

Disbursement of Agriculture Credit to Farmers And Bank's Contribution – Empirical Study With Reference to Farmers in Villupuram District

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Abstract - Agricultural Credit is the amount of investment funds made available for agricultural production from resources outside the farm sector. Agricultural Finance is considered as separate field of study dealing with lending and borrowing by organizations and farmers. Agriculture Credit is disbursed to farmers in need of time before or during irrigation period. There are many farm credit and farmers avail any one of them according to their demand. In this research paper, investigator examines various factors affecting disbursement of crop loans to farmers such as Collateral Optional, Minimum Documentation and Size of Holding because farm loans are decided primarily due to any one of or all of these factors. This research is of empirical in nature and study was conducted in and around Villupuram District. Farmers living there were interviewed and obtained the response according to that.

Keywords: FFC, NABARD, Kisan Credit Card and Agriculture Policy.

I. INTRODUCTION

Agriculture can be defined as the art, the science, and business of cultivating crops and livestock for economic purposes. At certain stages of human development, agriculture used to be the only known means of living. It is derived from the Latin terms ager referring to the soil and cultura to its cultivation. Agriculture is a broad term encompassing all aspects of crop production, horticulture, livestock farming, forestry etc. [1].

II. DISBURSEMENT OF AGRICULTURE CREDIT

In India, states have constitutional responsibility for many aspects of agriculture, but the central government plays an important role by developing national approaches to policy and providing the necessary funds for implementation at the state level. The central government is solely responsible for some key policy areas, notably, for international trade policies. Recently, the fiscal autonomy of the states is being strengthened through implementation of the recommendations of the 14th Finance Commission (FFC). Banks like NABARD, Village Co-operative Banks provide agriculture credit especially for running day to day operations, buying farm machinery such as tractors, harvesters, et cetera, Purchasing land, Storage purposes, Product marketing loans and Expansion. Apart from these banks, The Kisan Credit Card is a scheme launched by the Indian banks back in 1998, as a way to fulfill the financial necessities of the agricultural sector [2]. This is done by giving monetary support to farmers, which in turn comes

with various features and benefits. The quantum of the loan depends on several factors like cost of cultivation, farm maintenance cost, et cetera. However, State Bank of India, Axis Bank, Allahabad Bank, Punjab National Bank, HDFC Banks and Bank of Baroda also provide farm loans for variety of purposes thereby accomplishing key areas in agriculture policy [3].

III. OBJECTIVE OF THE STUDY

1. To examine the various factors affecting disbursement of crop loans to farmers.

IV. STATEMENT OF THE PROBLEM

As we know, agriculture is backbone of our country. These days agriculture is seen to be low profile activity and being taken up by countable people as this sector does not fetch sufficient revenue to the people depending on it. Due to which, banks also are reluctant to sanction credit to farmers. Farmers also slowly disappear since they are not able to be in this field for a long time. Similarly, we have come across many instances like farmer's suicide because of being unable to pay crop credit to banks and financial institutions. Banks also trim the amount of credit to be offered to farmers. Existence of middlemen is a cause of concern and farmers end up getting the credit against the expected amount of farm credit. Farmers are ill treated at the hands of bankers and they are not treated properly. They are made to wait for months together for crop loans which eventually make the farmers switch over to other menial activities other than farming.

V. SCOPE AND IMPORTANCE OF THE STUDY

Healthy agriculture is so essential to a country's well-being, it's been the setting of some of the most exciting **innovations** in technology. Through artificial intelligence, block chain software, gene manipulation, and more, scientists and farmers have been figuring out ways to increase crop productivity, use less water, and reduce negative impacts on the environment. For scientists and tech companies, agribusiness is one of the most fascinating and productive fields to work in. A stable agricultural sector ensures a nation of food security. The main requirement of any country is food security. Food security prevents malnourishment that has traditionally been believed to be one of the major problems faced by the developing countries. Most countries rely on agricultural products as well as associated industries for their main source of income. Banks also find ways and avenues to scale up crop credit to certain section of people who take up farm activities.

In these days, young generation are involved in agriculture sector and undergo revolution due to the existence of latest technology. As we have seen in the earlier paragraph, physical work is replaced by technology and agriculture productivity goes on increasing substantially. Institutional loans are available to farmers which are provided by agencies concerned in addition to bank credit for farmers. Farmers improve their standard of living by way of taking up healthy agriculture.

