

# An Economic Analysis on the Prospects of Cuddalore District Farmers through Agricultural Finance of commercial banks

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## ABSTRACT

Economic growth in India is through many sectors encompassing agriculture. growth in agriculture is plausible because of its huge cultivable land area potentiality which has the capacity to transform entire outlook of country's economy. With moving economy the proportion of agriculture is unique but notably opportunity to work even as labourers in farm are steeply down. An estimate of annual food grain consumption of India likely to be 200mt by 2050 due to burgeoning population explosion of 1.2 per cent per year. The demand in food grain could be met through utilization of recently developed varieties, judicious irrigation management, utilizing good quality seeds and need based after cultural measures. However farmers cannot meet out these farm measures because of their poverty and illiteracy. They need the support of banks for loans so that they make the farm business profitable. Even though commercial banks are providing loans to the farmers of various land holding and income group, still loan default by the stakeholders pose a major issue which tilt the activities of banks towards needed credit flow and halt the farmers livelihood improvement and total farm outcome. The reasons may be many both predictable and unpredictable. Repayment of loans by borrowers depends upon their ability as well as willingness to repay .The variables such as income resource level technology along with repayment structure determines ability to repay. In the present study emphasis has been given to understand the nature of defaulters and non-defaulters on farm credit based on their land holdings , cropping pattern, farm and non-farm income, consumption expenditure ,debt outstanding , family size, age and education status of cuddalore district.

*Key words:* stakeholders, borrowers, farm credit, debt

## I. INTRODUCTION

Agriculture provides not only food-stuff and essential raw materials but also employment to a huge section of the population. 18 per cent of India's gross domestic product (GDP) in 2017-18 is through Agriculture which provides employment to 70% of people. To improve the contribution of agricultural sector to enhance the GDP much emphasis should be given to improve the status of farmers by providing agricultural loan through commercial banks and Agricultural banks. For the targeted mark by the government, it is imperative to provide support in case of land, bank loans and other machineries to the small farmers along with the big farmers with which we can expect some improvement in Indian economy. Providing loans to farmers leads to steady increase in the area under cultivation. Further a substantial growth in the food crops is marked and a constant increase in the yield per hectare is noticed. However, the repaying capacity of the farm loan taken in commercial banks for various activities of Agriculture by the farmers is highly questionable due to various factors. One of the backward district of Tamilnadu ,Cuddalore has been taken for the study and an attempt to predict defaulters and non-defaulters of loan and to reason out the causes based on various factors such as size of land holdings, cropping pattern, farm and non-farm income, consumption expenditure, debt outstanding, family size, and age and education status.

## II. MOTIVATION OF THE STUDY

The study has the motivation to understand why there is lack of balance between agricultural credit flow of Indian commercial banks to small and marginal farmers and their ability to repay the loan obtained from such banks.

## III. REVIEW OF LITERATURE

**Ram Mudholkar(2018)** stated that The problems of small and marginal farmers are peculiar with their limited resources; they are not able to switch over to modern technology, this results in low productivity which limits farmer's resources and repaying capacity of the loan in commercial banks. absence of proper accounts, remoteness of farms, difficulties in knowing the integrity and trust worthy ness of the farmers ,hardships in maintaining close contacts 'have' added to the unwillingness of the banks to provide agricultural Finance.

**Mohan (2006)** studied the overall growth of agriculture and the role of institutional credit. Agreeing that the overall supply of credit to agriculture as a percentage of total disbursal of credit is going down, he argued that this should not be a cause for worry as the share of formal credit as a part of the agricultural GDP is growing. This establishes that while credit is increase ing, it has not really made an impact on value of output figures which points out the limitations of credit.

**Burgess et al (2005)** reported that increased supply and administered pricing of credit help in the increase in agricultural productivity and the well being of agriculturists as credit is a sub-component of the total investments made in agriculture . They also stated that the diversity in cropping patterns, holding sizes, productivity, regional variations make it difficult to establish such a causality for agriculture or rural sector as a whole, even if one had data. Finally, he argued that mere increase in supply of credit is not going to address the problem of productivity, unless it is accompanied by investments in other support services.

**Naryanan (1987)** Studied most of villagers who took loan were small and marginal farmers and agricultural laborers. He further observed that due to inadequate credit given to them, there was no increment in the in come of beneficiaries.

