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A Study on the Performance of Kisan Credit Card Scheme in Tamil Nadu

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ABSTRACT

Kisan Credit Card (KCC) scheme is an important effort of the banking sector for promoting agricultural credit and for achieving financial inclusion. The study evaluates the impact of KCC Scheme on farm economy. The primary data was collected from 120 farmers by personal interview from Nagapattinam District of Tamil Nadu. Farm business analysis, Cobb-Douglas production function, legit function and Garrett's ranking technique were used to assess the resource use efficiency, constraints faced by the farmers and the impact of KCC scheme on farm economy. It was found that the cost of cultivation and net income per hectare for three major crops (paddy, sugarcane and groundnut) were higher for beneficiary farmers than that of the non-beneficiary farmers. The transaction cost of borrowing was observed to be lower for beneficiary farmers which need to be further brought down. The constraints in the use of KCC are lengthy paper work, delay in payment of loan, and non-availability of loan on time, etc.

Keywords: Kisan Credit Card, Cobb-Douglas Production Function, Legit Model, Garrett's Ranking Technique

1. INTRODUCTION

The performance of agriculture sector has a significant effect on the growth of Indian economy. The agriculture and allied sectors accounts for 14.1 per cent of gross domestic product (GDP at constant price) and 52 per cent of employment (Government of India, 2011-12). In the sustained growth of agriculture sector, credit is essential for the development of agriculture in India. Considering the problems being faced by the farmers in having access to credit, the Government of India launched Kisan Credit Card (KCC) Scheme in 1998-99 to enhance the access to credit by the farmers. The scheme has facilitated the availability of credit in time and simplified the procedure for advancing loan by banks (Nahatkar et al., 2002). The timely availability of crop loan has helped the farmers in realising higher returns from farming (Singh and Sekhon, 2005). The flexibility in operation has resulted in improved loan repayment. The awareness among the farmers regarding the benefits of KCC is quite high (Vedini and Durga, 2007). The factors like age, gender, household size, farm size, education level, etc., positively influence the decision to adopt KCC card (Kumar et al., 2007; Bista et al., 2012). The KCC scheme despite its much desired popularity needs simplification of procedure, lesser paper work, lowering of interest rate, flexibility in instalment payment especially in times of hardship/crop failure, and of enhancing the existing credit limits (NABARD, 2009). Wide gap exists between the amount required and that sanctioned for crop production and other activities leading to diversion of loan amount towards purposes other than for which it is taken (Rao and Sahu, 2005). Many banks are observed to be selective in identifying beneficiaries'; they are reluctant to extend card facility in mono cropped areas; and levy costly service charges issuing loan under KCC (Karmarkar, 2008). The present paper has studied the performance of Kisan Credit Card scheme with the following objectives: (i) to analyse the progress and performance of the Kisan Credit Card scheme in India; (ii) to evaluate the impact of

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Kisan Credit Card scheme on crop productivity, income and employment in Nagapattinam District of Tamil Nadu of Tamil Nadu; and (iii) to identify the determinants and constraints in adoption of Kisan Credit Card scheme in Nagapattinam District of Tamil Nadu of Tamil Nadu and to suggest suitable measures for enhancing its performance.

2. DATA AND METHODOLOGY

The primary data was collected from 60 beneficiary farmers and 60 non beneficiary farmers from Nagapattinam District of Tamil Nadu. The farm business analysis was used to assess the impact of KCC scheme on farm economy. The Cobb Douglas production function was fitted to assess the resource use efficiency of paddy crop. The model used was $Y=A + b_1\ln X_1 + b_2\ln X_2 + b_3\ln X_3 + b_4\ln X_4 + b_5\ln X_5 + b_6\ln X_6 + b_7\ln X_7 + b_8\ln X_8 + D_1 + D_2 + D_3$; where, Y= Output (t/ha), X_1= Seed (Kg), X_2= Fertilizers (NPK in Kg), X_3= Pesticide (liter), X_4= Farm Yard Manure (Kg), X_5= Irrigation (Nos.), X_6= Machine (hours), X_7 = Farm size (Ha), X_8 = Farming experience (Years), D_1 = Kisan Credit Card loan (‘1’ if yes or else ‘0’), D_2 = Crop loan (‘1’ if yes or else ‘0’), D_3= Jewel loan (‘1’ if yes or else ‘0’). The constraints faced by the farmers were ranked using Garrett’s ranking technique. The formula for converting ranks into percent is given by: Percent position=$100*(R_{ij}-0.5)/N_j$; where, R_{ij}= Rank given for i-th factor by j-th individual; N_j= number of factors ranked by j-th individual. For each factor, the scores of individual respondents were added together and divided by the total number of the respondents for whom the scores were added. These scores for all the factors were arranged in descending order, ranks were given and most important factors were identified (Subhadra et al., 2009). The factors affecting adoption of KCC scheme were identified by deploying binary logit model.

