CHAPTER 5

IMPACT OF KISAN CREDIT CARD ON AGRICULTURAL PRODUCTIVITY

5.1 Introduction

In this chapter impact of Kisan Credit Card scheme on agricultural productivity is analysed. For the analysis eight years data have been taken and Multiple Regression tool is used. For the examination of impact on agricultural productivity in India fifteen major states are taken -who contributes 70-80% in KCC scheme. The agricultural productivity (total food grains per hectare) is taken as dependent variable and number of KCCs issued (kccno) and amount sanctioned through KCC scheme (kccamt) are taken as dependent variables. Multiple Regression Analysis is done in SPSS software. Firstly the analysis will be done by state wise and after that all over analysis will be done. The multiple regression equation for analysis is given below:

$Y= \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots\ldots + \beta_n X_n$

Productivity = $\alpha + \beta_1$ kccamt + $\beta_2$kccno

Whereas:

Productivity = dependent variable,

Kccamt and kccno are independent variables.

Null hypothesis$_1$: There is no significant impact of KCC amount on agricultural productivity.

Null Hypothesis$_2$: There is no significant impact of KCC Numbers on agricultural productivity

5.2 Impact of KCC Scheme on Agricultural Productivity State wise Analysis

For this objective analysis we put the values of the three variables agricultural productivity, Kisan credit cards numbers and KCC amount sanctioned among all states into the SPPS software table and gives the names to the variables as; productivity, kccno and kccamt. After this we will go to the analyse option into the SPSS software , click on Regression and after that by choosing our variables as dependent and independent analyse the impact by looking at the coefficient values and p-values. β Coefficient values tells us that when there is one unit change in independent variable then by how much unit dependent variable changes. P value (sig.) tells the acceptance or rejection of statistical hypothesis. If p valueis less than .005% then we do not accept the null hypothesis and vice-versa. The results of state wise multiple regression is given in below table:

Table no. 6 State- wise Multiple Regression results

States	Variables	C	Kccamt	Kccno
A.P.	β	2434.953	0.00	0.00
	sig.	0.00	0.672	0.695
ASSAM	β	1312.045	0.00	0.007
	sig.	0.00	0.61	0.004
BIHAR	β	1513.345	0.00	0.003
	sig.	0.001	0.134	0.135

GUJARAT	β	1877.341	0.003	-0.002
	sig.	0.00	0.339	0.318
HARYANA	β	3259.861	-0.001	0.002
	sig.	0.00	0.182	0.195
KARNATAKA	β	1481.75	0.00	0.00
	sig.	0.00	0.227	0.181
KERLA	β	2220.9	0.001	0.00
	sig.	0.00	0.016	0.023
M.P.	β	1275.133	0.00	0.00
	sig.	0.00	0.932	0.874
MAHARASTRA	β	1081.63	0.00	0.000
	sig.	0.00	0.643	0.816
ORRISA	β	1400.28	0.00	0.001
	sig.	0.00	0.257	0.257
PUNJAB	β	4099.143	0.00	0.00
	sig.	0.00	0.097	0.089
RAJASTHAN	β	1118.298	0.00	0.00
	sig.	0.00	0.171	0.196
TAMILNADU	β	2159.871	0.00	0.001
	sig.	0.00	0.352	0.313
U.P.	β	2093.075	0.00	0.00
	sig.	0.00	0.101	0.096
WEST BENGAL	β	2542.151	0.00	0.00
	sig.	0.00	0.265	0.297

Calculated by: author using SPSS

Table no. 6 shows the state wise multiple regression results which explains the state wise impact of amount of KCCs and numbers of KCCs on their agricultural productivity. In case of Andhra Pradesh, if there is one unit change in kccamt and kccno then there is no change in agricultural productivity. Our p-values (sig.) of kccamt and kccno no are greater than the sig. value (.005) then the results for A.P. state does not accept the both null hypothesis (Null hypothesis$_1$ and Null Hypothesis $_2$).

In case of Assam state, if there is one unit change in kccamt then there is no change in agricultural productivity and if there is one unit change in kccno then by 0.7% agricultural productivity changes. The p values of kccamt is greater than significant value so it does not accept null hypothesis $_1$ and the p value of kccno is less than the .005 so it accept null Hypothesis $_2$.

In case of Bihar, with change in one unit of kccamt there is no change in agricultural productivity whereas with one unit change in kccno there is change of 0.3% in agricultural productivity. Both the p values are more than 0.005 so it does not accept the both null hypothesis.

In case of Gujarat, if there is change of one unit in kccamt and kccno then productivity changes by 0 .31% and -0.2%. The p values of kccamt and kccno are greater than the sig. value so it does not accept the both null hypothesis.

In case of Haryana, when there is one unit change in kccamt and kccno then productivity changes by -0.1% and 0.2%. The p value is greater than 0.005 so it does not accept the both null hypothesis.

In Karnataka there is no impact of kccamt and kccno on agricultural productivity and both the null hypothesis does not accepted.

In Kerala, the kccamt change by one unit changes the productivity by 0.1% and productivity does not changes with change in kccno. The p values of kccamt and kccno are less than 0.005 so both the null hypothesis are accepted.

In case of M.P., kccamt and kccno does not have any impact on agricultural productivity and both the null hypothesis does not accepted.

In Maharashtra also, kccamt and kccno does not have any impact on agricultural productivity and both the null hypothesis does not accepted.

In case of Orissa, with the change in kccamt there is no change in agricultural productivity and with change in one unit of kccno, productivity changes by 0.1%. Both the null hypothesis does not accepted.

In case of Punjab, both the independent variables does not make change in dependent variable. Both the null hypothesis does not accepted.

In Rajasthan, there is no change in agricultural productivity with change in kccamt and kccno and both the null hypothesis does not accepted.

In Tamilnadu, there is no change in productivity with change in kccamt whereas when there is one unit change in kccno then productivity changes by0.1%. Both the null hypothesis does not accepted.

In Utter Pradesh, there is no change in agricultural productivity with change in kccamt and kccno and both the null hypothesis does not accepted.

In West Bengal also there is no change in agricultural productivity with change in kccamt and kccno and both the null hypothesis does not accepted.

Table no.7 Aggregate multiple regression results			
	C	kccamt	kccno
β	2136.416	0	0
Sig.	0	0.871	-0.887

The table no.7 shows the results of multiple regression when all the states are combined to know the impact of KCC scheme on agricultural productivity of India. The results interpret that when there is change in one unit of both the independent variables (kccamt and kccno) then there is no change in dependent variable (productivity) and both the p values are higher than the significant value (0.005) so, both the null hypothesis does not accepted.

5.3 Conclusion

This chapter concluded that among the states there are only two states who have significant impact on agricultural productivity and all other 13 states does not have any impact on agricultural productivity and there is no change in productivity due to change in KCCs numbers and KCCs amount. In Assam state, it accept the null Hypothesis $_2$ means that there is impact of KCCs number on agricultural productivity. In Kerala both the null hypothesis are accepted, this means that both the KCCs number and KCCs amount have an impact on agricultural productivity. The reason behind this impact may be courses like the financial literacy and credit counselling centre are opened in districts by the Kerala government and through this knowledge they utilise the scheme in a proper way. The literature tells that there are many other major factors which influence the agricultural productivity and credit is much far for

influencing the productivity. So this chapter concluded that there is no impact or negligible impact of Kisan Credit Card scheme on Agricultural productivity in India.