

## IMPACT OF CREDIT INTERVENTIONS FOR PROMOTION OF RICE FARMING IN THRISSUR DISTRICT

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### **ABSTRACT**

*The present study assessed the impact of credit interventions for promotion of rice farming in Thrissur district. Primary data were collected from 90 farmers of three panchayats, using a pre-tested structured interview schedule using Multi-stage random sampling. Percentage analysis, indicator approach and Cobb-Douglas Production Function were employed to analyze the data. The study found the credit interventions to support farmers by ways of interest subvention, timely credit etc., and linking of credit with marketing had found to be influencing the net income of farmers positively. The study suggested that the pattern of providing credit by Adat Service Co-operative Bank by way of revolving fund at the commencement of rice cultivation may be replicated by the other two Panchayats, and even other areas wherever not implemented, so that farmers can get easy and timely credit and their dependence on private agencies will also be reduced.*

**KEYWORDS:** *Commercial Banks, Co-operative Banks, Credit Interventions, Kissan Credit Card*

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### **Article History**

**Received: 29 Dec 2017 | Revised: 05 Jan 2018 | Accepted: 11 Jan 2018**

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### **INTRODUCTION**

Paddy cultivation was part of the proud culture of Kerala State. However, the area under rice has been falling at an alarming rate ever since the 1980s. Paddy area has come down from 8.82 lakh hectare in 1974-75 to 1.96 lakh hectare in 2015-16. The production has also concomitantly declined from 13.76 lakh MT in 1972-73 to 5.49 lakh MT in 2015-16 (GOK, 2016). Rice farming as the livelihood of a sizeable number of people, deteriorating rice cultivation demands immediate institutional intervention in the State. Input supply system, production process, credit supply and marketing can be positively promoted and protected by institutional support system. Due to increasing cost of inputs and labour, people are reluctant to do rice cultivation. It is difficult for the small and marginal farmers to meet this exorbitant input and technology cost from their own funds. In reality, it could be seen that the credit institutions are reluctant to finance the agriculture sector, especially the small and marginal farmers due to the fear of inherent risk such as low profitability and threat of poor repayment capacity. The farmers are also hesitant to approach formal financial institutions for their credit requirements, mainly because of long procedural formalities which results in their dependence on informal sources for the same. It is easy to obtain timely credit with low procedural formalities from these un-organized sectors, but at exorbitant

rate of interest with prompt repayment. As a result, sometimes farmers are forced to make distress sales to repay the loans, leading to reduced profitability. Hence, in the absence of timely credit the small and marginal farmers are forced to quit from rice cultivation. This makes institutional credit in rice farming an inevitable input. Provision of hassle-free credit can increasingly contribute to augment the income of rice farmers by mobilizing and channelling resources into productive utilization. Even though there are a number of agricultural credit schemes, it has to be judged whether they are reaching the ultimate beneficiaries and whether they are contributing towards augmenting farmer's income. The rice farmers as a group of producers should be supported and saved. The present study is in this direction to examine the impact of interventions of credit institutions on rice production in Thrissur district of Kerala.

## **2. OBJECTIVE OF THE STUDY**

To examine the impact of credit interventions on rice production in Thrissur district

## **3. RESEARCH METHODOLOGY**

For examining the impact of credit interventions on rice production in Thrissur district, three blocks which had the highest rice production in Thrissur district during the year 2011-12, viz., Pazhayannur block (11116.125 tonnes), Puzhakkal block (10854.885 tonnes) and Wadakanchery block (7667.600 tonnes) were selected (Economic Review, 2011-12). From each of these blocks, one Panchayat, viz., Pazhayannur, Adat and Mundathikode respectively, were selected, based on the area under rice cultivation. Primary data were collected from 90 farmers of three panchayats (30 from each Panchayat), using a pre-tested structured interview schedule using Multi-stage random sampling. Percentage analysis, indicator approach, chi-square test of independence and Cobb-Douglas Production Function were employed to analyse the data.