**Sharma and Prasad (1971)** stated that the introduction of latest technology without credit facilities would not have significance influence on the income of the farmers. Agriculture credit has direct relationship with the income level farm productivity and agriculture development.

## IV. NEED OF THE STUDY

- To understand why Indian commercial banks have been unwilling to provide agricultural credit to small and marginal farmers.
- To study the farmer's inability to repay the loan obtained from the commercial banks.

## V. a) METHODOLOGY

The present study mainly depends on data collected from primary source based on sample households. Reliability of any result depends upon the methodology encompassing sample design, schedules, analysing the collected data and finally the presentation and logical interpretation of the results in socio-economic studies of this kind.

## b) SAMPLING TECHNIQUE

The study covers beneficiaries opting different schemes operated in banks belonging to cuddalore district. Sample units are Randomized employing two stage stratified random sampling method. Region and Beneficiaries household are selected as stage I and II respectively by applying random sampling technique.

## VI. a) OBJECTIVES OF THE STUDY

- To understand regional imbalances of credit deployment and suggesting judicious credit flow.
- Delineating the socio-economic conditions of the stakeholders in the target area.

- Assessing scheme-wise and caste- wise inflow of bank finance on generation of income, employment and asset nature of the beneficiaries.
- To analyse the repayment nature of the stakeholders in the target area.
- To identify the problems faced by the bankers and stakeholders with regard to farm finance provided by commercial banks in the cuddalore District.

#### **b) HYPOTHESIS**

- The bank loan has no positive impact on income generation, employment creation and assets nature among the farmers assisted.
- The extent of bank loan provided is not adequate to finance the activity.

### **VII. LIMITATIONS OF THE STUDY**

The data of net income of the borrower's family from all identifiable sources in pre-loan and post-loan period were collected by recall method.

Relevant information was collected from the sample borrowers for two periods, viz., Pre-loan and Post loan to assess the extent of economic benefits derived by the beneficiary households in terms of increase in their net family income. Sufficient care was taken while recording net income of the post-loan period in order to realise net incremental income that can be attributed to the bank credit provided and that can determine the productive capabilities of the borrowers.

The respondents who are illiterates and they could not quantify precisely the values of their assets due to various reasons. Therefore, in all such process of re-collection of data relating to past years, assignment of net incremental income to the bank loan, and valuation of assets, some errors might have crept into the data. However, every effort was made to minimise such errors by exercising some checks and counter checks.

### **VIII. Socio-Economic Profile of Cuddalore District**

Cuddalore District is far behind to development compared with other districts of Tamilnadu .Farming and allied activities are predominant occupation. It is well known as South Arcot District for more than 100 years having mentioned everywhere in the history. The district has been renamed as Cuddalore after bifurcation from villupuram district during 1993. It occupies an area of 4283 sq. km and coast line of 68 km. Its boundaries extend as Bay of Bengal down East, Perambalur district in west, Viluppuram District towards north , and Nagapattinam District on the south . The district has 10 taluks and 13 panchayat union blocks. Covering 896 villages. The downpour is 528mm rainfall . The important crops cultivated include paddy,millets and other cereals, pulses, sugarcane, ground nut, cotton, etc. Even though part of this district is covered with coastal belt, rest of the land is arid.

#### ***Land Use Pattern***

The total geographical area of the district is 3,67,781 hectares of which not sown area constitute 35% whereas forest covers 6%. of the total area. The nine-fold clarifications of the land are pattern is given below in F

