Asian Journal of Agricultural Extension, Economics & Sociology

Volume 40, Issue 12, Page 488-495, 2022; Article no.AJAEES.96211
ISSN: 2320-7027

Assessment of Credit Pattern of Small and Marginal Farmers in Cauvery Delta Zone of Tamil Nadu, India

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2022/v40i121825

Open Peer Review History:
This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/96211

Original Research Article

Received: 25/10/2022
Accepted: 30/12/2022
Published: 31/12/2022

ABSTRACT

Finance is the lifeblood of any business same way credit is the lifeblood of agriculture. Without credit, farmers cannot do farming activities. Hence the Primary Agricultural Credit Co-operative Societies provide credit to farm and non-farm activities in rural areas to improve agriculture. The adequate and timely availability of credit at reasonable rates is crucial for agricultural development. The study is based on households' survey conducted in six blocks from three districts viz., Ammapettai and Orathanadu blocks of Thanjavur district, Needamangalam and Mannargudi blocks of Thiruvarur district, Kilvelur and Thirumarugal blocks of Nagapattinam district. Two villages from each block were selected purposively based on more area under rice cultivation. Sample size of 366 farmers which consisted of 183 marginal and 183 small farmers was selected randomly based

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on proportionate random sampling method. The data were statistically tabulated and analyzed by calculating simple percentages and cumulative square root frequency method for categorization. Nearly one-fourth of the farmers (24.86%) had low level of credit orientation followed by 23.50 per cent had very low level, 21.58 per cent had high level, 15.03 per cent of farmers had medium and very high level of credit orientation. The small farmers having high credit orientation than marginal farmers, the most of the small farmer’s occupational status was farming and business. They utilize credit for their farm, household and non-farm activities. More than three-fifth of the marginal farmers (63.39%) sometimes relying on individual moneylenders for their credit source followed by 45.36 per cent of small farmers sometimes rely on individual money lenders for their credit source and more than half of the farmers (54.37%). Most of the marginal and small farmers were having low to medium level of income category, they depend on banks, co-operative societies and money lenders for their credit source. Mostly they allocate equal percentage of loan for the farm and household expenses. The policy makers can make note of the utilization pattern of agricultural credit and can give directions on the lending terms and conditions.

Keywords: Cauvery delta; credit pattern; debt; loan; marginal and small farmer.

1. INTRODUCTION

Agriculture is the mainstay of the majority of farm households in our country, but insufficient financial resources, limited access to new farm technologies, and tiny and fragmented land holdings result in low output and profits on Indian farms. 60.00 per cent of population in the country is engaged in the agriculture sector. This sector contributes about 18.8 per cent in country’s GDP in 2021-2022 [1]. When there is a change from traditional agriculture to modern agriculture, the need for agriculture financing becomes more and more pressing, since it necessitates a greater use of high yielding varieties, agricultural chemicals, and machinery. In addition, Indian farmers' ability to save and invest money is extremely limited, making them largely reliant on external finance. Even governmental initiatives such as the minimum support price-based procurement system and warehouse receipt financing do not significantly help these farmers with low marketable surpluses increase their revenue. There has been a phenomenal increase in the flow of institutional credit to agriculture and allied activities in India in recent years. But several past studies and reports have indicated that there is wide regional imbalance and unequal access by small farmers to institutional credit disbursed for agriculture [2-6]. The credit provided through these banks is given in the form of different types of loan schemes like Kisan Gold Card, Krishi Plus etc. Which help the farmers for the cultivation of crops, purchase of livestock, development of dairy industries, development of irrigation and farm mechanization activities etc. Other credit source for the farmers was Self Help Group, Farmers Interest Group, relatives, friends and Individual Moneylenders. According to the NSSO survey [7] about 52.00 per cent of the agricultural households in the country were indebted and the average amount of outstanding loan per agricultural household was Rs. 47000. Agricultural finance is a decisive factor input in farming operations as it helps poor farmers to maintain their consumption of necessities, adopt advanced technology and raise their incomes [8]. The farmers in the Eastern region of India are generally small and marginal and have to depend largely on non-institutional sources of credit, which keeps them in a debt trap [9]. However, over time, the per-capita landholding of the Indian farm households is gradually declining and the dominance of small and marginal farmers is observed in major parts of India [10]. The results show that credit pattern of marginal and small farmers which will help the farmers' welfare and income. Better welfare may only be achieved if credit is supplied to the farmers on time. Furthermore, this study has potentially significances. First, the credit pattern of the study will elicit the farm debt and outstanding loan debt (last year). Second, the credit orientation and source of credit explore the farmer’s dependence on the credit sources i.e., institutional, non-institutional and from non-banking sources. Third, the average percentage of loan used on agriculture and household activities helps to know their utilization behavior of credit. In this regard, an attempt is made to analyze the credit pattern of small and marginal farmers in the Cauvery Delta Zone, Tamil Nadu. This would help the different stakeholders and policy makers to understand the extent of credit pattern of the farmers.