## **4. RESULTS AND DISCUSSIONS**

Timely credit is an inevitable element in the production process and it helps the farmer to conduct agricultural operations in time in the absence of owned funds. There are both institutional and non institutional agencies engaged in the provision of agricultural credit. The major institutional credit agencies are public sector banks, private sector banks, RRBs and cooperative banks. In the study area, public sector banks and cooperative banks are the major agencies which provide financial support to the rice farmers. There are also farmers who are taking credit from non-institutional agencies like money lenders. Along with the credit aspects, the farming aspects of farmer respondents viz, type of farmers, rice productivity, cost of cultivation and net income are also examined.

### **4.1. Classification of Farmers**

Based on the land holding size, the farmers are categorized as tenant, marginal, small and large farmers. The classification is made on the basis of land holding size of rice cultivation alone. The farmers, who have no land their own, but do rice cultivation on leased land are classified as tenant farmers. The farmers who hold land less than one hectare of paddy land is categorized as marginal farmers. Those farmers who have land holding size of one hectare to two hectares is categorized as small farmer and those who hold land more than two hectares are considered as large farmers.

**Table 1: Distribution of Farmers Based on Land under Rice Cultivation: Panchayat - Wise**

Sl.No	Type of Farmer	Pazhayannur	Adat	Mundathikode	Total
1	Tenant farmers	00	00	01 (03)	01(01)
2	Marginal farmers	23 (77)	11(37)	28 (94)	62 (69)
3	Small farmers	07 (23)	12 (40)	01 (03)	20 (22)
4	Large farmers	00	07 (23)	00	07 (08)
<b>Total</b>		<b>30 (100)</b>	<b>30 (100)</b>	<b>30 (100)</b>	<b>90 (100)</b>

**Source:** Compiled from primary survey

**Note:** Figures in parenthesis represent percentage share of each to total

#### 4.2. Rice Productivity

It is seen from Table 2 that productivity of rice is different in the three areas of the study. Rice production is the highest in Adat Panchayat followed by Mundathikode Panchayat. Wide difference is noticed in the productivity of rice between Adat Panchayat and the other two panchayats.

**Table 2: Productivity of Rice of Respondent Farmers: Panchayat - Wise**

Sl. No.	Production (kg /ha)	Pazhayannur	Adat	Mundathikode	Total
1	Less than 2000	11	00	10	21(23)
3	2000 – 4000	16	02	13	31 (34)
5	4000 – 6000	03	13	07	23 (26)
8	More than 6000	00	15	00	15 (17)
<b>Average Production (in Kg)</b>		<b>2444</b>	<b>5868</b>	<b>2947</b>	<b>3753</b>

**Source:** Compiled from sample survey

**Note:** Figures in parenthesis represents percentage of each to total

#### 4.3. Cost of Production

The cost of production of more than half (67 %) of the sample respondents falls within the category of ₹ 35000 to ₹ 45000 per ha. The cost of cultivation is the lowest in Adat Panchayat, where 26 out of the 30 respondents, i.e., 84 per cent are having cost of cultivation between ₹ 25000 to ₹ 35000 per ha and the average cost of all the respondents of the Panchayat is only ₹ 28489. Pazhayannur Panchayat has the highest cost of cultivation, with average cost of cultivation of ₹ 40345 per ha.

**Table 3: Distribution of Respondents Based on Cost of Production of Rice**

Sl No.	Cost of Production/ ha in ₹	Pazhayannur	Adat	Mundathikode	Total
1	25000-35000	01	26	00	27 (30)
2	35000-45000	28	02	30	60 (67)
3	45000-55000	00	02	00	02(02)
4	More than 55000	01	00	00	01 (01)
<b>Total</b>		<b>30</b>	<b>30</b>	<b>30</b>	<b>90(100)</b>
<b>Average Cost (in ₹)</b>		<b>40345</b>	<b>28489</b>	<b>38927</b>	<b>35920</b>

**Source:** Compiled from sample survey

It has been found from Table 4, that the marginal farmers is having the highest cost of cultivation (₹38648 per hectare) followed by the tenant farmer. The tenant farmer in the study has leased 6.88 ha of land which enables him to enjoy the benefits of large scale cultivation of a large farmer. Hence his cost of cultivation is lesser than the small farmers even after paying the lease rentals. The large farmers are having the least cost of cultivation since they are enjoying the benefits of economies of scale in their operations.

