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## Impact of Kisan credit card on farm productivity and farmer's economy in Odisha: An empirical evaluation

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### Abstract

Kisan Credit Card Scheme (KCC) was initiated in August 1998 by NABARD. At present it is implemented by three organizations namely commercial banks, cooperative banks and regional rural banks. KCC is a form of revolving cash credit facility that enables farmers to withdraw and repay funds to meet their various credit requirements. The KCC is helpful in strengthening relationship between financial institutions and agricultural producers. The sanctioned amount under KCC was increased from Rs 8582.00 crores in 2008-09 to Rs 501192.00 crores up to march 2023 in the country. In Odisha presently about 96.76 lakh KCC have been issued with sanctioned amount of Rs 446.89 crores by cooperatives, commercial banks and regional rural banks. Though in Odisha there are 78,60,651 registered farmers as per agricultural action plan 2019-20 and out of it only 31,56,838 farmers (40.16%) were issued KCC across the state since its inception. Since inception to till date, many farmers were benefited from the scheme and it is the time to access the impact on farmers in Odisha. In this background present paper constructed with broad objectives i.e. to access the extent of KCC fund utilized by the respondent and to evaluate the socio-economic impacts of KCC scheme in the sampled areas. A total of 160 (comprising 80 from KCC beneficiaries and 80 from Non KCC) households selected through stratified random sampling technique formed the sampled size. The data were collected through a well-structured questionnaire during the year 2021-2022. The study finds that KCC beneficiaries were more advantageous position in way of leaving, use of modernize agriculture, avail good education, health, service in tertiary sector with compared to non KCC beneficiaries. Lead banks of the districts may give emphasis on popularization, motivation and adoption of the scheme by a large number of farmers in sampled areas to increase farm productivity, farmers income and socio-economic condition.

**Keywords:** Kisan credit card, farmer, economy, empirical, evaluation, Odisha

### Introduction

The Kisan Credit Card Scheme (KCC) was initiated in August 1998 by NABARD. After that revision in KCC Scheme was made in the form of smart card, debit card and is implemented during April 2012. This revision was carried out by T. M. Bhasin, MD and Chairman of Indian Bank. In January 2013, the NABARD created a specialized project unit known as Kisan Credit Card (SPUKCC). As per the data collected from authenticated source, till the end of 2022-2023, banks across the nation issued over 1156.80 lakh KCC and sanctioned Rs.501192.00 crores. Presently in the country three agencies i.e. commercial banks which have issued a large number of KCCs with sanctioned amount of Rs. 502.91 lakhs (about 43.47%) up to march 2023 followed by Co-operative Banks with Rs. 477.87 lakhs (about 41.30%) and RRBs with Rs 176.02 lakhs (about 15.21%). If we compared in between 2008-09 to 2022-23 the commercial banks sanctioned about hundred times of the amount during 2008-08 followed by regional rural banks about 15 times and cooperatives only 43 percent. But in Odisha cooperative performed better durind referred period. In Odisha during financial year 2017-18 about 96.76 lakh KCC have been issued with financial sanctioned amount Rs 446.89 crores. In total sanctioned amount cooperatives constituted around 55.68 percent followed by commercial banks about 27.74 percent and Regional Rural Banks 16.58 percent. Co-operative banks are most common and larger distributor and sanctioned of KCC amount due to better performance and working in the state.

Though in Odisha there are 78,60,651 registered farmers (Agricultural action plan 2019-20), and out of it only 31,56,838 farmers were issued KCC across the state i.e., 40.16% of the total farmers since its inception which reflects slow growth in number of KCC issued by the cooperative but still it is very important institution in the state. A large number of farmers were benefited from the scheme since inception but till date no study had been conducted particularly on the KCC fund utilization gap and its socio economic impact. As per Literature reviewed from various journals researchers find very interesting information cited for strengthening of this paper. Researcher, Abhay, *et al.* finds that creation of jobs due to introduction of KCC scheme grew by 44.61 percent and study suggests for create a system to promote correct credit use and improve the quality of life. Researcher, Jainuddin *et al.* finds. in his study that KCC is extremely effective particularly in supply of short term production credit demand for all crops. Researcher, Priyanka *et al.* suggested that farmers who are availing KCC must allocated higher funds for the procurement of agricultural inputs. Researcher, Oleker highlighted that the biggest challenge faced in getting KCC loans through paper works and majority of farmers become non KCC holder was major issues in studied areas. Researcher, Sarkar reported that majority of sampled farmers (more than 70.00 percent) unable to engaged workers for interculturing operation due to lack of KCC fund and credit limits.