VI. REVIEW OF LITERATURE

A.R. Ahmad Izhar and Masood Tariq (2009) studied the impact of institutional credit on agricultural production in India. The authors used the Cobb Douglas agricultural production function to estimate credit for agricultural production for 1971-72 to 1990-91 and 1991-92-2004-05 by using time series data. Trends and pattern of institutional agricultural credit were also analyzed during these periods. They found that average yearly growth rate of institutional credit was maximum during 1971-1980 and lowest during 1990-2000. Similarly, the institutional credit as a percentage of agricultural Gross Domestic Product and also institutional credit per hectare of cultivated area increased during the post-reform period. But the share of agriculture sector in total non-food credit decreased during the study period. The study also suggested that the aggregate agriculture production actually affected by the accessibility of institutional credit in India. During the pre-reform period institutional credit significantly affected the agricultural production but during the post-reform period institutional credit did not affected much. So, they concluded that institutional credit was not an important determinant factor of agricultural production during the post-reform period in India [4].

Das et al. (2010) in their article suggest that agricultural credit has been rising in recent years as a share of both the value of inputs and the value of output. There are wide

regional disparities in the disbursement of agricultural credit by scheduled commercial banks. At the same time the share of agricultural GDP in total GDP is falling. In this context, this paper examines the role of direct and indirect agriculture credit in the agriculture production taking care of the regional disparities in agriculture, credit disbursement and agriculture production in an econometric framework using Dynamic Panel Data Analysis with Instrumental Variables using Arellano-Bond Regression. The analysis suggests that the direct agriculture credit amount has a positive and statistically significant impact on agriculture output and its effect is immediate. The number of accounts of the indirect agriculture credit also has a positive significant impact on agriculture output, but with a year lag. These results reveal that even though there are several gaps in the present institutional credit delivery system like inadequate provision of credit to small and marginal farmers, paucity of medium and long-term lending and limited deposit mobilisation and heavy dependence on borrowed funds by major agricultural credit purveyors, agriculture credit is still playing a critical role in supporting agriculture production in India [5].

D. Subbarao, the Governor of RBI (2012) while delivering a lecture on 30th anniversary celebration of the NABARD at Mumbai firmly stated that 'everything else will wait, but not agriculture'. While delivering his speech he stressed on that 'the agricultural growth has been the central to India's efforts at poverty reduction'. Further, he commented that in recent years, there has been growing concern for the food shortage which has created a big challenge to self-sufficiency in food production. Available land being fixed, self-sufficiency will only be possible through improved productivity which required adequate, timely and cheap credit. Development experience showed that the credit is an important determinant of value added in agriculture [6].

P. Satish (2012) evaluated the agriculture credit in India during the post-reform period. The author stated that during the post-reform period the policy of agricultural credit actually narrowed. This policy affected the strength of rural institutional credit and gave more pressure on the available resources available. He studied the economies of various countries for recommending the suggestions for improving the policy for agriculture credit. The author felt that the strengthening of rural financial markets would surely bring the expansion in agricultural credit [7].

V. Balakrishnama Naidu (2013) stated that about 66 percent population in India depends on agriculture. Therefore, agricultural credit is an essential input for higher agricultural productivity. Agricultural production and productivity should be improved to produce food for all population. Together with agricultural credit, other factors like seed quality, minimum support prices, rainfall, irrigation and environmental conditions were also considered significant in improving agricultural productivity. Because

of the misuse of credit, it was very difficult to estimate the exact use of credit for agricultural purpose [8].

VII. RESEARCH QUESTIONS

1. Do various factors affect the farmers while the getting crop loans?

VIII. RESEARCH HYPOTHESES

1. There exist significant association among the factors affecting while sanctioning loans to farmers.

IX. RESEARCH METHODOLOGY

The researcher has carried out the research work entirely in Villupuram District. Farmers were interviewed from different parts of Villupuram District. The main reason behind choosing Villupuram District is that Agriculture is one of the primary occupation for the people of Villupuram District. Totally 145 farmers were contacted for the purpose of data collection. Both primary and secondary data have

been collected. After conducting survey among 145 farmers in Villupuram District thus primary data were collected while Secondary data were collected from various sources viz. Books, Reputed Journals, Magazines, Library and respective websites. Cluster Sampling is adopted as population is homogeneous (i.e. Farmers)

and handful of farmers are chosen from male and female group by implementing systematic random sampling. Empirical Research Design has been put to use as this research is built on various statistical tools. Questions were translated in to Tamil Version due to lack of understanding of English by farmers.