**Table 4: Distribution of Respondents in Relation to Cost of Production of Rice: Farmer – Wise**

Sl. No.	Cost of Production/ ha (₹)	Tenant Farmer	Marginal Farmer	Small Farmer	Large Farmer	Total
1	25000-35000	00	07	13	07	27 (30)
2	35000-45000	01	52	07	00	60 (67)
3	45000-55000	00	02	00	00	02 (02)
4	More than 55000	00	01	00	00	01 (01)
	<b>Total</b>	<b>01</b>	<b>62</b>	<b>20</b>	<b>07</b>	<b>90(100)</b>
	<b>Average Cost</b>	<b>37286</b>	<b>38648</b>	<b>30914</b>	<b>25860</b>	<b>35920</b>

**Source:** Compiled from sample survey

**Note:** Figures in parenthesis represents percentage of each to total

#### 4.4. Net Income from Rice Farming

Table 5 reveals that net income per ha is the highest in Adat Panchayat and lowest in Pazhayannur Panchayat. Pazhayannur has the lowest productivity and highest cost of cultivation. (Tables 3 & 4). Hence their net income will also be the lowest. It is to be noted here that in Pazhayannur, out of 30 respondents, 14 farmers representing 47 per cent are facing loss from rice cultivation. Even though the Pazhayannur farmers are having high cost of cultivation, they are not ready to quit rice farming since they have been doing it for years and are highly dedicated to it.

**Table 5: Net Income of Respondents from Rice Farming: Panchayat - Wise**

Sl. No	Net Income/ ha (₹)	Pazhayannur	Adat	Mundathikode	Total
1	Net loss	14	00	00	14 (16)
2	Less than 25000	08	00	00	08 (09)
3	25000-75000	08	01	13	22 (25)
4	75000-125000	00	07	17	24 (26)
5	125000-175000	00	22	00	22 (24)
	<b>Average Net Income</b>	<b>2092</b>	<b>125430</b>	<b>77432</b>	<b>68318</b>

**Source:** Compiled from sample survey

The net income of the farmers based on their land holdings or farmer category - wise is examined and chi-square test was used to analyse the relationship between net income and land holding size of the farmers.

Table 6 reveals that marginal farmer category is having the lowest net income per ha. Out of the marginal farmers, 21 per cent are facing net loss from the rice cultivation. Out of the 14 farmers having loss from rice cultivation in Pazhayannur, (Table 5), 13 belong to the category of marginal farmers. Hence it can be inferred that it is the marginal farmer category which is reducing the average net income of the farmers of Pazhayannur Panchayat. All the large farmers are in the highest income bracket of ₹ 125000 to ₹ 175000. Even the tenant farmer has leased 6.88 ha for cultivation and has net income of ₹ 75,092/- per ha. This implies that higher the land holding, higher will be the net income per ha.

**Table 6: Net Income From Rice Farming: Farmer Category - Wise**

Sl. No	Net Income/ ha (₹)	Tenant Farmer	Marginal Farmer	Small Farmer	Large Farmer	Total
1	Net loss	00	13	01	00	14 (16)
2	< 25000	00	06	02	00	08 (09)
3	25000-75000	00	17	05	00	22 (25)
4	75000-125000	01	22	01	00	24 (26)
5	125000-175000	01	04	11	07	22 (24)
	<b>Total</b>	<b>01</b>	<b>62</b>	<b>20</b>	<b>07</b>	<b>90 (100)</b>
	<b>Average (₹)</b>	<b>75092</b>	<b>53019</b>	<b>92038</b>	<b>135087</b>	<b>68318</b>

