

# Socio-Economic Factors Influencing Default in Repayment of Loans at Primary Agricultural Co-Operative Credit Societies in Pudukkottai District

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## Abstract

The economic development of the nation depends on banks and financial institutions which provides financial assistance to uplift the poor and the under privileged sections. Co-operative banks form an important segment of the Indian financial system. It is only the co-operative banks that opened the doors of banks to the smallest of small man. It offers farm loans, equipment loans and allied services loans. But the perennial problem faced by the co-operative banks is the presence of overdues in all these years. The non-repayment of loans results in huge amounts of overdue, which destabilize the motto of the co-operative societies. The study examined influence of socio-economic characteristics on overdue of default borrowers. It was revealed that the area under irrigation, family consumption expenditure and total amount of credit borrowed had significantly influenced the overdues of both willful and non-willful defaulters.

**Keywords:** Banks, Co-operative Credit, Defaulter, Farmers and Overdue

## 1. Introduction

Agriculture plays a vital role in most of the developing countries among various sectors. India stands as the leader in producing variety of crops like wheat, rice, pulses, cotton, peanuts, fruits, and vegetables. In order to stimulate the tempo of agricultural production, it is necessary to adopt intensive agriculture. The introduction of new technology, named Green Revolution in Indian Agriculture has created an unprecedented upsurge in the demand for seeds of high yielding varieties and fertilizers, insecticides, improved implements and machinery. The increased use of inputs has been slowly accelerating the transformation of agriculture from the subsistence level to a profitable farm-business. The new technology is capital intensive and so has created a heavy demand for farm credit. The benefit of new technology has not reached the marginal and small farmers. Compared to farmers with large-sized holdings, they are unable to invest capital to purchase inputs. So, the problem of farm-finance has

assumed a new and wider dimension. The co-operative societies helps in reducing such problem.

The co-operative credit structure in India is now a century old and happens to be the largest in the world. Co-operative banks form an important segment of the Indian financial system. The Green Revolution, White Revolution, Yellow Revolution etc., in India was made possible only through the Co-operative Credit organizations. Though commercial banks, after nationalization and later RRBs, have entered the rural areas, co-operative banks still continue to enjoy an important place in the rural credit scenario. The financial needs of the farmers are mostly met by the Co-operative sector in India, even since the inception of Agricultural Co-operative Credit Societies. The co-operative banks offer various loans like farm loans, equipment loans and allied services loans. But the co-operative societies face difficulties to recover the amounts. The failure to recover loans results in huge amounts of overdue, which destabilize the motto of the co-operative society. The

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co-operative sector has also undergone many changes in the past years, but the perennial problem faced by the co-operative banks is the presence of overdues in all these years. Hence, the socio-economic factors influencing default in repayment of loan at Primary Agricultural Co-operative Credit Societies (PACS's) in Pudukkottai District, Tamil Nadu has been analysed.

The study covers socio-economic characteristics of borrowers such as Age of borrowers, Family size, Level of formal education, Percentage of earning adults to total adults, Operational size of holding, Area under irrigation, Cropping intensity, Gross income from agriculture, Non-farm income, Family consumption expenditure, Total amount of outstanding loans, Repayment capacity, Total amount of credit borrowed and examines the association between socio-economic characteristics and default in repayment of loan.

## 2. Review of Literature

Balishter *et al.*<sup>1</sup> in their study on overdues of loans in agriculture suggested that the willful defaulters must be made to repay the loans through the enactment of suitable legislations. It was suggested that the Government had to take steps to eliminate the political interference in the normal functioning of the credit institutions. For non-willful defaulters, a set of liberal measures should be adopted. Besides, steps must be taken to improve production, increase prices for the crop products, reduce input prices and crop insurance area. It might also be noted that slackness on the part of the bank officials who does not insist on timely repayment was also an important reason for willful default. It was suggested that this must be taken note by the bank administration to gear up their machinery for timely recovery of their loans. Viswanath<sup>2</sup> found that the important factors that increase overdues were grouped under two categories namely, external factors and internal factors. Anand Kumar Singh *et al.*<sup>3</sup> in their study on credit needs, utilization pattern and factors causing overdues in Varanasi District observed that most of the farmers had obtained short term and medium term loan. There were more number of farmers with short term loans on marginal farms and it decreased with the increase in size of farms. More than 50% farmers of small and large farms availed medium term loan to purchase working assets. Borrowed funds were properly utilized by the large farms and its proportion decreased in size of farms.