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PROGRESS OF KCC SCHEME

The KCC scheme was initiated in the year 1998-99 and a total of 7.84 lakhs cards were issued. The scheme was broadened in the year 2004 by introducing term loan financing under its gamut resulting in further increase in issue of cards. A certain component of loans through KCC also covers the consumption needs of the farmers. A total of 1078.30 lakhs of Kisan Credit Cards have been issued with the overall cumulative amount of Rs. 10274.25 billion up to 2011-12 by the banks. The commercial banks with cumulative number of accounts of 547.52 lakhs has the major share of number of cards issued and is followed by that of co-operative banks (398.57 lakhs) and regional rural banks (RRBs) (162.49 lakhs). The share of KCC in the total amount of loan

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disbursed to agriculture and allied sectors showed a steady increase during the initial few years of its launch. It increased from 31.1 per cent in the year 2000-01 to 41.7 per cent in 2001-02, but after 2001-02, the total share and respective shares of each of the financial institutions declined (Table 1). Two of the institutional agencies RRBs (22.4 per cent) and commercial banks (23.5 per cent) have recorded a positive growth rate for the amount sanctioned under KCC. Wide gap between the number of Kisan Credit Cards (KCCs) and the agricultural loan account has been observed. The banks must put in place a system to weed out dormant KCCs and maximise the flow of credit through KCCs (Anonymous, 2011). The poor performance of co-operative societies with respect to KCC scheme demands ground level investigation to decipher its cause. A number of schemes, viz., Ultra Small Branches, Direct Bank Transfer, One Bank Account for Every Family, Opening of Accounts of Migrant Labourers, Financial Inclusion, Financial Literacy and Credit Counselling Centres (FLCC), Self-employment Training Institutions, Swabhimann, Loan Eligibility Certificate (LEC), etc., have been enunciated in Tamil Nadu to enhance the access to credit by rural poor (Anonymous, 2013b). The performance of KCC scheme in Tamil Nadu has been very good which is revealed from the impressive growth. The amount advanced per account has increased from Rs. 21551 to Rs. 38505 during the study period of TE 2002 to TE 2012 recording an increase of more than 1.5 times (Table 2). The banks in Tamil Nadu have reached the target under agricultural advances but the share of agricultural loans against gold ornaments is very high in the total crop loans portfolio (Appendix Table 1).

SHARE OF KCC IN THE TOTAL FLOW OF CREDIT TO AGRICULTURAL SECTOR, 2000-11

FLOW OF CREDIT TO AGRICULTURE CO-OPERATIVE REGIONAL COMMERCIAL					CREDIT FLOW UNDER KCC CO-OPERATIVE REGIONAL COMMERCIAL			
YEAR	**BANKS**	**RURAL BANKS**	**BANK AGENCIES**	**TOTAL**	**BANKS**	**RURAL BANKS**	**BANK AGENCIES**	**TOTAL**
2000 - 01	20712	4220	27807	**52827**	9412 (45.4)	1400 (33.2)	5615 (22.2)	**(31.1)**
2001 - 02	23524	4854	33587	**62045**	15952 (61.8)	2382 (49.1)	7524 (22.4)	**25858 (41.7)**
2002 - 03	23636	6070	39774	**69560**	15841 (67)	2955 (48.7)	7481 (18.8)	**26277 (37.8)**
2003 - 04	26875	7581	52441	**86981**	9855 (36.7)	2599 (34.3)	9331 (17.8)	**21785 (25.1)**
2004 - 05	31231	12404	81481	**125309**	15597 (49.9)	3833 (30.9)	14756 (18.1)	**34186 (27.3)**
2005 - 06	39404	15223	125477	**180486**	20339 (51.6)	8583 (56.4)	18780 (14.9)	**47702 (26.4)**
2006 - 07	42480	20435	166485	**229400**	13141 (30.9)	7373 (36.1)	19786 (11.9)	**40300 (17.6)**
2007 - 08	48258	25312	181088	**254658**	19991 (41.4)	8743 (34.5)	19900 (10.9)	**48634 (19.1)**
2008 - 09	45966	26765	228951	**301908**	13172 (29.7)	7632 (28.5)	25865 (11.3)	**46669 (15.5)**
2009 - 10	63497	35217	285800	**384514**	7605.8 (11.9)	10131.7 (28.8)	39940.5 (13.9)	**57678 (15)**
2010 - 11	70105	43968	332706	**446779**	10719 (15.3)	11468 (26.1)	50438 (15.2)	**72625 (16.3)**
CAGR (per cent)	13.1	27.8	30.7	**25.7**	-1.5	22.4	23.5	**13.7**

