Economics

INSTITUTIONAL CREDIT DELIVERY TO SMALL AND MARGINAL FARMERS: A CASE STUDY IN CACHAR DISTRICT OF ASSAM

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ABSTRACT In recent years, the contribution of agriculture accounts for hardly 13.7% of gross domestic product (GDP) of India as compared to approximately 47% at the time of independence. This reduction, however, was not accompanied by a parallel decrease in the part played by agriculture in employment generation. Access to finance is crucial for the growth of the agricultural. Credit is an essential input for agriculture; therefore, its affordability and availability, particularly to the marginal and small farmers. This paper attempts to analyse the institutional credit delivery to small and marginal farmers in Cachar district of Assam and various factors influencing credit availability and highlight the issues of credit delivery system in Cachar district of Assam. For this purpose standard statistical tools have been applied along with strong theoretical justifications in this paper for analysing the proposed objective. The analysis reveals that the credit delivery to agricultural sector continues to be inadequate in the study area.

1. INTRODUCTION:
Agricultural credit is an important factor determining agricultural development of a country. Agricultural household model suggest that farm credit is not only necessitated by the limitations of self-finance, but also by uncertainty pertaining to the level of output and the time lag between inputs and outputs (De Janvry and Sadoulet, 1959). The credit delivery system for rural agriculture in India is a matter of concern. Though there have been changes in the banking policies time and again to support the farmers since independence. The Government of India for improving the condition of farmers has introduced many schemes and institutions to be able to reach out to the small and marginal farmers. The initiatives towards providing funds to farmers are seen in the form of Rural Infrastructure Development Fund (RIDF) was set up in NABARD, loans offered by SHGs (Self Help Groups), PRIs (Panchayati Raj Institutions), NGOs (Non-Government Organizations) etc.

By the year 2014, in general, nearly 51.9 per cent of the Indian farmers and 85 percent of the small and marginal farmers were under debt (NABARD, 2015) and the institutional credit facilities which were being extended to them had been inadequate (30%) (NABARD,2015). However, since the last five years, the government has been earmarking a substantial amount of capital for agricultural credit/farm credit, and the sectoral performance is also encouraging. In 2018–19, banks dispensed 12.55 lakh crore as ground-level credit to the agricultural sector (agriculture and related projects, agro-infrastructure, and support activities), and outdid the yearly target of 11 lakh crore. Moreover, to reverse the trend of the increasing dominance of non-institutional moneylenders in the agricultural sector, the Government of India has been undertaking several interventions. The initiatives such as PradhanMantri Jan DhanYojana (PMJDY), Direct Benefit Transfer (DBT), Digital financial services, Financial literacy programs/centres, Linkage of IoT with Agriculture, payment acceptance infrastructure through RuPayKisan Credit Cards (RKCs), and digitalized self-help groups are some of these (NABARD, 2019). Given this background the purpose of this paper is to assess the credit delivery system followed in Assam, in particular, the Cachar district.

2. OBJECTIVES OF THE STUDY:
The main aim of the study is to assess the credit delivery system followed in Assam, in particular, the Cachar district.

The research questions have led to the development of the following objectives:
1. To study the credit delivery mechanism of various institutions.
2. To find out the different factors that determining institutional credit.

3. Hypotheses of the Study:
H_1 Contribution of cooperatives in agricultural credit is negligible
H_2 Institutional credit delivery mechanism is not satisfactory.

4. RESEARCH METHODOLOGY:
This research work is conducted on the basis of primary data of 300 sample of small and marginal farmers collected purposively from Cachar district of Assam After selection of the district, stratified random sampling was followed to make strata of blocks out of total 15 development blocks of Cachar district where each stratum was represented three blocks. Again from each stratum one block was selected through simple random sampling. These blocks were Borjalanga Block, Kalain Block, Narsingpur Block, Salchapra Block and Udharbond Block. In each of the selected blocks three revenue villages are selected randomly. From each of the selected village 20 samples of small and marginal farmers are selected through simple random sampling. Hence sixty samples are selected in each block and total of 300 samples of small and marginal farmers. The respondents are of 18 years and above aged. For evaluating the objectives of the study, primary data are collected by survey using well structured, elaborate and pre-tested questionnaire. The primary data related to sources of the credit specially institutional credit delivery mechanism in rural areas, availability of credit, reason for borrowing, timely credit delivery, credit gap, political interference of credit delivery system and the problems faced by the farmers in the availing credit were collected from loan borrowers who were personally interviewed to ensure accuracy and comprehension.

5. RELIABILITY ANALYSIS:
In order to test reliability and consistency of Cronbach Alpha test is conducted in IBM SPSS 20 in order to measure the internal consistency i.e. reliability of the measuring instrument (Questionnaire). It is most commonly used when the questionnaire is developed using multiple likert scale statements and therefore to determine if the scale is reliable or not. Here, the likert scales taken are:

1. Strongly disagree,
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

The result Cronbach's alpha = 0.741, reflects high reliability of the measuring instrument. Furthermore, it indicates high level of internal consistency with respect to the specific sample.

