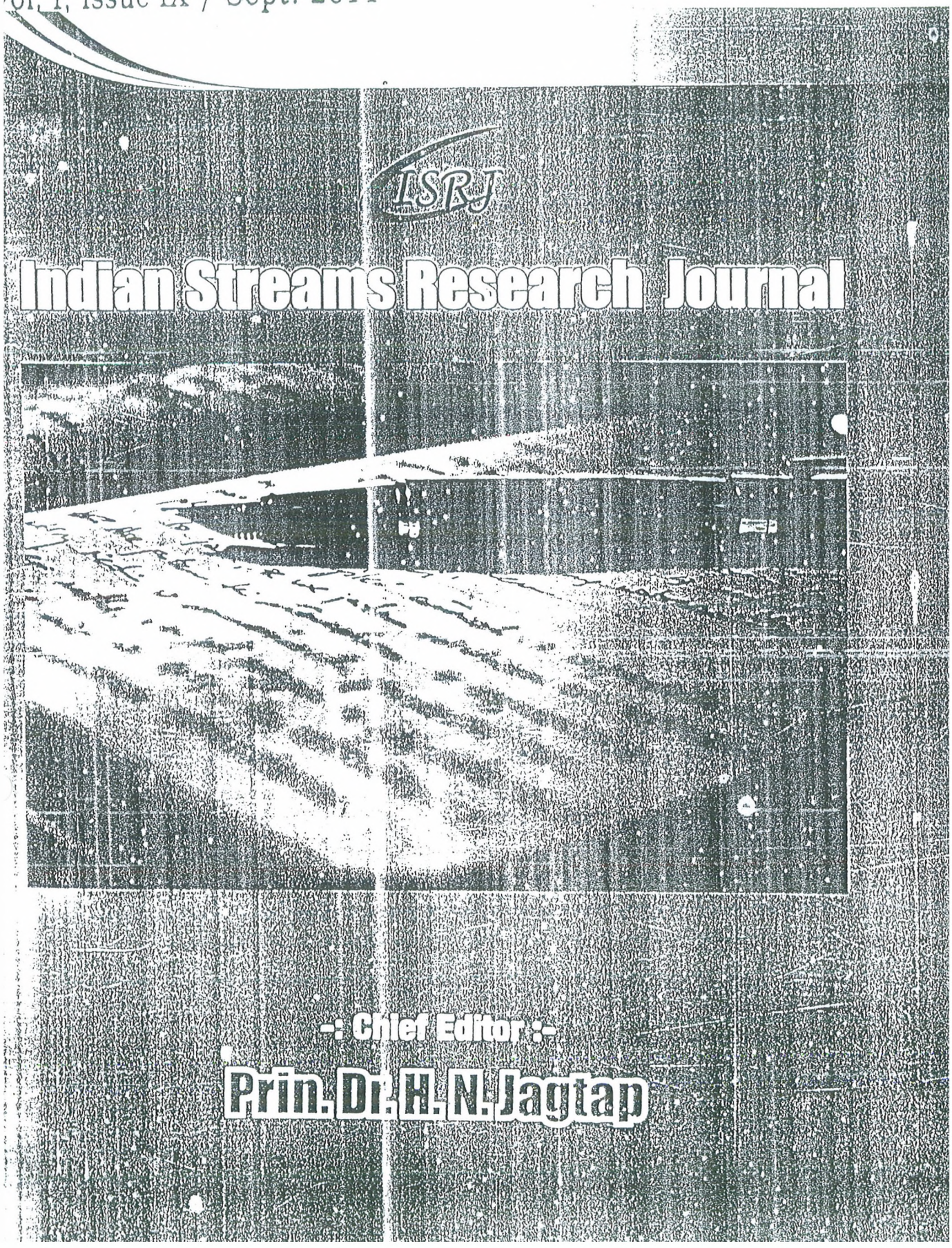
Vol. I, Issue IX / Sept. 2011

ISSN:2230-7850



ISRJ

Indian Streams Research Journal

-: Chief Editor :-

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institutional credit system involved in comprehensive development of agriculture, comprehensive agricultural productiIXty, creation of better employment opportunities in rural areas, improIXng farm systems and development of other agricultural sub systems such as livestock farming, fisheries, farm forestry, social forestry, sericulture, horticulture and support actiIXties. (Gopalakrishnan, 1995) through the multi agency approach of institutional credit.

The earlier studies such as Umesh (2000), Singh (2000) etc. attempted to analyse the demand for credit and supply side factors influencing the demand for credit. They did not assume the utility maximization for the borrowers either in the credit demand or supply equations. The present study estimated the borrowing function for the farmers based on the utility maximization objective. The following were the specific objectives of the study.

II. OBJECTIVES

1.To assess the availability of credit.