(Rs. crores)

Source: Reserve Bank of India (various issues); Bista et al. (2012); and NABARD (various issues).
Note: Figures in parentheses indicate percentage to the total flow of credit.

TABLE NO 1

TRANSACTION COST OF BORROWING LOAN

The costs incurred on legal documentation, commission agents and the opportunity cost of time spent in the process of procuring loan from the banks together makes up for the transaction cost of borrowing. The transaction cost of borrowing loan from formal sources of finance is also the

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important cost borne by the farmers. The transaction cost of borrowing loan from formal institutions was found to be lower for beneficiary farmers than the non-beneficiary farmers. As the KCC card is valid for five years the cost for legal documentation and opportunity cost are incurred once at the time of issue of KCC while for non-beneficiary farmers these costs are incurred each time they take loan. Further, after issue of cards farmers visit banks on an average twice in a year for borrowing and repayment of the loan but the non-beneficiary farmers on an average make five visits to the banks resulting in higher travel cost. Per annum transaction cost of borrowing for non-beneficiary (Rs. 617) was found to be significantly higher than that for beneficiary farmers (Rs. 345). The transaction cost for beneficiary farmers should be brought down further to make it more attractive to the farmer borrowers. This could be done by minimising the requirement of legal documentation, increasing the direct access of farmers to the banks (Table 3).

TRANSACTION COST FOR BORROWING LOAN FROM DIFFERENT TYPES OF FINANCIAL INSTITUTIONS

		CO-OPERATIVES			**COMMERCIAL BANKS**			**RRB'S**		
S. NO.	**PARTICULARS**	**KCC**	**JEWEL LOAN**	**SHG'S**	**KCC**	**JEWEL LOAN**	**SHG'S**	**KCC**	**JEWEL LOAN**	**SHG'S**
A	Documentation cost									
1	Loan agreement with stamp	-	50				50		-	-
2	Bond paper							180	-	-
3	Third party surety (for a loan amount above Rs 50,000)		40							
4	Title of property (Encumbrance certificate) from register office							200	-	-
5	Submission of documents (3 sets each)									
6	Membership fee	100	50							
7	Entrance fee	5	5	-						
8	No due certificate from banks (Pallavan Gramin Banka, Indian Bank, SBI)	300	-	-						
9	Ration Card Photocopy	10	20	15	-	30	15		17	25
10	Adangal Certificate (Issued by VAO)	240	-	-				30	-	
11	Photo*	50	50	40	-	40	30	30	30	20
12	Patta certificate issued by (Tasildar office)	60	80	-	-	90	-	20	60	-
13	Pass book/ KCC card	10	-	-		10	-	-		
	Sub Total	775	205	55	-	210	45	630	157	45
B	Opportunity Cost									
1	Visit to Bank	640	200	100	-	150	60	520	350	60
2	Village Administrative Office	40	-	-				50	60	-

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TABLE NO 2

The success of any loan scheme lies in minimising the diversion of loan. This would enable the timely repayment of the loan. Table 4 shows the purpose wise use of loan amount. It is observed that the beneficiary farmers use most of the loan amount for the purchase of inputs like seeds, fertilisers, pesticide, machine and labour. The diversion of loan by beneficiary farmers is for the purposes of education of children, consumption needs, medical treatment, etc. However, only a small percentage of farmers resort to diversion of loan. While the non-beneficiary farmers reveal a great tendency of diversion of loan. This is due to poor monitoring by the banks of credit utilisation by the farmers. The banks rely more on jewels as collateral and the peer pressure of SHGs for the recovery of loans rather than ensuring productive utilisation of the loan.