2. METHODOLOGY

The main focus of this paper is to examine the credit pattern of small and marginal farmers in Cauvery Delta Zone, Tamil Nadu. The marginal farmers have the land holding equal to or less than one hectare and small farmers with landholding ranging from one to two hectares of land. The study is based on households' survey conducted in six blocks from three districts viz., Ammapettai and Orathanadu blocks of Thanjavur district, Needamangalam and Mannargudi blocks of Thiruvarur district, Kilvelur and Thirumarugal blocks of Nagapattinam district. Two villages from each block were selected purposively based on more area under paddy cultivation. From the selected villages, a list of land holding size was obtained from the Assistant Director of Agriculture office of concerned blocks. Sample size of 366 farmers which consisted of 183 marginal and 183 small farmers was selected randomly based on proportionate random sampling method.

According to Cochran's sample size formula the sample size is estimated- Cochran's formula is considered especially appropriate in situations with large populations.

The Cochran formula is:

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where:

- e is the desired level of precision (i.e. the margin of error) 5%
- p is the (estimated) proportion of the population which has the attribute in question (p=0.6)
- q is 1 – p (q=0.4)
- The z-value is found in a Z table (for 95% Confidence Interval i.e., z =1.96)

$Sample\ size = \frac{1.96^2\ (0.6)(0.4)}{0.05^2}$ =368.79 ~ 366 (for 3 districts)

The primary data related to credit pattern were collected from farmer by survey method through personal interview with the help of a set of pre-tested schedules. The data were statistically tabulated and analyzed by calculating simple percentages and cumulative square root frequency method for categorization. For examining the credit pattern the following dimension viz., credit orientation, farm debt, source of farm credit, outstanding loan debt (last year) and average percentage of loan used was analyzed and results are interpreted. The data were analyzed using statistical software SPSS 22.

3. RESULTS AND DISCUSSION

Credit pattern of the marginal and small farmers were analyzed by the following dimension viz., credit orientation, farm debt, source of farm credit, outstanding loan debt (last year) and average percentage of loan used.

3.1 Credit Orientation

The above perusal of the table shows that more than one-fourth of the marginal farmers had low level of credit orientation followed by 24.04 per cent of marginal farmers had very low level and high level of credit orientation. 23.50 per cent had low level of credit orientation followed by very low level (22.95%), medium level (20.77%), high level (19.13%) and very high level (13.66%) of credit orientation. Nearly one-fourth of the farmers (24.86%) had low level of credit orientation followed by 23.50 per cent had very low level, 21.58 per cent had high level, 15.03 per cent of farmers had medium and very high level of credit orientation. The small farmers having high credit orientation than marginal farmers, the most of the small farmers occupational status was farming and business. They utilize credit for their farm, household and non-farm activities. This might be the reason for having medium to very high level of credit orientation.

3.2 Farm debt (current year-2022)

Farm debt is a liability or obligation incurred by a farmer for the purpose of funding and allocating for their farm operations, which is secured wholly or partly by a farm mortgage. For this farm debt level is important, the farm debt was enquired, analyzed and presented below.