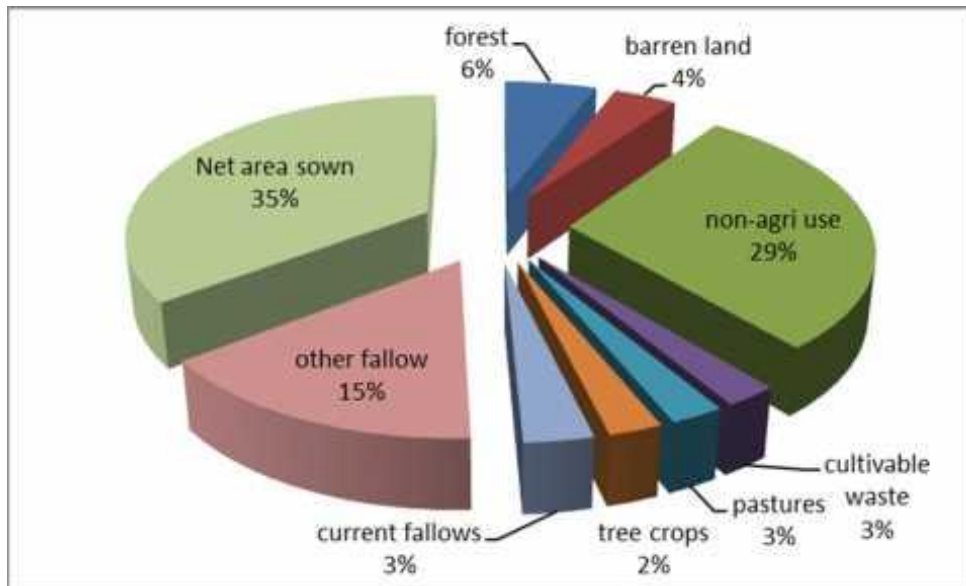


Fig 1. Land use pattern of Cuddalore District

**Agriculture**

Basically agriculture is the predominant life breath of the people of this district. Nearly 55.20 % of the cumulative work force is engaged in farm activity. Rice, cumbu - ragi, green gram, black gram, sugar cane , groundnut, gingelly and cotton are the prime crops . Apart from this, mango, guava and vegetables have also been grown successfully. The area, production and productivity of the Principal crops are depicted in Fig 2 as follows.

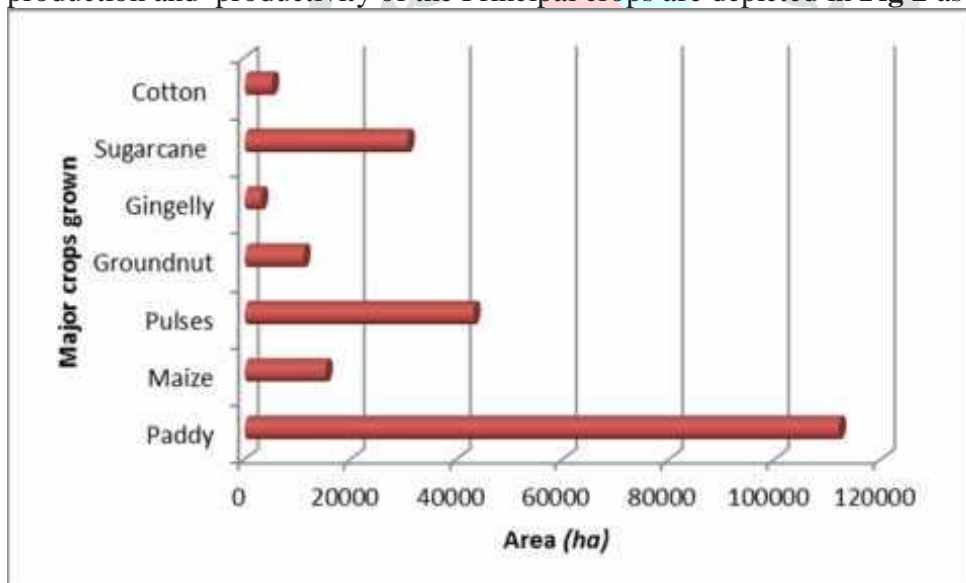
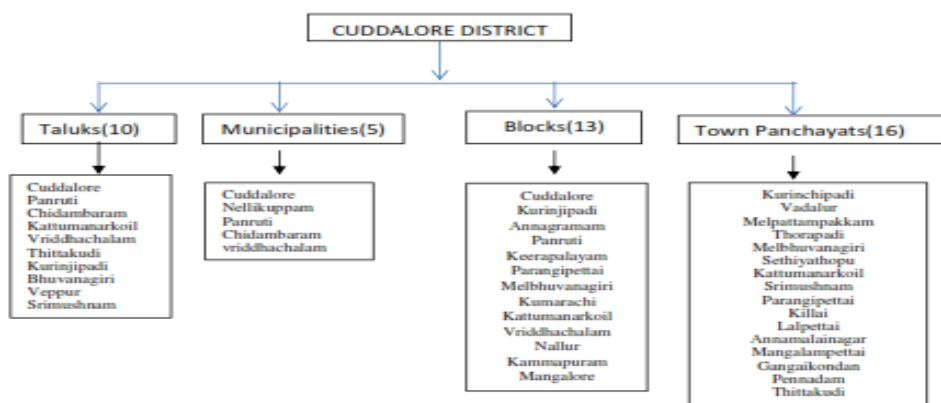