X. STATISTICAL TOOLS USED

1. Single Sample t Test
2. Multiple Regression
3. Chi-Square Test
4. Confirmatory Factor Analysis

XI. DATA ANALYSIS AND RESULTS DISCUSSION

11.1 Single Sample t Test

Single Sample t Test for Various factors affecting disbursement of crop loans to farmers

In this section, variables of various factors affecting disbursement of crop loans to farmers were studied. There are three variables namely, (i) Collateral Optional, (ii) Minimal Documentation, (iii) Size of Holding. To test the significant difference among the mean value of the variables measured towards various factors affecting disbursement of crop loans to farmers against the test average response of 4 (mean score), the following null hypothesis was framed.

❖ *Various Factors affecting disbursement of crop loans to farmers do not differ with the average score*

The results of one sample t-test for variables measured for various factors affecting disbursement of crop loans to farmers are shown in the table as below:

Table 11.1 One sample t-test for various factors affecting disbursement of crop loans to farmers

Statements	Mean	SD	t-value	p-value
Collateral Optional	3.86	1.078	-1.541	.125
Minimal Documentation	4.26	.958	3.296	.001
Size of Holding	4.13	1.075	1.467	.144

**** Significant at 1% level**

Interpretation

With regard to various factors affecting disbursement of crop loans to farmers, the t-values of two variables: -1.541 and 1.467 are not significant at 1% level and t value of one variable: 3.296 is highly significant at 1% level. This shows that there is significant difference between the mean responses given by the respondents towards various factors affecting disbursement of crop loans to farmers, three variables have been identified under various factors affecting disbursement of crop loans to farmers such as collateral optional, minimal documentation and size of holding. Mean responses given by respondents are not significant in case of collateral optional and size of holding due to p value is greater than .05. Therefore, formulated null hypothesis i.e. collateral optional and size of holding do not differ with mean score is accepted while minimal documentation does not differ with mean score is rejected due to p value is less than .05.

11.2 Multiple Regression Analysis

Multiple Regression Analysis for Various Factors Affecting Disbursement of Crop Loans to Farmers

Multiple regression analysis is performed by taking Collateral Optional as dependent variable and Size of Holding and Minimal Documentation were taken as Predictors.

Table 11.2 Regression analysis for Various Factors Affecting Disbursement of Crop Loans to Farmers

Predictors	Standard Beta	t-value		
Minimal Documentation	.016	.195	F= .568	R ² = 0.008
Size of Holding	.085	1.010	R = .089	Adjusted R ² = -.006

** Significant at 1% level

It is observed from the above table that the regression model's F value is .568 and it is not significant at 1% level as p value is greater than .05. The regression model's coefficient of determination (R^2) is 0.008 and adjusted R^2 is -.006 which is a moderate coefficient. Therefore, formulated null hypothesis i.e. there is no significant relationship between Collateral Optional and Size of Holding and Minimal Documentation is accepted at 1% level of significance.

11.3 Chi-Square Analysis

Association among the variables of various factors affecting disbursement of crop loans to farmers.

To assess the association among the variables of various factors affecting disbursement of crop loans to farmers, Chi-square test was performed to identify association among the variables of various factors affecting disbursement of crop loans to farmers. The following null hypotheses are framed:

- *There are not significant association among the variables of various factors affecting disbursement of crop loans to farmers*

Table 11.3 Association among the variables of various factors affecting disbursement of crop loans to farmers

	Chi-square	p-value
Collateral Optional	57.586	.000
Minimal Documentation	138.000	.000
Size of Holding	113.034	.000

**Significant at 5% level

Interpretation

With regard to the above table, **three variables i.e. (Collateral Optional, Minimal Documentation and Size of Holding) of various factors affecting disbursement of crop loans to farmers** were tested in order to find any close association among three variables as show in the table and result is highly significant and formulated null hypothesis i.e. *there are not significant association among the variables of various factors affecting disbursement of crop loans to farmers* is rejected at 5% level.