The above backdrop clearly indicated to access utilization gap and impact. Thus, present study was undertaken with the broad objectives i.e. to access the extent of KCC fund utilized by the respondents and to evaluate the socio economic impacts of KCC scheme in the sampled areas.

### **Materials and Methods**

The study employed a multi-stage random sampling procedure for selection of the ultimate beneficiaries and non beneficiaries' households. Initially, Odisha state was selected due to good number of KCC issued and amount sanctioned during past years. In the state two districts namely Khurdha and Mayurbhanj were selected on the basis of higher number of KCCs issued and the amount sanctioned in past three consecutive years. Both the sampled districts were also agricultural based and having a large number of farmers availed KCC. In the next stage of sampling two blocks having higher number of KCC beneficiaries across the block in respective district were selected. The selection of block was based on the Lead bank audited report of respective districts. In each sampled block two villages were selected with a view to obtain all information required for this study with the consultation of block level agricultural officials. In the selected village with the help of village headman a list of KCC beneficiaries and non-beneficiaries were prepared according to their age group. The prepared list were then categorized into three broad age groups *viz.* Young (Age up to 35 years) Middle age (Above 35 years & up to 50 years) and Old age (Above 50 years). As per probability proportion 80 KCC beneficiaries of different age group and 80 non KCC beneficiaries a total of 160 households were formed the sampled size for in-depth study. The required data related for study was collected through a well structured and pre tested questionnaire during the agricultural year 2022-23.

### **Statistical tools used in the study**

#### **Utilization of KCC by respondents**

The efficacy of the Kisan Credit Card (KCC) was assessed by

the implementation of a series of seven distinct statements designed to evaluate the various applications of the KCC, as proposed. The farmers' responses to the assertions, namely 'Full utilization', 'Partial utilization', 'Least Utilisation', and 'Non utilisation', were documented and each response was assigned a corresponding score of '3', '2', '1', and '0' correspondingly. The methodology provided below was utilized to assess the level of utilization of the Kisan Credit Card.

$$\text{Extent of utilization of KCC} = \frac{\text{Total scores obtained by the respondents}}{\text{Total obtainable score}} \times 100$$

Tabular analysis and simple percentage were used for estimating the socio economic impact of Kisan Credit Card.

## Results and Discussion

Age wise distribution of sampled respondent: Age wise distribution of sampled respondent presented in table-01.

**Table 1:** Age-wise distribution of sampled farmers in the study area

Age group	KCC Beneficiaries (Nos.)	Non-KCC Beneficiaries (Nos.)
Young Aged	35.00 (43.75)	25.00 (31.25)
Middle Aged	22.00 (27.50)	39.00 (48.75)
Old Aged	23.00 (28.75)	16.00 (20.00)
All Aged	80.00 (100.00)	80.00 (100.00)

Parenthesis indicates percentage

It may observed from the table 01 cited above KCC beneficiaries under young aged was quite high 43.75 percent with compared to Non KCC beneficiaries 31.25 percent. The table again showed that the number of Non- KCC beneficiaries was quite higher 48.75 percent of middle aged group with compared to KCC beneficiaries 27.50 percent. The old aged farmers were found higher 28.75 percent in case of KCC beneficiaries and only 20.00 percent in Non KCC beneficiaries. The table indicates young aged group was key beneficiaries of KCC Scheme in sampled areas.

### Social categories wise distribution of sampled house hold:

Social categories wise distribution of selected household is presented in table-02.

The table no 2 showed that the distribution of social categories of respondents and observed that KCC beneficiaries social categories was concentrated of scheduled tribe with about 40.00 percent however in case of non beneficiaries OBC concentration was found highest 31.25 percent. The table further reveals that general categories farmers were benefited about 26.25 percent. At the overall level it may be observed that all social categories availed the scheme but tribal community was more benefited may be due to higher share in total population.

**Table 2:** Social categories wise distribution of sampled house hold in study area

Social Categories	KCC Beneficiaries (Nos.)	Non-KCC Beneficiaries (Nos.)
General	21.00 (26.25)	17.00 (21.25)
OBC	17.00 (21.25)	25.00 (31.25)
SC	10.00 (12.50)	19.00 (23.75)
ST	32.00 (40.00)	19.00 (23.75)
All categories	80.00 (100.00)	80.00 (100.00)

Figures in parenthesis indicates percentage

## Educational level of sampled respondents

The educational level of sampled households is presented in table 03.