The ineffective utilisation of borrowed funds was higher on lower size groups of farms indicating the diversion of borrowed funds from the productive to unproductive use. Several factors were responsible for overdue performance in the repayment of borrowed funds. Rajni Jain and Raju<sup>4</sup> concluded that the agriculture was not a proper source of income for very small size land holdings and policy reforms were required to help marginal and small farmers. The age of the farmer, education status, land holding size and the non – farm income affected the period of overdue amount. Major cause of default in repayment of loans was due to crop losses because of some natural calamities. It was suggested that in order to meet such losses, all farmers should be encouraged for crop insurance. Yasir Mehmood *et al.*<sup>5</sup> in their study concluded that delay in repayments of agricultural credit was caused by many factors which resulted in increase in quantum of default in payment of loan. Furguan Mohammad Khan and Rituparna<sup>6</sup> in their study indicated that Non-performing Assets (NPAs) were caused due to weak credit appraisal and credit monitoring, direct lending to priority sector without adequate security, loopholes in legal machinery, natural calamities, change in government policy, etc. The study indicated that it was not possible to eliminate NPA from the banking business but could only be minimized by a proper policy for appraisal, supervision and follow-up of advances.

## 3. Objectives

- To examine the quantum of production credit availed and the extent of over dues among defaulter-borrowers of different farm-size groups.
- To analyse the factors influencing over dues among defaulter-borrowers of different farm - size groups.

## 4. Methodology

The study employs systematic random sampling technique. The primary data were collected from the default borrowers of six selected blocks in Pudukkottai district - two blocks with the highest percentage of overdues (Thiruvarankulam and Karambakudi), two blocks with lowest percentage of overdues (Ponnamaravathy and Aranthangi) and two blocks with moderate percentage of overdues (Viralimalai and Thirumayam) - covering various agro climatic regions. From each block, 2 PACSs

were selected. Thus, a total of 300 defaulter borrowers were selected from 12 PACSs. The information required for the study was collected from 25 defaulters from each of the selected PACSs.

## 5. Analysis and Discussion

### 5.1 Distribution of Production Credit

The distribution of production credit availed by the selected defaulter borrowers from PACSs is presented in Table 1.

The Table 1 shows that the large farmers have received maximum credit per acre (Rs. 9810) which is followed by medium farmers (Rs. 4529) and small farmers (Rs. 4498). The amount sanctioned per farm is the highest for large farmers (Rs. 1,38,358) followed by medium farmers (Rs. 32,715) and small farmers (Rs. 11,000). It is observed that

the loan amount sanctioned per acre and per farm has showed a raise with an increase in the size of holding.

### 5.2 Estimation of Production Cost Credit Gap

The requirements of production credit by selected defaulter-farmers are assessed through the survey. Credit gap is worked out by deducting the credit supplied from the total requirements or demands of credit for each category of defaulter-farmers. The credit requirement, credit availability and credit gap for the three categories of defaulter – farmers are furnished in Table 2.

The Table 2 shows that the credit gap in case of small defaulter-farmers is Rs. 4,564 per farm which is 29.32%. In case of medium and large farmers, the credit gap is estimated at Rs. 8,297 and Rs. 28,871 per farm respectively. It is also observed that the percentage of

**Table 1.** Production credit availed by selected defaulter – Farmer borrowers

(Amount in Rs.)

Category of Farmers	Average Size of Farm (Acres)	Amount Sanctioned	
		Per Acre	Per Farm
Small Farmers	2.00	4498	11000
Medium Farmers	7.00	4529	32715
Large Farmers	14.00	9810	138358

Source : Field Survey

**Table 2.** Credit requirement, credit availability and credit gap of selected defaulter - farmers

(Rs. Per Farm)

Category of Farmers	No. of Defaulters	Credit Requirement	Credit Availability	Credit Gap	Percentage of Credit Gap to Credit Requirement
Small Farmers	171	15564	11000	4564	29.32
Medium Farmers	81	41012	32715	8297	20.23
Large Farmers	48	167229	138358	28871	17.26

Source: Field Survey

**Table 3.** Overdues in relation to the size of holding of defaulter-farmers

(Amount in Rs.)