It is apparent from the table that Most of the marginal farmers (85.79%) have farm debt below Rs.80,184 followed by very meager percentage of marginal farmers having farm debt of medium level Rs.80,185 – Rs.1,10,390 (8.20%), High level Rs.1,10.391- Rs.1,63,277 (3.83%) and Very high level above Rs.1,63,277 (2.19%). More than one-fourth of the small farmers (28.96%) have low level of farm debt ranging from Rs.54,694 –

Rs.80,184 followed by 26.78 per cent of small farmers having medium level of debt ranging from Rs.80,185 – Rs.1,10,390 and nearly one-fourth of the small farmers (24.59%) having very high level of farm debt above Rs. 1,63,277. One-third of the farmers (33.61%) having low level of farm debt ranging from Rs.54,693 – Rs.80,184 followed by nearly one-fourth of the farmers (24.59%) having farm debt less than Rs.54,693 and 17.49 per cent of farmers have medium level of farm debt ranging from Rs.80,185 – Rs.1,10,390.

The result implies that most of the marginal farmer's occupational status was farming and wage earning and they relying on agricultural works for their earning. Most of the marginal farmers were use personal funds and relying on co-operative societies for crop production. This might be the reason for having very low to medium level of farm debts. Farm debt for small farmers ranging from low level to very high levels, the occupational status of the small farmers was farming and business. They were having farm debts from personal funds, crop loans from Co-operative societies, commercial banks, from friends and relatives. This might be the reason for the small farmers having medium to high level of farm debts.

3.3 Source of Farm Credit

The results shows that three-fifth of the marginal farmers (60.11%) always relying credit from their personal funds (savings), 85.25 per cent of small farmers always relying credit form the personal funds (savings) and 72.68 per cent of farmers always relying personal funds (savings) for their credit source. The most of the marginal and small farmers having financial reserves and they are using credits from the personal funds for the crop production. More than three-fifth of the marginal farmers (62.30%) always relying co-operative societies for their source of credit for crop production followed by half of the small farmers (50.27%) sometimes relying co-operative societies for their credit and 56.01 per cent of farmers always relying co-operative societies for

Table 1. Distribution of respondents according to their credit orientation

S.No.	Category	Marginal farmers (n=183)		Small farmers (n=183)		Total farmers (n=366)	
		No.	Per cent	No.	Per cent	No.	Per cent
1.	Very low level	44	24.04	42	22.95	86	23.50
2.	Low level	48	26.23	43	23.50	91	24.86
3.	Medium level	17	9.29	38	20.77	55	15.03
4.	High level	44	24.04	35	19.13	79	21.58
5.	Very high level	30	16.39	25	13.66	55	15.03
	Total	**183**	**100.00**	**183**	**100.00**	**366**	**100.00**

Table 2. Distribution of respondents according to their farm debt

S.No.	Category	Marginal farmers (n=183)		Small farmers (n=183)		Total farmers (n=366)	
		No.	Per cent	No.	Per cent	No.	Per cent
1.	Very low level (Less than Rs.54,693)	87	47.54	3	1.64	90	24.59
2.	Low level (Rs.54,694 – Rs.80,184)	70	38.25	53	28.96	123	33.61
3.	Medium level (Rs.80,185 – Rs.1,10,390)	15	8.20	49	26.78	64	17.49
4.	High level (Rs.1,10.391- Rs.1,63,277)	7	3.83	33	18.03	40	10.93
5.	Very high level (Above Rs.1,63,277)	4	2.19	45	24.59	49	13.39
	Total	**183**	**100.00**	**183**	**100.00**	**366**	**100.00**