**Table 3:** Educational level of sampled farmers in study area

Education level	KCC Beneficiaries (Nos.)	Non-KCC Beneficiaries (Nos.)
Illiterate	02 (2.50)	08 (10.00)
Primary	13 (16.25)	19 (23.75)
Middle School	19 (23.75)	32 (40.00)
High School	27 (33.75)	21 (26.25)
HSC	15 (18.75)	11 (13.75)
Graduate & above	04 (5.00)	00 (0.00)
All	80 (100.00)	80 (100.00)

Figures in parenthesis indicates percentage

The education scenario of respondents are presented in Table 3. The table reveals that the majority of KCC beneficiaries got more than high school education about 58 percent with compared to non KCC beneficiaries 40.00 percent. No member of sampled non beneficiaries are having graduate. The number of illiterate members in non-beneficiaries was also high. It was reported that the beneficiaries who had completed secondary school were primarily employed in the agricultural sector and completed college level education mostly pushed towards the tertiary sector. Most of these non-KCC working family who passed primary, secondary and college level education were found to serve occupation as per their education level.

**Occupational Level of the respondent:** Occupational level of sampled respondents are presented in table 4.

**Table 4:** Occupational level of sampled farm household in study area

Occupation Level	KCC Beneficiaries (Nos.)	Non-KCC Beneficiaries (Nos.)
Farming	19.00 (23.75)	33.00 (41.25)
Farming + Non farming	10.00 (12.50)	21.00 (26.25)
Farming + Livestock	34.00 (42.50)	11.00 (13.75)
Farming + Non farming + Livestock	17.00 (21.25)	15.00 (18.75)
All	80.00 (100.00)	80.00 (100.00)

Figures in parenthesis indicates percentage

It is observed from table 4 that KCC beneficiaries employed higher in farming + livestock about 42.50 percent followed by farming about 23.75 percent, farming + non farming + livestock about 21.25 percent and farming + non farming about 12.50 percent in sampled areas. In case of non KCC beneficiaries about 41.25 percent households were found engaged in farming as occupation followed by 26.25 percent in Farming + Non farming, about 18.75 percent in Farming + Non farming + Livestock and only 13.75 percent in Farming + Livestock. The data indicates beneficiaries were highly engaged in diversified farming and non beneficiaries were found mostly engaged in farming.

**Source of credit in sampled area:** Source of credit to the respondents are analyzed and presented in table 5

**Table 5:** Source of credit to the sampled farmers in study area

Source	KCC Beneficiaries (Nos.)	Non-KCC Beneficiaries (Nos.)
Financial Institution	66 (82.50)	05 (6.25)
SHG	02 (2.50)	22 (27.50)

Relatives	05 (6.25)	16 (20.00)
Landlord of the village	07 (8.75)	37 (46.25)
All	80 (100.00)	80 (100.00)

The table number 5 showed that KCC beneficiaries were mostly borrowed loan from financial institution around 82.50 percent followed by 8.75 percent through landlord of the village, 6.25 percent from relatives and only 2.50 percent from nongovernmental sources. The table again showed that non KCC respondents mainly obtained loan from landlord of the village about 46.25 percent followed by SHG about 27.50 percent,

**Table 6:** Utilization of KCC sanctioned fund amount by sampled farmers

KCC fund Utilization	Old aged (N= 30) MOS OS UG	Middle aged (N=26) MOS OS UG	Young aged (N= 24) MOS OS UG
Timely available	90 74 17.77	78 64 17.94	72 60 16.66
Obtained max. allotted limit	90 63 30.00	78 59 24.35	72 56 22.22
Utilized in all season	90 50 44.44	78 41 47.43	72 46 36.11
Productive utilization	90 40 55.55	78 56 28.20	72 62 13.88
Use for crop insurance	90 55 38.88	78 57 26.92	72 66 8.33
Utilized as cash credit	90 02 97.77	78 07 91.02	72 07 90.27
Reduced cost of credit	90 61 32.72	78 68 12.82	72 64 11.11
Use as identity card	90 00 100.0	78 00 100.0	72 00 100.0
Overall	720 345 52.08	624 352 43.58	576 361 37.32

**Note:** MOS – Maximum obtained score, OS – Obtain score & UG- Utilization gap,

t-value old & young = 2.56, t value young & middle aged = 2.08 and t value middle & old aged = 4.75 (t-table value approximately 2)