Farm Size	No. of Defaulters	Percentage to Total Defaulters	Total Amount of Overdues	Percentage to Total overdues	Overdue	
					Per Farm	Per Acre
Small Farmers	171	57	1320041	17.08	7720	3157
Medium Farmers	81	27	1680809	21.75	20751	2873
Large Farmers	48	16	4726129	61.16	98461	6981

Source : Field Survey

credit gap to requirement in case of medium and large defaulter farmers were 20.23% and 17.26% respectively. It is inferred that the credit gap decreases with increase in farm size.

### 5.3 Overdues of Defaulters

The farm size-wise information on overdues of the selected defaulters is given in Table 3.

Table 3 shows that the share of small, medium and large defaulters of the total overdues is 17.08%, 21.75% and 61.16% respectively. The overdues per farm showed that it is Rs. 7720, Rs. 20,751 and Rs. 98,461 for small, medium and large farms respectively. Thus, it indicates that the higher the farm size, the higher is the average overdue per farm. The per acre overdues is estimated at Rs. 3,157, Rs. 2,873 and Rs. 6,981 for small, medium and large farms respectively which shows that recovery performance in case of large farmers is less compared to small and medium farms.

### 5.4 Factors Influencing Overdues

H01: There is no significant influence of socio-economic variables on overdues of default borrowers.

The factors associated with increasing overdues among the different categories of defaulter-farmers is analysed with regression analysis by using the following equation.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11} + b_{12}X_{12} + b_{13}X_{13} + u$$

where,

Y = Amount of Term Loan Overdues (in Rupees)

X<sub>1</sub> = Age of Borrowers (in years)

X<sub>2</sub> = Family Size (in No.)

X<sub>3</sub> = Level of Formal Education

(Upto primary pass = 0, above primary pass = 1)

X<sub>4</sub> = Percentage of Earning Adults to total Adults

X<sub>5</sub> = Operational Size of Holding (in acres)

X<sub>6</sub> = Area under Irrigation (in acres)

X<sub>7</sub> = Cropping Intensity (in percentage)

X<sub>8</sub> = Gross Income from Agriculture (in Rupees)

X<sub>9</sub> = Non Farm Income (in Rupees)

X<sub>10</sub> = Family Consumption Expenditure (in Rupees)

X<sub>11</sub> = Total Amount of Outstanding Loans (in Rupees)

X<sub>12</sub> = Repayment Capacity (in Rupees)

X<sub>13</sub> = Total Amount of Credit Borrowed (in Rupees)

u = Random Variable

b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub>, b<sub>4</sub>, b<sub>5</sub>, ..... b<sub>13</sub> = regression co-efficients

a = intercept (constant)

Multiple Regression Analysis is employed by taking overdues as the dependent variable. Before fitting the functions, zero-order correlation matrices are worked out to identify the multicollinearity problem. There is no multicollinearity problem observed among the independent variables included in the function for willful defaulters and total defaulters. But the multicollinearity problem is observed between Operational holding (X<sub>5</sub>) and Area under irrigation (X<sub>6</sub>) and similarly between Operational holding (X<sub>5</sub>) and Gross farm income (X<sub>8</sub>) since, r<sub>ij</sub> > R<sub>y</sub>. In order to avoid this problem, X<sub>5</sub> was omitted from the function to be estimated for non-willful defaulters. The results of the regression analysis are presented in Table 4.

The results of the regression analysis showed that variables such as Age (X<sub>1</sub>), Percentage of earning adults to total adults (X<sub>4</sub>), Area under irrigation (X<sub>6</sub>), Gross income from agriculture (X<sub>8</sub>), Family consumption expenditure (X<sub>10</sub>) and Total amount of credit borrowed (X<sub>13</sub>) have significantly influenced the overdues of willful defaulters. Among these variables, the co-efficient of Family consumption expenditure (X<sub>10</sub>) and Total amount of credit borrowed (X<sub>13</sub>) were highly significant at 1% probability level.

In the case of non-willful defaulters, variables such as Area under irrigation (X<sub>6</sub>), Family consumption expenditure (X<sub>10</sub>) and Total amount of credit borrowed (X<sub>13</sub>) have significantly influenced the overdues. Only one variable (X<sub>13</sub>) is highly significant at 1% probability level.