Fig 2. Area under Major Crops of Cuddalore District

**CUDDALORE DISTRICT ADMINISTRATIVE PROFILE****IX. RESULTS AND DISCUSSION****FAMILY INCOME OF THE BENEFICIARIES - SCHEME-WISE**

An attempt is made to derive various sources on total family income derived from different components of the sample stockholders in target region. It encompasses net farm income and non-farm income which considers additional net farm income, wages accrued by hiring out family labour, bullock labourer and agronomical implements and all forms of secondary forms of income gained apart from primary occupational source. In Table 1 the data on total family income from pre-loan and post-loan period of the sample stockholders in the district are furnished.

TABLE 1

Sl.no	Scheme	Calculated value of 't'	Table value of 't' at 5% level	Table value of 't' at 1% level
1	Milch animals	3.971**	2.052	2.771
2	Farm Machineries	2.756 <sup>NS</sup>	2.860	3.579
3	Crop production	7.2814**	3.249	4.296
4	Poultry	4.256**	2.609	3.145
5	Sheep,Goat	4.823**	2.616	3.157
6	Bullocks&Bullock carts	2.815*	2.632	3.184
7	Water resouces(Electric Motors)	2.187 <sup>NS</sup>	2.976	3.787

The Table 1 showed the impact of bank finance in generating income in all the components are significant except in farm machineries and water resources(Electric motors) implying significant impact of bank finance. As the sample size is two in tractors scheme, it not possible to estimate 't' values.

TABLE 2

## Paired 't' Test Table on Employment Creation - Scheme-wise

Sl.no	Scheme	Calculated value of 't'	Table value of 't' at 5% level	Table value of 't' at 1% level
1	Milch animals	2.682**	1.980	2.615
2	Farm Machineries	2.108 <sup>NS</sup>	2.306	3.355
3	Crop production	5.289**	2.060	2.787
4	Poultry	2.548**	1.980	2.615
5	Sheep,Goat	3.125**	2.042	2.750
6	Bullocks&Bullock carts	2.981*	1.980	2.617
7	Water resouces(Electric Motors)	1.902 <sup>NS</sup>	2.000	2.660

**EMPLOYMENT LEVELS OF BENEFICIARY HOUSEHOLDS - SCHEME-WISE**

One of the main aims of financial assistance is to provide employment opportunities for the beneficiary households assisted under the different schemes. The particulars relating to the employment generated under each scheme is presented in the Table .2. Using paired 't' test the mean variance in household employment of beneficiaries in the pre-loan and post loan periods were compared Table 2 showed the 't' values on employment generation in different schemes. It revealed that there is significant impact of bank

finance on generation of employment in all the schemes between pre-loan and post-loan period except hiring farm machineries and electric motors. As the size of beneficiaries are two in tractors scheme, it is not possible to calculate the 't' values.

### ***FAMILY INCOME OF THE SAMPLE BENEFICIARIES - CASTE-WISE***

Income distribution caste-wise on sample beneficiaries is shown in Table 3. It shows that among 174 beneficiaries borrowers in the region the Scheduled caste borrowers were 58, 75 Backward caste beneficiaries and Other castes were 41 .

**TABLE 3**

**Paired't' Test table on Income Generation – Caste-wise**

Sl.no	Caste	Calculated value of 't'	Table value of 't' at 5% level	Table value of 't' at 1% level
1	Schedule caste	2.007 <sup>NS</sup>	2.042	2.750
2	Backwardward caste	4.587**		2.617
3	Other caste	5.986**	2.000	2.660

It is evident from the above table , impact of bank finance in Backward castes and Other castes beneficiaries is significant whereas Scheduled castes beneficiaries recorded non-significant impact. Generating considerable income is noticed in general which indicated the favourable impact on caste-wise beneficiaries on generation of income.