11.4 Confirmatory Factor Analysis

Confirmatory Factor Analysis is used to determine the relationship among construct and observed variables of various factors affecting Disbursement of Crop Loans to Farmers

Table 11.4 Confirmatory Factor Analysis for various factors affecting Disbursement of Crop Loans to Farmers

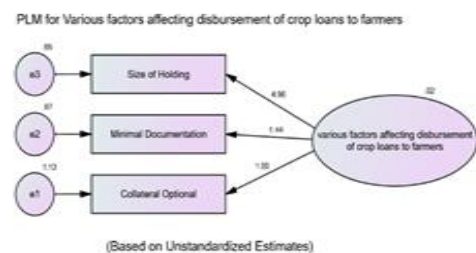
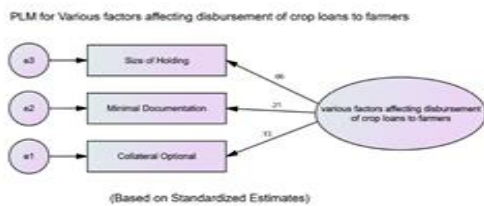
			Regression Estimates	S.E.	C.R.	P	Remarks
Various Factors affecting Disbursement of Crop Loans to Farmers	<---	Collateral Optional	1.000				Not Significant
	<---	Minimal Documentation	1.438	1.587	.906	.365	
	<---	Size of Holding	4.956	14.508	.342	.733	

In this table, factor Structure is predetermined by researcher through hypothesized model and hypothesis is tested to see if this is true. Similarly, this is used to test how well the measured variables represent the number of constructs. Construct is various factors affecting disbursement of crop loans to farmers and measured variables are namely collateral optional, minimal documentation and size of holding. The regression estimate for various factors affecting disbursement of crop loans to farmers in the prediction of minimal documentation and size of holding are not significantly different from zero at 5% level of significance under two-tailed and formulated null hypothesis i.e. factor model for various factors affecting disbursement of crop loans to farmers is ideally fit accepted.

Various Factors affecting Disbursement of Crop Loans to Farmers			Standardized Regression Estimate
	<---	Collateral Optional	.133
	<---	Minimal Documentation	.215
	<---	Size of Holding	.660

In the above table, it is believed that When Various Factors affecting Disbursement of Crop Loans to Farmers scaled up by 1 standard deviation, Collateral Optional, Minimal Documentation and Size of Holding are shot up by 0.133, .215 and .660 standard deviations respectively.

	Estimate of Variance	S.E.	C.R.	P	Remarks
F1	.020	.065	.313	.755	Not Significant
e1	1.133	.146	7.741	***	Significant
e2	.869	.161	5.405	***	Significant
e3	.649	1.474	.440	.660	Not Significant



Construct variance and error variances are highlighted in the above table and the purpose of this computation is to remove mostly errors present in the data collected by the research and ensure quality of data. The variance estimates of Various Factors affecting Disbursement of Crop Loans to Farmers is not significantly different from zero at 5% level under two tailed and it is evident that only minor errors were highlighted in the collected data however, the variance estimates of error terms e1 and e2 are significantly different from 0 at 5% level under two tailed and it is evident that errors were present in collected data and corrected in due course of time and the last error term e3 which is not significantly different from 0 at 5% level of significance under two tailed and only minor errors were present in the collected data.

XII. FINDINGS

- Based on the finding from single sample t test, it is revealed that Mean responses given by respondents are not significant in case of collateral optional and size of holding due to p value is greater than .05. Therefore, formulated null hypothesis i.e. collateral optional and size of holding do not differ with mean score is accepted while minimal documentation does not differ with mean score is rejected due to p value is less than .05.
- As regards regression analysis for various factors affecting disbursement of crop loans to farmers, the regression model's coefficient of determination (R^2) is 0.008 and adjusted R^2 is -.006 which is a moderate

coefficient. Therefore, formulated null hypothesis i.e. there is no significant relationship between Collateral Optional and Size of Holding and Minimal Documentation is accepted at 1% level of significance.

- Based on the finding of Chi-square test, three variables were tested under various factors affecting disbursement of crop loans to farmers. The three variables are collateral optional, minimal documentation and size of holding. The result is highly significant and formulated null hypothesis i.e. there are not significant association among the variables of various factors affecting disbursement of crop loans to farmers is rejected at 5% level.
- Confirmatory Factor Analysis has been used in order to determine the relationship among construct and observed variables with respect to various factors affecting Disbursement of Crop Loans to Farmers. Construct is various factors affecting disbursement of crop loans to farmers and measured variables are namely collateral optional, minimal documentation and size of holding. The regression estimate for various factors affecting disbursement of crop loans to farmers in the prediction of minimal documentation and size of holding are not significantly different from zero at 5% level of significance under two-tailed and formulated null hypothesis i.e. factor model for various factors affecting disbursement of crop loans to farmers is ideally fit accepted.