2.To identify the factors determining borrowing behaIXour of the farmers and to estimate the borrowing function of farmers.

III. METHODOLOGY

1. RATIONALE FOR SELECTING THE PROBLEM

Coimbatore district is an agriculturally advanced district of Tamilnadu. Tamilnadu Agricultural University and its research station and the Sugarcane Breeding Institute make it easy for the farmers to acquire the latest knowhow in agriculture and allied fields.

The total geographical area of the district is 7,47,079 hectares, of which, the net sown area was 3,01,752 hectares, forest accounted for 1,58,606 hectares, 1,70,532 hectares were fallow land, 10,185 hectares were barren and agricultural waste, 3,295 hectares were of cultivable waste, 1,137 hectares were of permanent pasture grazing land, 5,044 hectares of land were under tree crops and groves not included in net sown and 96,738 hectares of area were brought under high yielding variety seeds (Potential Linked Credit Plan, Coimbatore district, 2003-2004).

The number of holdings with less than one hectare of land was 1,01,609. The number of small holdings with one to two hectares of land was 63,499 and above two hectares of land was accounted 66,567. (Potential Linked Credit Plan, Coimbatore district, 2003-2004).

In the agricultural front, the district is a leading producer of coconut. It ranks first in the state with an area of 96,072 hectares under coconut cultivation producing 8,287 lakh nuts per annum. The district is known for using high yielding varieties in almost all the major commercial crops like cotton, sugarcane, paddy and maize (Potential Linked Credit Plan, Coimbatore district, 2003-2004).

The above features of agriculture in the district make the financial institutions to conduct effective financial operations towards agricultural sector. In 2005-2006, there were 409 branches of commercial banks in the district. Besides, there were 25 branches of Coimbatore district central co-operative banks, 274 primary agricultural co-operative credit societies and 13 primary land development banks operating in the district. The population served per branch was placed as 9,427 on an average (Potential Linked Credit Plan, Coimbatore district, 2003-2004).

The amount of deposits in the commercial and co-operative banks of Coimbatore district amounted to Rs.10,769.21 lakh and advances amounted to Rs.14,414.55 lakh in the district in 2005-2006. The district has the unique distinction of achieIXng the allocations under Annual Credit Plan over the years.

The overall achievement24 against the annual credit plan target for the years 2001-2002 to 2004-2005 was 62, 101, 101 and 100 percent respectively (Annual Credit Plan, Coimbatore district, 2003-2004).

Agriculture and allied actiIXties accounted for a share of 15.8, 18 and 21 percent of the total priority sector advances, during 2001-2002, 2002-2003 and 2003-2004 respectively. The banks dispensed Rs.804.74 crore as credit to agriculture and allied actiIXties in the year 2005. There are variations among the blocks and banks in credit allocation, deployment and recovery performance.

Though there was no resource gap in the crop loan dispersion in the district, the survey conducted by the Potential Linked Credit Plan (2003-2004) in Coimbatore district showed that the farmers did not get adequate amount of credit and they were forced to borrow from money lenders at high interest rates upto 20 percent. Moreover, the targeted amount of investment loan during 2005-2006 was Rs.8,349.45 lakh but the actual loan disbursement was Rs.6,083.48 lakh. It showed wide credit gap in the investment loan. Hence, the above features created favorability for selecting this district for the current study (Potential Linked Credit Plan, 2003-2004).

In depth studies on the extent of credit availability, demand for credit and credit constraint, factors determining credit constraint and impact of credit on farm sector in the district are necessary to enable the state and central governments in formulating policies on agricultural refinancing.

2. SOURCES OF DATA AND SAMPLING DESIGN

Data for the study were collected from primary sources. The period of the study was pertaining to the year 2003. A two stage random sampling procedure was followed in selecting the sample of borrowed farmers. The Karamadai and Thondamuthur blocks were selected as the banks in these areas intensively financed agriculture both in terms of amount of agricultural advances and the number of farm families financed. The banks located in the block namely the State bank of India, Canara Bank, Indian Overseas Bank and Corporation Bank had been approached to collect the list of the borrowers / defaulters and their addresses. The co-operatives, the Land Development Banks, and the Farmers Credit Societies had been omitted, as they were not willing to proIXde the list of borrowers. Out of the 300 borrowers in the list proIXded by the four banks branches, 100 were selected randomly (50 in each block) in the next stage. In the post stratification, it was found that in Karamadai and Thondamuthur blocks, 12 and 22 were large farmers with more than five hectares, 11 and 15 were of semi-medium farmers with more than two hectares and 18 and 5 belonged to small and marginal farmer category with less than two hectares of operational holdings respectively. The distribution of the selected borrower farmers is given in Table - 1.