6. Data Analysis and Interpretation:
The process by which an analyst proves/disproves the assumptions of the study regarding the parameter set by the researcher is known as Hypothesis testing. This methodology is employed in order to check whether the assumptions set by the author are true or not. This technique is also referred by researchers to test conformity of data analysis. This states that the hypothesis can be tested on the basis of observing the process of the model and interpreted using various analytical tests. Similarly for this study, the hypotheses that tested which are presented below along with results of estimations:

6.1. Contribution of Co-operatives in Agricultural Credit:
The agricultural credit is mainly done for augmenting a credit flow at the various levels of planning, adopting, rationalizing and borrowing. Thus, co-operative credit becomes a dependent variable and the independent variables are offering credit by co-operatives, co-

operatives are the best distributor, co-operative banks delays the credit and co-operatives banks sharing the knowledge. Depending on the variables the null and alternative hypotheses of the study are:

Null hypothesis: Contribution of cooperatives in agricultural credit is negligible.

Alternative hypothesis: Contribution of cooperatives in agricultural credit is not negligible.

Testing of the above hypothesis gives the results presented in table-1 and table-2 below:

Table 1: Model Summary of the contribution of co-operatives in agricultural credit

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.740[a]	.548	.542	1.12291	1.558
a. Predictors: (Constant), Do the banking institutions provide accurate knowledge regarding the schemes and policies? Cooperative banks delay the credit delivery. , Do the Co-Operative institutions offer credit? Cooperative and commercial banks are the best in the distributing the credit.					
b. Dependent Variable: Contribution of co-operatives in agricultural credit					

Source: Author's calculation based on primary data

The model summary describes the relation between a dependent variable and independent variable such as my dependent variable is contribution of co-operatives in agricultural credit and independent variables are [Do the Co-Operative institutions offer credit, Cooperative and commercial banks are the best in the distributing the credit, Cooperative banks delay the credit delivery]. The R-value also correlation coefficient = 0.74 which indicates a strong relation between them. The R square value = 0.548 which indicates there is 54.2% variation on dependent variables that is Contribution of cooperatives in agricultural credit explained by independent variables that is Do the Co-Operative institutions offer credit, Cooperative and commercial banks are the best in the distributing the credit, Cooperative banks delay the credit delivery. When Durbin-Watson test done on similar data, it was found that 1.558 which indicates a positive correlation between the dependent and the independent variables. The value of R-square and Adjusted Square is estimated with the standard error of 1.12291.

Table 2: ANOVA Model Summary of the contribution of co-operatives in agricultural credit

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	461.641	4	115.410	91.528	.000[b]
	Residual	380.802	296	1.261		
	Total	842.443	300			
a. Dependent Variable: Contribution of co-operatives in agricultural credit						
b. Predictors: (Constant), Do the banking institutions provide accurate knowledge regarding the schemes and policies? Cooperative banks delay the credit delivery. , Do the Co-Operative institutions offer credit? Cooperative and commercial banks are the best in the distributing the credit.						

Source: Author's calculation based on primary data

The ANOVA model summary describes the significant relation value of the dependent and independent variables with the help of regression and the residual value of the study data. In this model, the significance value of the F test is 91.52 with p-value =0.00. The significance level is less than 0.05, which implies that the relation is statistically significance. So, we accept the Alternate hypothesis which says the contribution of co-operatives in agricultural credit is not negligible. Thus, co-operative banks should not delay credit delivery and help the small farmers in growing the GDP contribution from the agricultural sector.

6.2. Credit delivery mechanism of various institutions:
The agricultural credit is mainly done for augmenting a credit flow at the various levels of planning, adopting, rationalizing and borrowing. This is done through various credit rationing institutions. Thus, for this reason, institutional credit becomes the dependent variable for farmers and the independent variables are coverage of financial services, the role of education on credit delivery mechanisms, credit giving proportion to the poor, involvement of the credit in C.B., distribution of the credit by the banks to finance business, credit delay system, absence of the policy paper and so on. Depending on the variables the hypotheses formed are:

Null Hypothesis: Co-Operative institutions do offer credit.
Alternative Hypothesis: Co-Operative institutions do not offer credit.

As per the hypothesis stated, the case processing summary is explained in tables-3, 4, 5, 6, 7 and 8 as follows:

Table 3: Case Processing Summary (Un-weighted Cases)

Case Processing Summary				
Un-weighted Cases			N	Percent
Selected Cases	Included in Analysis		300	100.0
	Missing Cases		0	.0
	Total		300	100.0
Unselected Cases			0	.0
Total			300	100.0
a. If weight is in effect, see classification table for the total number of cases.				

Source: Author's calculation based on primary data

Table-3 reveals there were 300 samples of respondents collected and from which there were no missing cases of the respondents. Thus, there is no use of dummy data while estimating the relationship between the dependent and independent variables of the study.