The function estimated for overall total defaulters indicated that six variables viz., Family size (X<sub>2</sub>), Percentage of earning adults to total adults (X<sub>4</sub>), Area under irrigation (X<sub>6</sub>), Family consumption expenditure (X<sub>10</sub>), Repayment capacity (X<sub>12</sub>) and Total amount of credit borrowed (X<sub>13</sub>) have significantly influenced the mounting overdues. Among these variables, the co-efficient of Repayment capacity (X<sub>12</sub>) and Total amount of credit borrowed (X<sub>13</sub>) are significant at 1 per cent probability level.

Thus, it can be concluded that these variables have a significant influence on overdues of default borrowers.

## 6. Suggestions

- The overdues have mounted continuously over the period and hence a mechanism should be evolved in order to reduce them. The concept of proper repay-

**Table 4.** Results of regression analysis

Variables	Co-efficients		
	Overall Defaulters	Willful Defaulters	Non – Willful Defaulters
Intercept	- 3076.132	- 14100.8	37191.309
Age of the borrowers (X <sub>1</sub> )	146.909 (145.993)	295.373* (99.279)	29.319 (178.694)
Family Size (X <sub>2</sub> )	1830.489* (1092.004)	1062.959 (738.630)	567.522 (1264.743)
Level of Formal Education (X <sub>3</sub> )	-3446.157 (3873.008)	- 1892.651 (2554.375)	-5771.988 (6861.382)
Percentage of Earning Adults to total Adults (X <sub>4</sub> )	- 163.324** (66.750)	- 96.297** (48.947)	-32.163 (66.208)
Operational Size of Holding (X <sub>5</sub> )	175.849 (511.396)	414.058 (325.108)	-
Area under Irrigation (X <sub>6</sub> )	- 1143.421* (616.429)	- 889.828** (354.959)	-1599.361** (795.440)
Cropping Intensity (X <sub>7</sub> )	0.920 (30.715)	24.229 (20.083)	-22.889 (38.397)
Gross Income from Agriculture (X <sub>8</sub> )	-0.053 (0.052)	- 0.078** (0.035)	0.06305 (0.060)
Non – Farm Income (X <sub>9</sub> )	-0.053 (0.059)	-0.038 (0.039)	-0.05432 (0.068)
Family Consumption Expenditure (X <sub>10</sub> )	0.168 * (0.102)	0.182*** (0.066)	-0.338 ** (0.147)
Total Amount of Outstanding Loans (X <sub>11</sub> )	0.015 (0.045)	0.038 (0.031)	-0.08265 (0.051)
Repayment Capacity (X <sub>12</sub> )	0.642*** (0.087)	- 0.026 (0.058)	0.542 (0.346)
Total Amount of Credit Borrowed (X <sub>13</sub> )	0.268 *** (0.017)	0.486*** (0.013)	0.117*** (0.017)
N	300	160	140
R <sup>2</sup>	0.71	0.95	0.40

Source: Field Survey

Figures in parentheses indicate Standard Error

\*\*\* Significant at 1% Probability level

\*\* Significant at 5% Probability level

\* Significant at 10% Probability level

ment of instalment dues should be well installed into the minds of the borrowers at the time of sanctioning loans, utilizing them and enjoying the benefits.

- The farmers have not utilized the loans borrowed for the purpose for which it was borrowed, which might be one of the main reasons for defaults. Therefore, necessary changes in operational policy and procedure is needed with a view to reduce the mis-utilization of borrowed funds.
- As multiple agencies are involved in lending operations in India, farmers tend to get loans from different agencies for the same purpose. This leads to accumulation of huge amounts of loan, much above their repayment capacity. Such a condition naturally causes the overdue problem. Therefore, it is better to have a single window integrated credit system by combining rural branches of Commercial Banks, Co-operative

Banks and Regional Rural Banks together which will limit the sanction of large quantum of loan and also strengthen the recovery policies and procedures.

- The bank officials involved in recovery of instalments should be given adequate training and orientation in loan sanctioning and recovery of instalments.

## 7. Conclusion

The present study reveals the association between socio-economic factors and repayment of Agricultural Co-operative Credit Societies. It was found that the Area under irrigation, Family consumption expenditure and Total amount of credit borrowed had significantly influenced the overdues of both willful and non-willful defaulters. In addition to above, another three variables, Age of the borrowers, Percentage of earning adults to

total adults and Gross income from agriculture had also significantly influenced the overdues of willful defaulters. The banking authorities have to implement the suggestions to overcome the problem of repayment and overdues in order that the cooperative banks may flourish in future.

## 8. References

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