PURPOSE WISE UTILISATION OF LOAN AMOUNT BY THE FARMERS

		NON-BENEFICIARY JEWEL LOAN/ SHG'S				BENEFICIARY CROP LOANS/ KCC'S		
SL. NO.	PURPOSE OF USE	RBB'S	CO - OPERATIVE BANKS	COMMERCIAL BANKS	AVERAGE	CO - OPERATIVE BANKS	COMMERCIAL BANKS	AVERAGE
A	**Average amount of loan taken(Rs)**	14000	15000	20000	16333	20548	26500	23524
B	**Purpose of the use of loan**							
1	Seeds	700 (30)	1000 (100)	950 (50)	883 (60)	750 (100)	2100 (80)	1425 (90)
2	Fertilisers	1500 (35)	3000 (100)	2850 (45)	2450 (60)	2925 (100)	3250 (75)	3087.5 (87.5)
3	FYM/ Manure	500 (10)	700 (25)	1400 (30)	867 (22)	950 (25)	1450 (40)	1200 (32.5)
4	Machine - Harvester	1400 (25)	1500 (40)	3625 (45)	2175 (37)	4800 (75)	6756 (50)	5778 (62.5)
5	Human Labour	1900 (30)	2000 (50)	3020 (60)	2307 (47)	4950 (80)	5400 (75)	5175 (77.5)
6	Plant protection chemicals	1860 (10)	1050.5 (15)	2700 (20)	1870.2 (15)	2000 (60)	4175 (65)	3087.5 (62.5)
7	Education	2040 (35)	1600 (30)	2500 (28)	2047 (31)	1000 (15)	1500 (10)	1250 (12.5)
8	Consumption							
9	Small Implements	200 (12)	400 (15)	1200 (10)	600 (12)	750 (13)	1000 (15)	875 (15)
10	Medical Expenses	400 (18)	500 (15)	800 (20)	567 (18)	473 (5)	0	473 (5)
11	For Settling Old Debts	2500 (30)	2000 (22)	500 (10)	1667 (21)	1500 (13)	0	1500 (13)
12	Savings	0	0	0		0	370 (4)	370 (4)

Note: Figures in parentheses are percent of farmers using the loan for the purpose.

TABLE NO 3

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IMPACT OF KCC ON CROPPING PATTERN, INPUT USE AND PRODUCTIVITY

The availability of credit in adequate quantity and in proper time enables the farmers to include commercial crops in the cropping pattern which is expected to have a positive impact on the cropping intensity. The cropping intensity of the beneficiary and non-beneficiary farmers is depicted in Table 5. It is observed that the beneficiary farmers have recorded a higher cropping intensity of 223 per cent as against the non-beneficiary farmers who have recorded cropping intensity of only 207 per cent. It is also observed that the beneficiary farmers have allocated more area for the commercial crops like sugarcane and banana which are a 10 months crop in the area. The findings of the study are corroborated by the results of Singh and Sekhon (2005) who observed that non-KCC farmers recorded lower cropping intensity than that of KCC farmers. The overall improvement in agriculture demands that the farmers switch over from low productive crops to high productive and high income crops. They should allocate part of their land for commercial crops which will fetch them higher income (Anonymous, 2013b).