### ***REGRESSION ANALYSIS***

Elasticity of bank finance on income is measured through regression analysis for employment and asset position of the beneficiaries. results of regression relating to the sample households assisted for the purchase of bullocks is shown in table 4.

**TABLE 4**

**Regression Analysis – Bullocks**

Dependent variable	Coefficient	R <sup>2</sup>	't' Value
Yi	0.3921	0.6259	5.2310**
Ye	0.2569	0.5862	3.1825**
Ya	0.3615	0.3925	6.4290**

Note: \*\* Significant at 1 per cent level

Table 4 revealed that the influence of bank finance on income, employment and asset accumulation of beneficiaries assisted in purchase of bullocks is positive, since the Coefficients were 0.3921, 0.2569 and 0.3615 respectively. The analysis clearly shows all the co-efficient was significantly different from zero at the probability of 1 per cent level.

The results of regression for the units financed for the Milch animals are presented in Table 5

TABLE 5

**Regression Analysis – Milch Animals**

Dependent variable	Coefficient	R <sup>2</sup>	't' Value
Yi	0.1394	0.4930	3.4861**
Ye	0.1640	0.5275	4.6292**
Ya	0.1890	0.3650	3.8957**

Note: \*\* Significant at 1 per cent level

It is understood from Table 5 , the elasticity co-efficient of bank finance with respect to income, employment and asset making is significant at 1 per cent level for milch animals.

Table 6 shows the regression results to find out the impact of bank finance on income, employment and assets position of the beneficiaries financed for Electric Motors.

TABLE 6

**Regression Analysis – Electric Motors**

Dependent variable	Coefficient	R <sup>2</sup>	't' Value
Yi	0.4956	0.5926	4.6520**
Ye	0.2081	0.3251	5.2591**
Ya	0.1980	0.4625	3.6497**

Note: \*\* Significant at 1 per cent level

It is clear from Table 6 that the co-efficient<sup>8</sup> of bank finance in relation to increase in income, employment and asset position are 0.4956, 0.2081 and 0.1980 respectively. It is observed that all the coefficients were significant at 1 per cent level.

**MULTIPLE REGRESSION ANALYSIS**

Understanding the relative importance of the various factors responsible in creating overdues at different levels, multiple regression analysis is used as the analytical tool to delineate two regions i.e., Bhuvanagiri and Srimushnam after classifying the components into external and internal factors. Factors which are beyond the control of borrowers and lending institutions such as climate conditions, irrigation facilities, cropping pattern, intensity of cropping are external whereas internal factors are within the control of borrowers and lending institutions. Therefore, to test the validity of over dues the factors responsible have been included in a regression model.

***Bhuvanagiri Region***

Table 7 presents the results of multiple regression analysis to find out the impact of independent variables as overdues to banks in the sample beneficiaries in Bhuvanagiri region.



TABLE 7

**Multiple Regression Analysis-Bhuvanagiri Region**

Variable	Coefficient	't' Value	R <sup>2</sup>
X <sub>1</sub>	-0.3213	4.9312**	0.6249
X <sub>2</sub>	0.7394	3.8673*	
X <sub>3</sub>	-0.4724	2.8652*	
X <sub>4</sub>	1.8942	1.3426NS	
X <sub>5</sub>	0.1986	2.8613*	
X <sub>6</sub>	2.6439	4.9624**	
X <sub>7</sub>	0.8625	0.3649*	
Intercept	342.5173		
Note: ** Significant at 1 per cent level			
Note: * Significant at 5 per cent level			

The R<sup>2</sup> value of 0.6349 indicated the presence of independent variables and variation of 63.49 per cent. X<sub>1</sub> has significant coefficient values at 1 per cent and X<sub>2</sub>, X<sub>3</sub>, X<sub>5</sub> and X<sub>7</sub> at 5 per cent, thus denoting overdues are influenced by these factors. X<sub>4</sub> has no significant coefficient signifying repayment of beneficiaries on cropping pattern has no influence. significant.

**Srimushnam Region**

The results of multiple regression analysis to find out the impact of independent variables on over dues to bank in the sample beneficiaries in srimushnam region are shown in Table 8.