XIII. SUGGESTIONS

As we know, getting agriculture credit is provided based on the standing instruction of Central Government and State Government by involving banks and financial institutions. In spite of being collateral made optional, still some banks stringently demand for collateral securities prior to sanctioning loan to farmers. This step motherly attitude by some banks in India forces farmers point their finger at indigenous bankers for term credit who in turn charge exorbitant rate of interest for this credit. So, all the banks in India should uniformly follow set of guidelines as and when issued by Reserve Bank of India.

Ceiling amount of loan should be raised irrespective of size of holding of paddy land. But in some places, it is believed that limit of loan is decided based on size of farm land. This practice should be curbed and fair amount of loan should be given to farmers by accepting their demands through farmers meet.

XIV. CONCLUSION

Agriculture should be protected by taking concrete steps by the government. Farmers slowly move out of this occupation due to existence of social stigma and low income. Farmer's rights are denied and they are not respected in the society. Agriculture Policy should be formulated keeping in view the welfare and benefits of farmers. Voice of farmers should be heard and government should resolve their issues amicably. Agriculture Credit should be given in no time and government and banks should join together to redress the issues concerning farmers.

Documentation process with regard to agriculture credit should be as easy as possible and farmers should always be accessible to agriculture credit at any point of time. Interest free loan should be offered to farmers as a whole irrespective of size of landholding. Farmers have to be encouraged to take up farming activities by ensuring that timely credit be offered to them. Private Banks also should come forward to extend financial support to farmers round the clock as that of public sector banks. So that, our nation will become resourceful in productivity thereby enhancing export of the agriculture produce.

SCOPE FOR FUTURE RESEARCH

1. In this research article, investigator has covered only Villupuram District. Similar study should be conducted on other districts too.
2. Role of Farmers Association in ensuring Minimum Support Price can be highlighted through a research.
3. A study on Role of Farmers towards GDP also can be conducted. So that, importance of farmers can best be understood.

REFERENCES

16.1 Primary References

- 1) "India: Priorities for Agriculture and Rural Development". World Bank.
- 2) All India Rural Credit Survey Report
- 3) Annual Reports of NABARD.
- 4) Izhar, Ahmad & Tariq, Masood, 2009. "Impact of Institutional Credit on Aggregate Agricultural Production in India during Post Reform Period," MPRA Paper 17075, University Library of Munich, Germany.
- 5) Das, Abhiman & Senapati, Manjusha & John, Joice. (2009). Impact of agricultural credit on agriculture production: an empirical analysis in India. Reserve Bank of India Occasional Papers. 30. 75-107.
- 6) Reserve Bank of India, 'Annual Report', various issues. Reserve Bank of India, (2012): 'Report of the Advisory Committee on Flow of Credit to Agriculture and Related Activities from the Banking System' (Chairman: Prof. Vyas).
- 7) Satish P. (2012), 'Innovation in Agricultural Credit Market: Rationalisation of Policy Response,' Indian Journal of Agricultural Economics Vol.67, No. 1, January-March, 201
- 8) V. Balakrishnama Naidu (2013) "India's Rural Co-Operatives' Ritu Publications-Jaipur.

16.2 Other References

- 9) Government of India, 'Economic Survey', various issues.
- 10) Sriram M. S. (2007): 'Productivity of Rural Credit: A Review of Issues and Some Recent Literature', Indian Institute of Management Ahmedabad, Working Paper No. 2007-06-01.
- 11) Agricultural irrigated land (% of total agricultural land) The World Bank (2013).
- 12) Financial Intermediation and Markets, Economic Survey 2008-09.
- 13) Agricultural Statistics - Govt, of India.
- 14) Annual Reports-NCARDBFL-Mumbai.
- 15) Govt, of India, Report of Banking Commission, 1972.
- 16) <http://en.wikipedia.org/wiki/RegionalRuralBank>
- 17) <https://www.nabard.org>
- 18) www.indicus.info/index.php/banking.html
- 19) www.rbi.org.in