Table 4: Dependent Variable Encoding

Dependent Variable Encoding	
Original Value	Internal Value
Yes	0
No	1

Source: Author's calculation based on primary data

The table above shows that the dependent variable question, do the Co-Operative institutions offer credit? It has two categories 0 stands for yes category and 1 stand for no categories. Depending on the response of the respondents, the data is segregated and analyzed.

Table 5: Model Summary about the termination of the data

Model Summary			
Step	-2 Log likelihood	Cox &Snell R Square	Nagelkerke R Square
1	324.721[a]	.192	.267
a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.			

Source: Author's calculation based on primary data

The above table of the model summary describes the relation between the variables, i.e. dependent and independent variables. The Nagelkerke R Square value indicates there is 26.7% variation on dependent variables explained by independent variables. The Cox & Snell R Square value indicates that there is a 19.2% variation on dependent variables when explained by the independent variables. Similarly, 2 log-likelihood test explains the variation range of the dependence of the dependent variable on the independent variable.

Table 6: Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	13.402	8	.099

Source: Author's calculation based on primary data

This test indicates that the data are in an Event format. All of the goodness-of-fit tests have p-values higher than the usual significance level of 0.05. Thus, the significance value of the study is 0.99 which is higher than the usual value. This shows that the study is a goodness-of-fit model.

Following table-7 confirms that the major percentages of cases were rightly predicted by the model. In the context of this paper, 68.7% cases were correctly predicted.

Table 7: Classification Table

Classification Table			
Observed		Predicted	
		Do the Co-Operative institutions offer credit?	Percentage Correct

				Yes	No	
Step 1	Do the Co-Operative institutions offer credit?		Yes	51	51	50.0
			No	45	160	78.0
	Overall Percentage					68.7
a. The cut value is .500						

Source: Author's calculation based on primary data

Table 8: Variables in the Equation

Variables in the Equation								
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)
								Lower	Upper
Step 1[a]	Credit delivery is providing a wide range of financial services	-.080	.134	.356	1	.551	.923	.710	1.200
	Education is necessary to understand the credit deliveries system	-.057	.120	.229	1	.632	.944	.747	1.194
	Credit delivery is the system of giving credit money to the poor in the village	10.358	20096.697	.000	1	1.000	31522.730	.000	.
	commercial banks clearly explain the process of involved in credit	-.222	.156	2.040	1	.153	.801	.590	1.086
	Banking institutions distribute the credit impartially	-10.392	20096.697	.000	1	1.000	.000	.000	.
	Cooperative banks delay the credit delivery	.079	.143	.303	1	.582	1.082	.818	1.431
	Corruption in the banks affected the delivery of credit	-1.082	.201	29.087	1	.000	.339	.229	.502
	There is no proper policy implemented by the government in the system	-.493	.154	10.209	1	.001	.611	.452	.827
	Constant	5.305	.886	35.872	1	.000	201.328		

a. Variable(s) entered on step 1: Credit delivery is providing a wide range of financial services, Education is necessary to understand the credit deliveries system, Credit delivery is the system of giving credit money to the poor in the village, Commercial banks clearly explain the process of involved in credit, Banking institutions distribute the credit impartially, Cooperative banks delay the credit delivery, Corruption in the banks affected the delivery of credit, there is no proper policy implemented by the government in the system.

Source: Author's calculation based on primary data

Table-8 above indicates i.e., Corruption in the banks affected the delivery of credit and there is no proper policy implemented by the government in the system of the rural credit system has a maximum effect on the dependent variables, i.e**.,** Do the Co-Operative institutions offer credit? For factor 10, Corruption in the banks affected the delivery of credit, increase by 1 unit Exponential Beta (0.339) is observed. That is, the odds of outcome belonging to 'No' categories found to decreases by [1-0.339=0.661] 66.1%. For factor 13, there is no proper policy implemented by the government in the system of the rural credit system, increase by 1 unit Exponential Beta (0.611) is observed. That is, the odds of outcome belonging to 'No' categorizes found to decreases by [1-0.611= 0.389] 38.9%.

7. CONCLUSION:

This paper attempts to undertake the statistical modeling of the determinants of availing of institutional credit by the small and marginal farmers in Cachar district of Assam. It is found that social group, education of the small and marginal farmers, types of farming, political interference and housing condition of the farmers are significant contributory factors in availing institutional credit. It is also found that increase in the level of education of head of the small and marginal farmers have a positive impact on availing institutional credit. Farmers of pucca house are also found relatively a positive impact on institutional credit. So, it may be concluded that the credit delivery process of small and marginal farmers are facing the process of fulfilling documentary requirements for obtaining a loan to the illiterate farmers who are approaching these sources. The lengthy procedures involved also raise the total cost of a loan, though the rate of interest should be low by the institutions, complex procedure of the banking system, corruption of the bank staff and officers etc. for the problems of smooth functioning of the institutional credit. Another important factor such as weak cooperative institution for credit delivery and from political interference is hindrances smooth credit delivery in the rural areas. These aspects are very important for policy makers and researchers for future development in this area of study.

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