**Source:** Compiled from sample survey

**Note:** Figures in parenthesis represents percentage of each to total

#### 4.5. Sources of Credit

Table 7 reveals that 24 out of 90 respondents constituting 27 per cent are not having any loans or credit. Out of 66 respondents availing loans, 12, constituting 18 per cent are borrowing from private agencies like money lenders. It proves that non institutional sources are still prevalent among farmers. In Adatpanchayat, all the farmers are accessing credit from the cooperative bank of the area, viz, Adat Farmers Service Cooperative Bank. It is also to be noted that none of the respondent farmers in Adat Panchayat have availed loans from non – institutional sources, and all of them have availed from institutional sources, which shows the efficient intervention of the Bank with respect to credit. It is the only panchayat among the selected panchayats which has cent percent respondents coming under the purview of institutional sources of credit for paddy farming. Adat Bank will sanction a KCC for all rice farmers for one year while starting the cultivation at the rate of ₹ 10000 per acre subject to a maximum limit of ₹ 25000 per farmer. The loan amount will not be given directly to the farmer, but can be used by the farmer like a revolving fund without any interest. The farmer can purchase fertilisers, herbicides, insecticides and other inputs from the Depot of the Bank. After harvesting, the Bank will take the marketable surplus of the farmers and it will be given to SUPPLYCO. From the cash realised from sales proceeds, the loan amount and commission of one percent of sale proceeds will be deducted by the Bank and the balance amount disbursed to the farmer. The farmers are able to get easy finance without interest and can undertake timely cultural operations due to the efficient intervention of Adat Service Co-operative Bank. But in Pazhayannur and Mundathikodepanchayats the picture is entirely different with farmers depending on non – institutional sources along with institutional sources. In Pazhayannur and Mundathikodepanchayats, 47 and 33 per cent of the respondents respectively, have not availed any credit – institutional or non institutional. Moreover, out of those who availed loans, 44 per cent in Pazhayannur and 25 per cent in Mundathikode are depending on money lenders also. In both these areas, cooperative banks are not providing KCC advance to the respondent farmers and they are giving agricultural loans at 12 per cent interest rate, for which there is no interest subsidy. Availing credit is considered as a burden by some of the farmers. Reluctance to approach institutional agencies is yet another factor dissuading the farmer from availing credit. While interest subsidy is the prominent motivating factor for farmers for availing loans from institutional sources, it is timely and easy accessibility of credit for preferring non institutional agencies.

**Table 7: Sources of Credit to Respondents for Rice Farming: Panchayat - Wise**

Sl. No.	Panchayat	Not Availed	Public Sector Banks	Cooperative Banks	Private Agencies
1	Pazhayannur	14	08	06	07
2	Adat	00	07	30	00
3	Muundathikode	10	12	04	05
	<b>Total</b>	<b>24</b>	<b>27</b>	<b>40</b>	<b>12</b>

Source: Compiled from sample survey

#### 4.6. Extent of Institutional Credit to Agriculture

As far as the total quantum of credit is concerned, the highest amount is disbursed by co-operative banks in Adat Panchayat, and by public sector banks in Pazhayannur Panchayat. But the average credit per borrower is the highest in Pazhayannur Panchayat in the case of both co-operative banks and public sector banks. The disbursement of credit by co-operative banks is the highest in the Adat Panchayat since all the respondents have availed loans from Adat Service Co-operative Bank. But the average credit per farmer is the lowest since the Bank gives agriculture loans under the KCC in which the maximum amount is only ₹ 25,000. The dependence on public sector banks for credit is the lowest in the case of

Adat Panchayat, where, only seven out of 30 respondents have availed loans from commercial banks. It is the farmers who have higher landholdings who have availed loans from public sector banks in addition to what is obtained from Adat Co-operative Bank. The average credit per farmer is higher for public sector banks in all the three Panchayats resulting in the highest total average credit of all panchayats together at ₹ 65037/-. The maximum loan amount under this Scheme is ₹ 3 lakhs. So naturally the average credit per borrower will be higher than co-operative banks. The benefit of interest subvention scheme available in public sector banks, is attracting more farmers to this institutional source in recent days.