CROPPING PATTERN OF THE SAMPLE NON-BENEFICIARY AND KCC BENEFICIARY FARMERS
(acres)

		NON-BENEFICIARY JEWEL LOAN/ SHG'S				BENEFICIARY CROP LOANS/ KCC'S			
S. NO	CROPS/ SEASONS	NO LOAN	CO - OPERATIVES	RRBS	COMMERCIAL BANKS	AVERAGE	CO - OPERATIVES	COMMERCIAL BANKS	AVERAGE
A	KHARIF SEASON								
1	Rice	15.4 (75.6)	21.5 (64.4)	15.0 (49.2)	11.0 (35.4)	15.7 (54.5)	23.7 (56.0)	26.20 (52.6)	24.90 (54.1)
2	Sugarcane	1.6 (7.8)	2.2 (6.6)	4.5 (14.8)	6.75 (21.7)	3.8 (13.0)	6.9 (16.3)	12.35 (24.8)	9.63 (20.9)
3	Banana	0.7 (3.6)	0.0 (0.00)	0.0 (0.00)	4.24 (13.6)	1.3 (4.3)	3.5 (8.2)	7.00 (14.1)	5.21 (11.3)
4	Groundnut	1.4 (6.8)	8.9 (26.6)	9.8 (32.2)	7.25 (23.3)	6.8 (23.7)	7.9 (18.7)	4.25 (8.5)	6.08 (13.2)
5	Others	1.3 (6.2)	0.8 (2.3)	1.2 (3.8)	1.86 (6.0)	1.3 (4.4)	0.4 (0.8)	0.0 (0.0)	0.17 (0.4)
	Sub-Total	20.3	33.4	30.5	31.1	28.8	42.4	49.8	45.99
B	RABI SEASON								
1	Rice	13.3 (65.2)	19.5 (58.3)	13.8 (45.1)	10.0 (32.2)	14.1 (48.0)	19.7 (46.3)	23.45 (47.1)	21.53 (46.8)
2	Bhendi	0.3 (1.3)	0.5 (1.6)	0.0 (0.0)	0.00 (0.0)	0.2 (0.7)	0.6 (1.3)	0.00 (0.0)	0.27 (0.6)
3	Pulses	1.3 (6.60	2.4 (7.1)	3.0 (9.8)	0.00 (0.0)	1.7 (5.8)	0.8 (1.8)	2.25 (4.5)	1.02 (2.2)
4	Groundnut	1.4 (6.8)	4.9 (14.7)	3.3 (10.7)	6.25 (20.1)	3.9 (13.7)	5.9 (14.0)	0.00 (0.0)	2.93 (6.4)
5	Others	1.1 (5.2)	0.7 (2.2)	1.4 (4.6)	0.00 (0.0)	0.8 (2.7)	0.4 (0.9)	2.00 (4.0)	1.19 (2.6)
	Sub-Total	17.3	27.9	21.4	16.25	20.7	27.3	27.7	26.94
Gross Cropped Area		42.3	65.8	60.9	69.33	59.5	90.5	116.2	102.61
Cropped Intensity		208.0	197.1	199.7	222.9	206.6	213.4	233.3	223.1

Note: Figures in parentheses indicate percentage to net cropped area;
*others include tomato and brinjal;
**Sugarcane and banana are 10 months crops and the area under it is taken three times for computation of cropping intensity.

TABLE NO 4

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The role of KCC in improving the cropping intensity is now very much evident. The KCC scheme should be promoted for the larger benefit of the rural economy. The access to good quality loan enhances the use of inputs by the farmers. The farmers use good quality inputs and also use it at the right time and in right dosage. The use of inputs by the beneficiary and non-beneficiary farmers is depicted in Table 6. It is observed that the beneficiary farmers are using relatively higher dosage of inputs than that by non-beneficiary farmers. In paddy crop the beneficiary farmers use more of machine labour (28 per cent) and plant protection chemicals (76 per cent) the two most critical inputs. Similarly, in case of sugarcane crop the beneficiary farmers are using higher dosage of all the inputs which ranges from 2 per cent to 36 per cent. The farmers are also using higher dosage of seeds (23 per cent), inorganic fertilisers (19 per cent), irrigation (43 per cent) and plant protection chemicals (70 per cent), etc., in case of groundnut crop.

