank borrowers and the differences amongst both these groups of borrowers are not significant. However, when the data relating to the number of milch animals owned is examined the differences are significant between both these groups of borrowers. Rural communities at times own certain business activities in addition to their farming operations which could include dealing with agriculture inputs like seeds, fertilisers as also trading activities and other small businesses. The data reveals that there is no significant difference between both the groups of borrowers as far as the ownership or total investment in these types of businesses is concerned.

As far as the numbers of family members in non-farm employment are concerned, the differences are significant in that a higher proportion of co-operative bank group borrowers being in employment at 33 per cent as compared to 20 per cent in the case of commercial bank borrowers. In case of the number of family members in employment also the difference levels are significant. About 43 per cent of co-operative bank group borrowers are receiving incomes from other sources as against only 37 per cent in case of commercial bank group borrowers. These bring out the

fact that commercial bank group borrowers being agriculturally well off did not resort to any additional activities or sources to augment income whereas the agriculturally less well-off co-operative bank borrowers had necessarily to look for income from other sources to augment the primary source of his income which is from agriculture. Multi-occupation is again revealed here as a risk management proposition for a group which is less well-off economically.

The study had also analysed the demographic, social and educational characteristics of these borrower groups, but due to space constraints we are unable to discuss them here.

RECAPITULATION OF SIGNIFICANT DIFFERENCES

To sum up, let us recapitulate the significant differences in the characteristics of the commercial bank and co-operative bank borrowers in Punjab:

- (i) The own farm size and the total operational land holding of the commercial bank borrower is higher than that of the co-operative bank borrower.
- (ii) The commercial bank borrower has a higher level of ownership of farm machinery like tractors, tubewells, trolleys and farm vehicles.
- (iii) The area and value of the house owned and the value of cattleshed owned of the commercial bank borrower are higher.
- (iv) In case of the ownership of motorcycle/scooter and car/jeep also the proportion among commercial bank borrowers is higher.
- (v) Hiring of permanent farm servants by commercial bank borrower is significantly higher as compared to the co-operative bank borrower.
- (vi) The commercial bank borrower is an early adopter of technology having taken to ownership of tractor and tubewell far earlier than the co-operative bank borrower. He is also more progressive and technology savvy as the value of seed purchased by him is significantly higher as compared to the co-operative bank borrower.
- (vii) The ownership of financial assets like Fixed Deposits/Recurring Deposits/National Savings Certificates or the total amount of savings with the commercial bank borrower is significantly higher than the co-operative bank borrower.
- (viii) The ownership of other consumer durables like refrigerator, room cooler, cooking gas of the commercial bank borrower is higher as compared to the co-operative bank borrower. The total value of the consumer goods owned by the commercial bank borrower is also significantly higher.
- (ix) In the matter of subsidiary activities, the number of dairy animals owned by the commercial bank borrower is larger than the co-operative bank borrowers.

- (x) In the matter of income and employment the co-operative bank borrower has higher proportion of the number of family members in employment as compared to the commercial bank borrower.

CONCLUSION

The analysis carried out above has clearly brought out the fact that in agricultural credit there are two classes of borrowers. One class, which has smaller land holdings, lesser capital equipment and is at the lower end of economic prosperity. This co-operative borrower class mainly comprises the small and marginal farmers. The other class which emerges is basically the capitalist farmer who takes up farming on a commercial basis. This class is more sophisticated having larger land holdings and higher amounts of capital equipment.

For these two types of clientele the approach and system for credit delivery has to be different. In the case of commercial type of clientele, viability of the project, infrastructure required and marketing arrangements need to be evaluated and risk analysis has to be made to finance the project. In case of second type of clientele, a holistic approach needs to be taken to deliver credit to the small and marginal farmers who are resource poor and who feels comfortable in an informal type of environment (Samal, 2002).

Drawing upon these observations one can infer that commercial banks should be the preferred institutions for the first category of borrowers while the co-operatives with their less formal and more user friendly systems can serve the small farmer type of clientele. The small and marginal farmers tend to be the client of the co-operative banking system whereas the commercial farmer prefers the commercial bank. Keeping these factors in view, the co-operative banking and commercial banking system would need to tune their lending practices to suit these characteristics.

REFERENCES

- Darling, Malcolm L. (1925), *Punjab Peasant in Prosperity and Debt*, Oxford University Press, London.
- Reserve Bank of India (1989), "A Review of the Agricultural Credit System in India, Report of the Agricultural Credit Review Committee", (Chairman: A.M. Khusro), Bombay.
- Samal, B. (2002), "Institutional Credit Flow to West Bengal Agriculture: Revisited", *Indian Journal of Agricultural Economics*, Vol. 57, No. 3, July-September, pp. 546-559.
- Shergill, H.S. and Gurmail Singh (1995), "Rural Poverty in Punjab: Trend over the Green Revolution Period", *Economic and Political Weekly*, Vol. 30, No. 26.
- Shergill, H.S. (1998), *Rural Credit and Indebtedness in Punjab*, Institute for Development Communication, Chandigarh.
- Singh, Lakhwinder and Sukhpal Singh (2002), "Deceleration of Economic Growth in Punjab: Evidence, Explanation and a Way-out", *Economic and Political Weekly*, Vol. 37, No. 6, February 9.