**Table 8: Institutional Credit to Rice Farmers: Source - Wise**

Sl. No.	Panchayat	Cooperative Banks		Public Sector Banks		Total	
		Amount (In ₹)	No. of Farmers	Amount (In ₹)	No. of Farmers	Amount (In ₹)	No. of Farmers
1	Pazhayannur	500000 (35.46) [83333]	06	910000 (64.54) [113750]	08	1410000 (100) [100714]	14
2	Adat	595000 (51.74) [19833]	30	550000 (48.26) [78571]	07	1145000 (100) [30945]	37
3	Mundathikode	80000 (21.28) [20000]	04	296000 (78.72) [24667]	12	376000 (100) [23500]	16
<b>Total average credit</b>		<b>29375</b>	<b>40</b>	<b>65037</b>	<b>27</b>	<b>43746</b>	<b>67</b>

Source: Compiled from primary data

Note: (i) Figures in simple brackets represent percentage share of each to total

(ii) Figures in square brackets represent average credit per farmer given to each farmer in the panchayat

#### 4.7. Interest Subvention Scheme

As per the interest subvention or interest subsidy scheme of the Central Government, farmers are eligible to get two per cent interest subvention and one per cent additional interest subvention for prompt repayment in the case of agricultural loans. The rate of interest of the loans under this Scheme is at present seven per cent, of which three per cent interest will be given by the Government and the farmer needs to pay only four per cent interest if the loan is repaid in time. All the respondents who have availed loans from public sector banks are getting the benefit of Interest Subvention Scheme. But with regard to the cooperative bank, only farmers in Adat Panchayat are getting the benefit of subvention scheme. The co-operative banks of Mundathikode and Pazhayannurpanchayats are not providing KCC and the farmers are taking loans at 12 per cent interest rate, without any interest subsidy. It is noteworthy that even though the average credit is the highest for public sector banks (Table 8), the average subsidy amount is the highest for co-operative banks, the credit of which goes to Adat Service Co-operative Bank alone since the co-operative banks in the other two Panchayats have not given any subsidized loans. This also implies that the farmers of Adat Panchayat who are borrowing from Adat Service Co-operative Bank are utilizing the benefit of interest subsidy to the maximum extent. The case of default is completely eliminated since the Bank links credit with the marketing of the rice produced. Thus the efficient intervention of Adat Service Co-operative Bank with respect to extending the benefit of the subsidy of its farmers is underlined here.

**Table 9: Receipt of Interest Subsidies by Farmers from Institutions: Panchayat –Wise**

Sl. No.	Subsidy Class (Amount in ₹)	Pazhayannur		Adat		Mundathikode		Total	
		Public Sector Banks	Co-op Banks	Public Sector Banks	Co-op Banks	Public Sector Banks	Co-op Banks	Public Sector Banks	Co-op Banks
1	Not availed	00	06	00	00	00	04	00	10
2	< 1000	00	00	00	09	11	00	11	09
3	1000-2000	02	00	02	21	01	00	05	21
4	2000-3000	00	00	02	00	00	00	02	00
5	3000-4000	04	00	03	00	00	00	07	00
6	6000-7000	02	00	00	00	00	00	02	00
7	Total	08	06	07	30	12	04	27	40
	Average Subsidy (in ₹)	927	00	555	1750	296	00	593	1750

**Source:** Compiled from sample survey

#### 4.8. Criteria for Selection of Source of Credit

The farmers have identified four main reasons for selecting their source of credit, viz, timely credit, easy accessibility of credit, low rate of interest and availability of subsidies. Of these, low rate of interest followed by availability of subsidies are the primary reasons for selecting the commercial banks by the farmers. Both these criteria are related, since due to the availability of subsidies only, the rate of interest is becoming low. All the respondents who have availed loans from commercial banks are supporting the criteria of low rate of interest and availability of subsidies. It is to be noted that easy accessibility is not at all a criteria for selecting commercial banks, which is to be considered by commercial banks for making their interventions more effective. As far as co-operatives are considered, low rate of interest and timely credit are the favourable factors. Out of the 33 respondents who consider low rate of interest as their first preference for opting for co-operative banks, 30 belong to Adat Service Co-operative Bank. Only 30 respondents have opted for availability of subsidies, all of whom belong to Adat Service Co-operative Bank. The position of co-operative banks is better compared to commercial banks, with respect to timely credit. The farmers approach private agencies for their financial needs, only because of timely credit and easy accessibility.