INPUT USE BY BENEFICIARY AND NON-BENEFICIARY FARMERS (Rs./ha)

		NON-BENEFICIARY JEWEL LOAN/SHG'S				BENEFICIARY CROP LOANS / KCC'S			
S. NO	**ITEMS**	**NO LOAN**	**RRBS**	**CO-OPERATIVES**	**COMMERCIAL BANKS**	**AVERAGE**	**CO - OPERATIVES**	**COMMERCIAL BANKS**	**AVERAGE**
				PADDY					
1	Seed (kg.)	31.8	69.4	41.7	65.5	52.1	33.3	70.1	51.7
2	Inorganic fertiliser (kg.)	142.4	161.6	223.1	153.8	170.2	230.8	250.0	240.4
3	Organic fertiliser(tonnes)	1.3	1.5	1.4	1.6	1.5	1.6	1.5	1.5
4	Irrigation (hours)	70.0	65.0	67.5	57.5	65.0	65.0	72.5	68.8
5	Machine power / tractor (hours)	11.6	12.5	10.6	17.1	13.0	16.3	16.9	16.6
6	Human labour(No.)	10.1	15.1	14.5	15.7	13.8	17.5	18.0	17.8
7	Plant protection chemicals (litre)	0.1	3.4	2.9	3.6	2.5	4.1	4.6	4.4
				SUGARCANE					
1	Seed (kg)	2.7	3.0	2.8	2.7	2.8	2.9	3.0	2.9
2	Inorganic fertiliser (kg.)	440.4	548.1	442.4	503.8	483.7	500.0	601.6	550.8
3	Organic fertilisers (tonnes)	2.3	2.8	2.7	2.5	2.6	2.8	2.8	2.8
4	Irrigation (hours)	157.5	172.1	180.1	189.0	174.7	175.0	182.5	178.8
5	Machine power/ tractor (hours)	9.6	11.6	11.3	10.9	10.8	12.4	12.6	12.5
6	Human labour (No.)	23.9	28.3	30.5	24.3	26.8	26.7	31.8	29.3
7	Plant protection chemicals (litre)	2.1	2.9	3.1	3.1	2.8	3.6	3.9	3.8
				GROUNDNUT					
1	Seed (kg)	71.8	87.0	90.1	87.0	84.0	96.0	111.2	103.6
2	Inorganic fertiliser (kg.)	94.7	150.1	176.9	150.1	142.9	153.8	186.9	170.4
3	Organic fertilisers (tonnes)	0.4	0.7	1.0	0.7	0.7	0.8	0.7	0.7
4	Irrigation (hours)	7.5	11.0	11.0	11.0	10.1	13.1	16.0	14.5
5	Machine power/ tractor (hours)	3.1	2.4	3.6	2.4	2.9	2.6	3.4	3.0
6	Human labour (No.)	14.3	13.8	12.7	13.8	13.7	13.2	17.3	15.3
7	Plant protection chemicals (litre)	0.7	1.3	1.0	1.3	1.0	1.6	1.9	1.7

TABLE NO 5

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The use of good quality inputs and in right dosage and time enabled by access to institutional loans through KCC would effectively result in higher productivity on beneficiary farms (Samantara, 2010). Table 7 depicts the yield of major crops obtained by sample farmers. In kharif season the beneficiary farmers have recorded higher yield in groundnut (38 per cent) and is followed by that for paddy (23 per cent) and sugarcane (22 per cent). During rabi season higher percentage gain in yield is obtained by the beneficiary farmers over that obtained by the non-beneficiary farmers. Rabi groundnut has shown highest yield gain of 50 per cent by the beneficiary farmers over non-beneficiary farmers.

ESTIMATES OF INPUT COEFFICIENTS FOR PADDY CROP

The coefficients of different inputs of Cobb-Douglas production function for paddy crop are presented in Table 7. The inputs like seed, fertiliser, irrigation and use of machine were found to have positive impact on productivity. The impact of quality of loan was assessed through the dummy variables namely KCC card, crop loan, jewel loan as against no loan. The KCC loan is perceived to be of best quality because of various inbuilt features leading to reduction in transaction cost, being valid for five years, etc. The crop loan offered by the co-operative banks is also similar to KCC loan. The crop loan taken from co-operative banks the farmer has to first take membership of the bank by submitting a number of document but in later periods involves lesser paper work for taking loans. Thus it is very similar in its features to KCC loan. The jewel loan on the other hand is considered to be least preferred loan as the rate of interest applicable on them is much higher and many of the features of KCC are not present in it.

