NABARD RESEARCH STUDY - 50

Analyzing the Differential Performance in the Adoption of Kisan Credit Card (KCC) Scheme in the States of Uttar Pradesh, Bihar and West Bengal

Institute of Economic Growth, New Delhi

आर्थिक विश्लेषण एवं अनुसंधान विभाग
Department of Economic Analysis & Research

राष्ट्रीय कृषि और ग्रामीण विकास बैंक, मुंबई
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DISCLAIMER

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Submitted by:
Institute of Economic Growth, Delhi

Researchers:
Saudamini Das & Sumit Sharma

**Department of Economic Analysis and Research (DEAR),
National Bank for Agriculture and Rural Development
(NABARD), Mumbai**

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Analyzing the Differential Performance in the Adoption of Kisan Credit Card (KCC) Scheme in the States of Uttar Pradesh, Bihar and West Bengal About NABARD Research Study Series

The NABARD Research Study Series has been started to enable wider dissemination of research conducted/sponsored by NABARD on the thrust areas of Agriculture and Rural Development among researchers and stakeholders. The study titled 'Analyzing the Differential Performance in the Adoption of Kisan Credit Card (KCC) Scheme in the States of Uttar Pradesh, Bihar and West Bengal' completed by Institute of Economic Growth (IEG), New Delhi is the fiftieth in the series.

The Kisan Credit Card (KCC) Scheme was designed by NABARD and introduced by the Government of India in 1998-99 to provide farmers with timely access to affordable bank credit. Its main objective is to support the financial needs of farmers by offering loans to cover the costs of crop cultivation, post-harvest expenses, and allied agricultural activities. Empirical studies show that the scheme has enabled small and marginal farmers to realize higher returns, make timely loan repayments, improve their awareness of the agricultural market, reduce indebtedness and dependency on moneylenders. Over and above financing crop production inputs, the KCC scheme was extended to cover livestock and fishery owners recently.

However, in some places, uptake is below expectations, and performance varies widely by region and across the financial institutions despite high dependence of rural population on agriculture and the need for institutional finance for marginal and small farmers. In this connection, this study aims to examine the issues related to differential adoption of the KCC scheme in states of Uttar Pradesh, West Bengal and Bihar at farmer level, financial system level and ecosystem level. The study also attempts to understand the impact of Business Correspondents in the adoption/usage of KCC to gauge the impact of financial

inclusion. The study covers 08 districts, 16 blocks and 32 villages with a total sample size of 4,137 households representative of households having and not having KCC in the states of Uttar Pradesh, Bihar and West Bengal.

Hope this report would make a good reading and help in generating debate on issues of policy relevance. Let us know your feedback.

Kuldeep Singh
Chief General Manager
Department of Economic Analysis and Research

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ACRONYMS & ABBREVIATIONS

ADO	Agriculture Development Office
AHDF	Animal Husbandry and Dairy Farming
ATM	Automated Teller Machine
BC	Business Correspondent
BDO	Block Development Office
CBAM	Concerns-Based Adoption Model
CGFKCC	Credit Guarantee Fund for Kisan Credit Card
DBT	Direct Benefit Transfer
DDM	District Development Managers
DEAR	Department of Economic Analysis and Research
FGD	Focus Group Discussion
FPO	Farmer Producer Organization
GoI	Government of India
GVA	Gross Value Added
HCR	Head Count RatioHH
ISS	Interest Subvention Scheme
KCC	Kisan Credit Card
KYC	Know Your Customer
MPI	Multidimensional Poverty Index
NABARD	National Bank for Agriculture and Rural Development
NITI	National Institute for Transforming India
NOC	No Objection Certificate
NPA	Non-Performing Asset
NRLM	National Rural Livelihoods Mission
PAIS	Personal Accident Insurance Scheme
PBS	Poverty and Backwardness Score
POS	Point of Sale
PRI	Prompt Repayment Initiative
PSL	Priority Sector Lending
RBI	Reserve Bank of India
RRB	Regional Rural Bank
SHG	Self Help Group
TH	Total Number of Land Holdings
TIH	Total Number of Individual Land Household Holdings
UP	Uttar Pradesh
UTAUT	United Theory of Acceptance and Use of Technology
WB	West Bengal

EXECUTIVE SUMMARY

The Government of India introduced the Kisan Credit Card (KCC) scheme in the year 1998-99. This flagship scheme, designed with care by NABARD, aims to ease rural indebtedness and poverty by providing small and marginal farmers easy, timely credit.