**Table 10: Criteria for Selection of Source of Credit: Institution - Wise**

Sl. No.	Criteria	Commercial Banks	Cooperative Banks	Private Agencies
1	Timely credit	15 (56)	32 (80)	10 (83)
2	Easy accessibility	00	10 (25)	06 (50)
3	Low rate of interest	27 (100)	33 (83)	00
4	Availability of subsidies	27 (100)	30 (75)	00

**Source:** Compiled from sample survey

**Note:** Figures in parenthesis represent percentage share of each criterion to total number of farmers who availed credit from the concerned institutions

#### 4.9. Type of Farmers and Procurement Agency

It can be observed from Table 10 that only marginal farmers (15 per cent) are selling their produce to private agencies. All others are selling their paddy to SUPPLYCO. The chi-square statistic is significant at one per cent level, and the result implies that the farmer class and supply agency are related. It is to be noted here that all the marginal farmers of Adat Panchayat are selling their produce to SUPPLYCO. Many of the marginal farmers are mainly depending on non institutional money lenders for their finance. So they have to repay the credit immediately after the sales. The realization of cash proceeds from SUPPLYCO is not immediate. The farmers who have taken loan from money lenders will not be in a position to repay the credit within the prescribed period. Hence, these farmers are forced to sell their produce to private agencies at a lower price for quick realization of cash, even if they are making distress sales.



It has already been seen that marginal farmers of Pazhayannur are facing net loss from rice farming (Tables 5 &6), and this distress sale is the major reason for the loss incurred by the marginal farmers. If there had been proper institutional intervention of credit agencies in Pazhayannur Panchayat, as in the case of Adt Panchayat, the problems of marginal farmers would have been solved to a large extent. Sahu *et al.* (2009) also found that lack of infrastructure and poor access to institutional credit, such farmers are exploited by means of an interlocked market connecting informal credit to the sale of paddy. The resulting gap, between the sale by a borrower of paddy at a predetermined low price, and the price of this commodity on the open market, constitutes the amount of what is termed a distress sale. The latter is itself influenced by the bargaining capacity (or lack thereof) of the peasant farmer who borrows on the informal market.

**Table 11: Option for Procurement Agency: Farmer Wise**

Sl. No.	Procurement Agency	Tenant Farmer	Marginal Farmer	Small Farmer	Large Farmer	Total
1	SUPPLYCO	01	48	20	07	76
2	Private agencies	00	14	00	00	14
	<b>Total</b>	<b>01</b>	<b>61</b>	<b>08</b>	<b>20</b>	<b>90</b>
	<b>Chi-Square</b>	<b>7.487**</b>				

Source: Compiled from sample survey

#### 4.10. Impact of Institutional Credit on Rice Production

For analysing the benefits from the credit availed indicator approach has been used and the probable indicators have been identified first. Table 12 reveals that out of total number of respondents who availed institutional credit, 42 per cent farmers have increased rice production. It has helped 59 per cent of respondents in repaying their existing credit and five per cent in purchasing/ constructing assets for rice farming like, sprayers, tube wells etc. with the help of institutional credit. In the opinion of farmers, if they had not availed credit, they would not have been able to do rice cultivation. All the respondents who have availed credit has benefited in at least one of the above methods.

**Table 12: Benefits of Farmers from Institutional Credit Availed: Source - Wise**

Sl. No.	Benefits	Public Sector Banks	Co-Operative Banks	Total No. of Responses
1	Increase in Production	12	16	28 (42)
2	Repayment of Existing Debt	15	24	39 (59)
3	Purchase of Assets	03	00	03 (05)

Source: Compiled from primary data

In order to analyse the impact of credit on rice production, Cobb-Douglas production function has been used. Total production (₹) is the independent variable and GCA (ha) and total credit availed (₹) are taken as the independent variables.

The function is estimated in logarithmic form as follows:

$$\text{Log } Y = \log A + b_1 X_1 + b_2 \log X_2$$

Where, Y = total production (in ₹),  $X_1$  = Gross Cropped Area, and  $X_2$  = Total credit availed (₹).