ESTIMATES OF COEFFICIENTS OF INPUTS FOR PADDY CROP

INPUTS (1)	COEFFICIENTS OF INPUTS (2)	STD. ERROR (3)
Constant	- 3.276***	0.533
Seed (in kg.)	0.263**	0.106
Fertilisers (in kg.)	0.203**	0.082
Pesticide (in litre)	0.001	0.078
Farm yard manure (in kg.)	- 0.022	0.038
Irrigation number	0.424**	0.157
Machine (hours)	0.395***	0.124
Farm size	0.084	0.133
Farming experience	0.181*	0.094
Kisan credit loan (If yes=1 or else 0)	0.263**	0.116
Crop loan (If yes=1 or else 0)	0.337***	0.116
Jewel loan (If yes=1 or else 0)	0.129	0.091
R^2	0.91	

Note: ***, ** and * Significant at 1, 5 and 10 per cent level of significance.

TABLE NO 6

The regression results presented in Table 7 reveals that the coefficient of crop loan is positive and significant and thus has highest impact on productivity. The crop loan which is issued by the co-operatives has kind component for items like seeds and fertilisers. This ensures that the beneficiary farmers at least purchase and use these critical inputs and prevent the incidence of diversion of loan. These features of crop loan make it a very good quality of loan. This means that if the

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performance of KCC is to be improved then strategies must be devised to ensure that the diversion of loan is minimised.

The coefficient of jewel loan has turned out to be insignificant and hence is unable to have any impact on the productivity. The jewel loans bear higher interest rate and are usually taken by the farmers to meet exigencies. So the farmers most often desist from taking it for investment purposes rather to meet very emergent consumption need. The nature of collateral offered gives little incentive for the banks to monitor the end use of the loan. This has little impact on productivity and hence should be discouraged by the banking sector.

3. CONCLUSIONS AND POLICY IMPLICATIONS

The KCC scheme has played a significant role in farm operations and income of the farmers. The timely availability of crop loan has helped to realise higher per ha gross return for KCC beneficiary. The loan amount credited to the beneficiaries account was withdrawn in a phased manner (more than two times) by only 25 per cent of the beneficiaries. The phased withdrawal has implication on the savings in terms of interest rate charges for the period and in minimising the diversion of loan amount. The farmers need to be sensitised about the positive features of the KCC scheme. The transaction cost for beneficiary farmers was lower compared to non-beneficiary farmers. The transaction cost for opening KCC accounts need to be lowered. This can be achieved by minimising the legal documentation procedure, increasing the direct access of farmers to the banks, etc. Market infrastructure need to be improved so that the access to good quality inputs like seed, fertiliser, pesticide, use of machines, etc. would enhance the end use of the KCC scheme. The improved market infrastructure would enable them to dispose of their produce efficiently and effectively. The realisation of better price for their produce would have demand side effect on the KCC scheme.

The cost and return analysis of beneficiary and non-beneficiary farmers revealed that cost of cultivation per ha for the major crops were higher for beneficiary farmers compared to non-beneficiary farmers. However gross return per ha for all the crops for beneficiary farmers was much higher than non-beneficiary famers thus reaping higher profit. The timely availability of crop loan through KCC has positive impact on cropping pattern, input use, productivity and returns for KCC beneficiary. Therefore, the KCC scheme needs to be promoted. The binary Logit model analysis revealed that the education has positive influence on the adoption of KCC scheme. While the factors like distance from the bank and distance from the market have negative relationship. There is need to increase more branches in rural areas. The constraints faced by the beneficiary farmers should be addressed through reduction of paper work, increasing credit limit of crop loan, provision of ATM flexibility in the use of bank branches and number of withdrawals and repayment are some useful ways to improve the KCC scheme. The difficulty in opening bank accounts, easy availability of loan from informal sources and availability of jewel loan are some of the reasons stated which hinder the farmers from adopting the KCC scheme. This can be mitigated by organising campaigns for issuance of KCC and appraising the benefits of the scheme. This will help overcome the fear among the farmers of becoming defaulter. Government should develop policy to discourage the jewel loan scheme as it suffers from many disadvantages in terms of higher interest charges, investment for consumption needs and involves lesser monitoring. SHG loans should be encouraged to include people to participate in institutional credit market. Once the farmers acquire the desired skill set they could be brought under the fold of KCC. NABARD should formulate a scheme to engage NGOs to facilitate opening of KCC account by the farmers and linking them to banks.

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