Table 3. Distribution of respondents according to their source of farm credit

S. No.	Source of credit	Marginal farmers (n=183)*			Small farmers (n=183)*			Total farmers (n=366)*		
		A	S	N	A	S	N	A	S	N
1.	Personal funds (savings)	110 60.11%	62 33.88%	11 6.01%	156 85.25%	27 14.75%	0 0.00%	266 72.68%	89 24.31%	11 3.01%
2.	Cooperatives/ Societies	114 62.30%	51 27.87%	18 9.84%	91 49.73%	92 50.27%	0 0.00%	205 56.01%	143 39.07%	18 4.92%
3.	SHG's/ FIG's	28 15.30%	15 8.20%	140 76.50%	3 1.64%	29 15.85%	151 82.51%	31 8.47%	44 12.02%	291 79.51%
4.	Commercial Banks	0 0.00%	70 38.25%	113 61.75%	9 4.92%	127 69.40%	47 25.68%	9 2.45%	197 53.83%	160 43.72%
5.	Regional Rural Banks	3 1.64%	16 8.74%	164 89.62%	0 0.00%	19 10.38%	164 89.62%	3 0.82%	35 9.56%	328 89.62%
6.	Relatives/ friends	53 28.96%	101 55.19%	29 15.85%	50 27.32%	71 38.80%	62 33.88%	103 28.15%	172 46.99%	91 24.86%
7.	Individual Moneylenders	42 22.95%	116 63.39%	25 13.66%	44 24.04%	83 45.36%	56 30.60%	86 23.50%	199 54.37%	81 22.13%

(A: Always, S: Sometimes, N: Never) *(*) Multiple responses obtained*

their credit source. Majority of the farmers (79.51%) expressed that they never rely the Self Help Group's and Farmers Interest Group's for their credit source. Nearly two-fifth of the marginal farmers (38.25%) sometimes relying commercial banks for their credit source, more than two-third of small farmers (69.40%) sometimes relying commercial banks for their credit source. This implies that small farmers sometimes rely more than the marginal farmers for the credit source from commercial banks, this is due to that most of the marginal farmers occupational status was farming and business. Only meager percentage of marginal (8.74%) and small farmers (10.3%) sometimes relying Regional Rural Banks (RRB) for their credit source. The accessibility of regional rural banks was less compared to the commercial banks. This might be the reason for less relying of RRB for their credit source. More than three-fifth of the marginal farmers (63.39%) sometimes relying on individual moneylenders for their credit source followed by 45.36 per cent of small farmers sometimes rely on individual money lenders for their credit source and more than half of the farmers (54.37%). sometimes rely on individual money lenders for their credit source. The results are accordance with the results of Susweta Ray, and Anil Kumar [11] who also reported that majority of them availed credit only from institutional sources for their credit.

3.4 Outstanding Loan Debt (last year)

Above perusal of the table shows that more than half of the marginal farmers (58.47%) fully paid the previous loans followed by 24.04 % of marginal farmers have outstanding loan amount under Rs. 30,000 and 10.38 per cent of marginal farmers have outstanding loan debt in the past year ranging from Rs. 30,001 to 50,000. Nearly one third of small farmers (32.79%) have fully paid their past year loans followed by 15.30 per cent have past debt ranging from Rs. 30,001 to 50,000 and Rs. 70,001 to 90,000. 45.63 per cent of farmers fully paid the past debt followed by under Rs.30, 000 (16.12%), Rs. 30,001 to 50,000 (12.84%), 9.29 per cent of farmers have past debt of Rs.50,001 to 70,000 and Rs.70,001 to 90,000 and 6.83 per cent of farmers have past debt above Rs.90,000. The farmers having crop loans from the co-operative societies and they have to pay within a year. This might be the reason for the fully paid of past debt in a last year.

3.5 Average Percentage of Loan Used

It is inferred from the Table 5, more than half of the marginal farmers (54.64%) had used 51.00 to 75.00 percentage of loan amount for the on-farm activities followed by one-third of marginal farmers (34.43%) had used 26.00 to 50.00 percentage of loan amount for on-farm activities. More than half of the small farmers (51.37%) had used loan amount 26.00 to 50.00 percentage followed by 36.61 per cent used 51.00 to 75.00 percentage of loan for on-farm and 8.74 per cent used less than 25.00 per cent for on-farm activities. 45.62 per cent of farmers used 51.00 to 75.00 percentage for their on-farm activities followed by 42.90 per cent of farmers used 26.00 to 50.00 percentage of loan for on-farm activities.