**Table 13: Results of Cobb – Douglas Production Function for Production and Credit**

Sl. No.	Variables	Coefficient (B)	T Statistic
1	A (constant)	7.279 <sup>**</sup>	9.774
2	X <sub>1</sub> (GCA)	0.809 <sup>**</sup>	4.627
3	X <sub>2</sub> (Credit availed)	0.337 <sup>**</sup>	12.997

$R^2 = 0.907$  and Adjusted  $R^2 = 0.904$

The Cobb - Douglas production function will be:  $Y = \log 7.28 + 0.81 \log X_1 + 0.34 \log X_2$

The adjusted  $R^2$  is 0.90 which indicates that 90 per cent of variation in production can be explained by GCA and total credit availed. It has been found that both the variables are significant at one per cent significant level and are positively related to output. From the production function, it can be inferred that an investment of ₹ 100 in GCA, will lead to an increase in production by ₹ 81. In case of credit availed, a credit of ₹ 100 can increase the production by ₹ 34. So, it can be concluded that institutional credits have significant impact on the production and income of rice farmers.

## 5. SUGGESTIONS AND CONCLUSIONS

The financial assistance of banks with a subsidized interest rate helps the farmers to raise funds for conducting timely agriculture operations. The credit interventions to support farmers by ways interest subvention, timely credit and linking of credit with marketing had found to be influencing the net income of farmers positively. The pattern of providing credit by Adat Service Co-operative Bank by way of revolving fund at the commencement of rice cultivation may be replicated by the other two Panchayats, and even other areas wherever not implemented, so that farmers can get easy and timely credit and their dependence on private agencies will also be reduced. It will also help the farmers to avoid distress sales of paddy to meet the obligations of the money lenders immediately after harvest. In the study, the researcher is also fully convinced with the effective and efficient credit intervention of the Adat Service Co-operative Bank with respect to provision of interest free KCC loans and linking of credit with the marketing of paddy. If credit for production is linked with marketing, misutilisation of subsidized credit by non farmers can also be prevented. The Agricultural Development Policy, 2013 of Kerala State in its Policy 106 recommended for the continuance of the unique model of Kerala in providing interest free loans to paddy farmers, for the coming years also, fully convinced with the utility of the same by the farmers of the State, the interest of which would be paid to the Co-operative Banks by the State Government. Hence it is suggested that the provision of interest free KCC loans by co-operatives and even commercial banks may be implemented in the interests of the paddy farmers and for the promotion of rice farming in the State, together with transfer of funds through DBT and linking of credit with marketing. Hence credit is an inalienable input to inspire and insulate the economy. But existing constraints in rice farming showed there are miles to go to provide economic independence to rice farmers.

## 6. REFERENCES

1. GOK [Government of Kerala]. 2013. *Agricultural Development Policy (Draft)*, 2013. Available: [http://www.keralaagriculture.gov.in/pdf/dap\\_e\\_15072013.pdf](http://www.keralaagriculture.gov.in/pdf/dap_e_15072013.pdf) [10.08.2017]
2. Atakelt Hailu Asfaw & P. Veni, *Determinants of Credit Risk in Ethiopian Private Commercial Banks*, *International Journal of Accounting and Financial Management Research (IJAFMR)*, Volume 5, Issue 3, May-June 2015, pp. 1-14
3. GOK [Government of Kerala]. 2016. *Economic Review 2016* [on-line]. Available: <http://www.spb.kerala.gov.in/images/pdf/er13/index.html> [10.08.2017].

4. Oladejo M.O, Fashina H.T & Yinus Oluwaseun, *Socio Economic Factors Influencing Mobile Banking Adoption in The Selected Commercial Banks of Nigeria*, *International Journal of Financial Management (IJFM)*, Volume 5, Issue 2, February-March 2016, pp. 17-22
5. G. B. Sahu, S. Madheswaran, and R. Rajasekhar,. 2009. *Credit constraints and distress sales in rural India; Evidence from Kalahandi district, Orissa*. *J. Peasant Studies* 31 (2): 210-241.
6. Meenakshi Chaturvedi, *Borrower Rating Related to Credit Risk in Commercial Banks*, *International Journal of Accounting and Financial Management Research (IJAFMR)*, Volume 4, Issue 2, March-April 2014, pp. 19-26
7. Nevine Sobhy Abdel Megeid, *The Impact of Effective Credit Risk Management on Commercial Banks Liquidity Performance: Case of Egypt*, *International Journal of Accounting and Financial Management Research (IJAFMR)*, Volume 3, Issue May-June 2013, pp. 13-32