TABLE 8

**Multiple Regression Analysis-Srimushnam Region**

Variable	Coefficient	't' Value	R <sup>2</sup>
X <sub>1</sub>	-0.8641	3.9823**	0.5341
X <sub>2</sub>	0.7625	3.5973**	
X <sub>3</sub>	-	2.9258*	
X <sub>4</sub>	1.2651	2.5492*	
X <sub>5</sub>	2.5624	2.4964*	
X <sub>6</sub>	0.2005	5.6309**	
X <sub>7</sub>	3.5647	0.1085 <sup>NS</sup>	
Intercept	287.3184		
Note: ** Significant at 1 per cent level			
Note: * Significant at 5 per cent level			

The R2 value of 0.5341 indicated the presence of independent variables and variation of 53.41 per cent. X1, X2, X4, and X5 has significant coefficient values at 1 per cent and X3 and X6 at 5 per cent. X7 has nonsignificant coefficient signifying repayment of beneficiaries among various castes are non significant.

## X. SUMMARY OF FINDINGS

- Not only unemployment but also underemployment as labourers are due to inadequacy of growth in non-agricultural arena.
- Land used for cultivation is mostly by small and marginal farmers cannot even satisfy to their basic needs
- With poor farm income it is unable for the farmers to meet out their day to day activities.
- The pathetic condition is that the asset less farmers are increasing and hence they solely depended on daily wages.
- Their employment prospects are crippled by vagaries of monsoons which limit the cropping intensity and gross yield.

## XI. CONCLUSIONS

Based on the findings of the study, the following conclusions are made which may contribute to the effective formulation, planning and implementation of the suitable schemes by commercial banks for agricultural development.

- It is found in this area that a majority of the beneficiaries due to ignorance and illiteracy are not familiar with the meaning and significance of bank loan facilities. It can be suggested that this handicap on the part of illiterate and ignorant public may be reduced to some extent by advertising the schemes and their benefits through mass media.
- Identification of the needy and genuine beneficiaries is one of the crucial problem which affect the credit sanctioning, disbursement, repayment and the recovery of overdone this can be avoided through the establishment of customer or beneficiaries' associations. The associations of the beneficiaries must be formed through the initiation of the banks. This would help the bankers to collect the information regarding the nature, behaviour, the social and economic background of the prospective beneficiaries.
- In this study it is observed that the inadequate loans and sanctioned for some of the schemes. Hence it is suggested the participating branches in rural areas should make a realistic assessment of the financial requirements and allocation of funds should be substantially enhanced to match the hike in prices.
- Informal education and training must be imparted to the beneficiaries on maintenance of assets, prompt repayment of loan instalment and on improving their social and economic conditions.
- It is observed that the attention is paid towards evaluation of assistance by either the bank or other sponsoring agency is negligible. This tendency demonstrates only a spend trend but does not call for the detail about the amount spent and result achieved. This situation invites the necessity for a Systematic evaluation by district study centre with the concerned authority to have clear glimpse of the impact of bank finance on income, and assets position of the beneficiary household.

## XII. SUGGESTIONS

The repayment performance of the beneficiaries in the study area is not impressive and various factors play in the matter of repayment of loan .

Besides ensuring better quality of lending, some of the suggestions are made for preventing emergence of over dues and improving flow of repayments to the financing bank.

- All possible steps should be taken to eliminate or reduce the political inferences in functioning of the credit system.
- The functioning of various agencies directly or indirectly associated with the task of recovering the loan such as tile officials of the credit institutions and revenue officials should be streamlined, For this purpose ‘Recovery cells’ should be created at the district and region level.
- The bank staff in rural areas shall come forward to utilise non-public business working day (NPBWD) properly for better recovery and deposit mobilisation.
- The poor recovery because of wilful default by all household should be strictly dealt with through legal action.
- The beneficiaries who observe credit discipline and regular repayment of the loan should receive a recognition at times giving some mementos in the recovery camps. Wherever village-wise recovery is good the village should be encouraged by extending some community services by bankers.

It is concluded that if due weightage is accorded to the suggestions made above by the authorities concerned, it not only triggers off agricultural prosperity but also enables the government(s) to provide socio-economic justice to the people.

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