Table 6 presents a comprehensive analysis of the degree of utilization and utilization gap across various types of farmers with respect to the Kisan Credit Card (KCC) scheme. The table indicates that old farmers demonstrated very low utilize gap only 17.77 percent in accessing finance in a timely manner. The table further indicates that utilized in all season and productive utilization gap recorded to 44.44 and 55.55 percent respectively, it may be due to delay in sanction of amount. At overall level utilization gap average was recorded 52.08 percent in case of old aged respondents. In case of middle aged respondents the overall average of utilization gap was recorded 43.58 percent which is lower than that of old aged respondents may be due to seriously taken efforts for obtained the amount. The table again showed

relatives 20.00 percent and borrowed from financial institutions only 6.25 percent. The table concludes here that KCC beneficiaries were maximum amount of loan borrowed from institutional sources and non KCC beneficiaries from non institutional sources may be due to provision of KCC to beneficiaries in study area.

**Utilization of KCC fund by sampled farmers: Utilization level of borrowed KCC fund by the respondents are presented in table 6.**

that the utilization gap was low 37.32 percent in young aged respondents may be due to serious efforts taken by them. It is very interesting to note here that in all categories of respondents productive utilization gap percentage was found very high mainly due to delay sanctioned of the amount and other unexplained reason. In order to evaluate the presence of a statistically significant difference among the various categories of farmers, a t-test was conducted. The results indicate that there was a significant difference in the utilization level of KCC between old farmers and middle-aged farmers as observed from the table.

**Comparison of standard of living between KCC respondents and non-KCC respondents:** The comparison between beneficiaries and non-beneficiaries in respect of living standard was worked out and presented in table 7.

**Table 7:** Standard of living of KCC and non-KCC respondents in sampled areas

Sl. No.	Respondents	Housing			Total	Communication facility				Rural Electrification		Water supply	
		Kuccha House	Semi-Pucca House	Pucca House		School	Hospital	Bank	Post Office	Yes	No	Yes	No
1	KCC Holders	7 (8.75%)	23 (28.75%)	50 (62.50%)	80 (100%)	80 (100%)	80 (100%)	80 (100%)	68 (85%)	80 (100%)	0 (0%)	60 (75%)	20 (25%)
2	Non- KCC Holders	23 (28.75%)	39 (48.75%)	18 (22.5%)	80 (100%)	70 (87.5%)	76 (95%)	48 (60%)	62 (77.5%)	50 (62.5%)	30 (37.5%)	26 (32.5%)	54 (67.5%)

(Figures in parenthesis show the percentage in total)

The table 7 cited above explained that only 22.50 percent of the non-KCC respondents had a Pucca house which is far below to 62.50 percent of KCC beneficiaries. In case of semi-pucca again non - KCC beneficiaries were in advantageous position about 48.75 percent with compared to beneficiaries. The data again showed that KCC holders were only 8.75 percent Kuccha house. It indicates the positive impact of KCC in study areas. In case of communication facilities like school, hospital, bank post office KCC holders were found availing hundred percent in school, hospital and bank however only 85 percent were accessed post office. These facilities were found availed by non KCC beneficiaries but percentage was low clearly indicates a significant positive impacts of KCC in studied areas. The table

again shows that in studied areas water supply and electrification facilities largely availed by KCC holders as compared to non KCC holders. This demonstrates that respondents from the KCC and their families had easier access to general institutions with compared to the respondents from non-KCC. All listed factors clearly indicated that the beneficiaries of the KCC and their families had a higher level of living with compared to non-KCC beneficiaries.

### Conclusions

This paper tries to explore KCC fund utilization gap and the socio- economic impacts of KCCs in Odisha. The analysis of results shows that the funds obtained through KCC scheme

beneficiaries were able to improve their lifestyle by its productive use. The analysis also explained the capability for accessing communication facilities such as hospitals, banks, schools by KCC holders with compared to non-KCC beneficiaries. All these factors clearly suggested that the beneficiaries of the KCC and their families had a higher level of living with compared to non-KCC beneficiaries. This improvement was mainly due to the implementation of KCC scheme in true sense & sprits in studied areas.

### Suggestions

On the basis of above discussions one can suggest that KCC fund utilization gap may be bridged by taking serious efforts and action by the financial institutions like lead banks. The extension backup and field employees may also play a key role in disbursement of KCC advances to right persons in right time for productive uses of borrowed amount. These efforts will be certainly helpful in checking in fund diversion obtained under scheme of KCC in the study area which will have directly or indirectly contribution in increasing farm productivity, farmers income and farmers socio-economic condition. It is also suggested that financial institutions may give emphasis on the sanction of KCC to marginal, small and poor farmers in the studied areas for improvement in socio economic conditions of these farmers.

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