57.38 per cent of marginal farmers used loan 26.00 to 50.00 percentage of loan for household expenses followed by 32.34 per cent of marginal farmers used 51.00 to 75.00 percentage of loan for household expenses and 8.20 per cent of marginal farmers used less than 25.00 per cent of loan for household expenses. 47.54 per cent of small farmers used 51.00 to 75.00 percentage of loan for household expenses followed by 43.17 per cent of small farmers used 26.00 to 50.00 percentage of loan for household

Table 4. Distribution of respondents according to their outstanding loan debt

S.No.	Category	Marginal farmers (n=183)		Small farmers (n=183)		Total farmers (n=366)	
		No.	Per cent	No.	Per cent	No.	Per cent
1.	Fully paid	107	58.47	60	32.79	167	45.63
2.	Under Rs. 30,000	44	24.04	15	8.20	59	16.12
3.	Rs.30,001 to 50,000	19	10.38	28	15.30	47	12.84
4.	Rs.50,001 to 70,000	7	3.83	27	14.75	34	9.29
5.	Rs.70,001 to 90,000	6	3.28	28	15.30	34	9.29
6.	Over Rs.90,000	0	0.00	25	13.66	25	6.83
	Total	**183**	**100.00**	**183**	**100.00**	**366**	**100.00**

Table 5. Distribution of respondents according to their average percentage of loan used

S.No.	Category	Marginal farmers (n=183)		Small farmers (n=183)		Total farmers (n=366)	
		No.	Per cent	No.	Per cent	No.	Per cent
I.	**On-farm activities**						
1.	< 25%	11	6.01	16	8.74	27	7.38
2.	26-50%	63	34.43	94	51.37	157	42.90
3.	51-75%	100	54.64	67	36.61	167	45.62
4.	>75%	9	4.92	6	3.28	15	4.10
II.	**Household expenses**						
1.	< 25%	15	8.20	15	8.20	30	8.20
2.	26-50%	105	57.38	79	43.17	184	50.27
3.	51-75%	59	32.24	87	47.54	146	39.89
4.	>75%	4	2.19	2	1.09	6	1.64
	Total	**183**	**100.00**	**183**	**100.00**	**366**	**100.00**

expenses. Half of the farmers (50.27%) have used 26.00 to 50.00 percentage of loan amount for household expenses followed by 39.89 per cent used 51.00 to 75.00 percentage, 8.20 per cent of farmers used less than 25.00 percentage and 1.64 per cent of farmers used above 75.00 percentage of loan for the household expenses. Most of the marginal and small farmers were having low to medium level of income category, they depend on banks, co-operative societies and money lenders for their credit source. Mostly they allocate equal percentage of loan for the farm and household expenses. The marginal and small farmers use credit for the farm and household expenses [12-14].

4. CONCLUSION

However, the majority of farmers are marginal and economically disadvantaged. As a result, it is vital to improve their living conditions and raise their revenues from agricultural activity. Microcredit is required to assist them in transitioning to multiple cropping. The availability of this sort of institutional lending can assist farmers in obtaining working capital to transition to multiple cropping, particularly during the post-rainy season. This can eventually assist them in increasing their net farm income. Another key factor impeding marginal farmers' ability to improve agricultural revenue is the size of their operational holding. To enjoy positive economies of scale during the time of cultivation, the initiation of cooperative farming through the formation of a farmer’s club or group is necessary. In addition to farming activity, income-earning opportunities among members of the marginal farmer household are crucial in improving their earnings from agricultural operations and livelihood. The policy makers can make note of the utilization pattern of agricultural credit and can give directions on the lending terms and conditions. There is a scope for further studies on the repayment of agricultural credit and the constraints faced in repayment of credit.

ACKNOWLEDGEMENTS

I sincerely thank to Indian council of Social Science Research (ICSSR) for their contributing fund thorough the fellowship of ICSSR centrally administrative doctoral fellowship for the period (2021–2023) of research work.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
https://www.sdiarticle5.com/review-history/96211