TABLE - 1

DISTRIBUTION OF THE SAMPLE BORROWER FARMERS

S. No.	Farmer Category	Number	
		Karamadai Block	Thondamuthur Block
1	Small and marginal farmers	18	5
2	Semi-medium farmers	11	15
3	Medium farmers	9	8
4	Large farmers	12	22
	Total	50	50

The survey method was used to collect information from the

and non-farm income emerged as significant variables explaining the variations in the borrowing behaIXour in Karamadai block. The non-farm income had a negative impact on borrowing behaIXour while the land size had positive relationship with it. As the non-farm income increases, the tendency of the farmers to borrow will be less. Whereas in Thondamuthur block, the land size was the only variable which had a significant and positive relation with the borrowing behaIXour. Udapa et al., (1981), Venkateshwara (1981), Jalal and Bight (1985), Balishter et al., (1986), Babudin and Singh (1987), Singh and Singh (1988), Antani and Patani (1999), and Reddy and Laxminarayana (1997 had observed positive relationship between borrowing and size of land holding.

B. PRINCIPAL COMPONENT ANALYSIS

To confirm the findings in the regression analysis, again principal component analysis was employed based on the assumption that the credit depends on the age of the borrower (X1), land size (X2), family size (X3), capital expenditure (X4), farm income (X5), non-farm income (X6), education of the borrower (X7), total variable cost (X8) and consumption expenditure (X9). The loadings for the first principal component, P1 are given in Table – 6

FACTOR LOADINGS OF THE FIRST PRINCIPAL COMPONENT FOR THE KARAMADAI AND THONDAMUTHUR BLOCKS.

S. No.	Variables	Factor Loading	
		Karamadai Block	Thondamuthur Block
1	Age of the borrower (X_1)	0.4021**	0.1359
2	Land size (X_2)	0.8249*	0.8462*
3	Family size (X_3)	0.6881*	0.831*
4	Capital expenditure (X_4)	0.7111*	0.982*
5	Farm income (X_5)	0.8940*	0.964*
6	Non-farm income (X_6)	0.6947	0.829*
7	Education (X_7)	0.6855*	0.804*
8	Total Variable Cost (X_8)	0.7983*	0.840*
9	Consumption Expenditure (X_9)	0.6625*	0.837*
10	Latent root	6.3612	7.06889
11	Percentage of variance explained	70.7	78.5

Note : ** - Significant at both 5 percent and 1 percent level
* - Significant at 5 percent level

The first principal component accounted for 70.7 percent of the variation in agricultural credit in Karamadai block, while it was 78.5 percent for Thondamuthur. The factor loadings indicates that in both the blocks, except the age of the farmer, all other socio-economic variables showed a high positive correlation with agricultural credit, that is higher the size of land area, family size, capital expenditure, farm income, non-farm income, education of the borrower, total variable cost and consumption expenditure, higher the amount of agricultural credit disbursed. Major portion of the gross income was spent on fixed input and variable inputs and it had

The positive correlation with agricultural credit in Karamadai block. In Thondamuthur block, capital expenditure had the highest positive correlation with agricultural credit as the farmers required higher amount for land development, dugwell, purchase of tractors and tillers.

Based on the factor loadings, the percentage of total variation explained by each variable was estimated and is shown in Table - 7.

TABLE - 7

PERCENTAGE OF TOTAL VARIANCE EXPLAINED

S. No.	Variables	Explained Variations (in percentage)	
		Karamadai Block	Thondamuthur Block
1	Age of the borrower (X_1)	38.9	42.7
2	Land size (X_2)	18.2	19.5
3	Family size (X_3)	13.6	16.4
4	Capital expenditure (X_4)	9.7	10.9
5	Farm income (X_5)	7.8	4.2
6	Non-farm income (X_6)	5.4	3.0
7	Education (X_7)	3.4	2.6
8	Total Variable Cost (X_8)	2.0	0.5
9	Consumption Expenditure (X_9)	1.1	0.2

The age of the farmer emerged to be the most significant variable accounting for about 38.9 percent of the total variation in agricultural credit in Karamadai block and 42.7 percent in Thondamuthur block. The next important variable was the size of land, which accounted to 18.2 and 19.5 percent in both blocks respectively, followed by family size and capital expenditure. To conclude, the age of the farmer emerged as the most important determinant of agricultural credit, which implies that higher the age of the farmer, higher will be the amount demanded.

V. CONCLUSION

To sum up, the size of land holding was a significant factor in determining the borrowing behaIXor of farmers. It has a significant and positive relationship with the borrowing behaIXour. The above findings was again confirmed in the principal component analysis. The same observations were made by Jalal and Bight (1985) and Udupa et al., (1981). They observed that the size of land holding was one of the factor determining the availability of credit. Hence the policy makers should consider the size of land holding as one of the major factor in the allocation of agricultural credit to various regions.

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