The KCC scheme has proven effective. Empirical studies show that the scheme has enabled small and marginal farmers to realize higher returns, make timely loan repayments, improve their awareness of the agricultural market, and reduce indebtedness and dependency on moneylenders.

Keeping farmers' priorities and requirements in mind, the scheme covers consumption expenditure, maintenance of farm assets, and term loans for agriculture and allied activities. Paperwork has been reduced and interest subvention introduced for timely payment. Over and above financing crop production inputs, the KCC scheme covers beneficiaries under the Personal Accident Insurance Scheme and the Atal Pension Yojana. Recently, the scheme was extended to cover livestock and fishery owners.

Yet, in some places, uptake is below expectations, and performance varies widely by region and also across the financial institutions providing the KCC. Results are particularly poor in eastern India – Uttar Pradesh (UP), Bihar, and West Bengal (WB). Three types of financial institution – regional rural bank (RRB), commercial bank, cooperative bank – provide the service. Some cooperative banks show poor results.

Eastern India is relatively poor. The dependency on agriculture is high, as is the concentration of small and marginal farmers. They need institutional finance. Yet, the take-up of KCC is low. And, in most of these poorly performing states, the adoption rate varies widely by district.

Taking insights from theory, and the help of multiple instruments – primary household surveys, bank surveys, secondary data from sources like Reserve Bank of India (RBI), Indiastat, NABARD, other publications – we study the KCC adoption behaviour in UP, Bihar, and WB.

Objectives

The study attempts to answer several questions.

(1) What are the factors influencing KCC adoption? Other than household features – landholding size, education, awareness – what are the most important external factors impacting adoption?

(2) Adoption differs by district; what explains the difference?

(3) Is adoption being hindered by a social network issue? Can targeting based on network theory improve adoption?

(4) Recently, the scheme has been extended to include households engaged in fisheries and animal husbandry activities, and RuPay cards have been introduced; how have these innovations affected the adoption rate?

(5) How successful has the RuPay card scheme been? Have farmers accepted these cards? How many cards have been issued? How many are being used?

(6) How do Business Correspondents (BC) affect KCC adoption and usage? How has financial inclusion affected the adoption rate?

(7) To drive KCC saturation, PM Kisan beneficiaries have been covered under the KCC scheme; has the adoption rate increased as a result?

(8) How can the KCC scheme be better saturated? Can we derive insights from the field?

Methodology and Study Area

Adoption has been slow at three levels: farmer, financial system, and ecosystem. To explain the slow adoption, the study uses, respectively, household surveys, bank surveys, and secondary data from RBI and other reports/sources. Logistic regression, graphical, and tabular representation of data are used to bring home findings.

A four-stage selection (states to ecological zones →districts→ blocks →villages) is adopted to sample the households so that the sample is representative of the state. The states were selected by NABARD and from states multiple criteria were used to select

the study villages at stage four. Household selection was purely random as systematic random sampling did not help to select the KCC households. The blocks studied were Karwi Mafi and Pahadi (Chitrakoot, UP), Kaushambi and Manjhanpur (Kaushambi, UP), Lotan and Mitwal (Sidharth Nagar, UP), Bokhra and Dumra (Sitamarhi, Bihar), Barhat and Jamui (Jamui, Bihar), Kalichak I and II (Malda, WB), and Kulpi and Pathar Pratima (South 24 Parganas, WB).

Results

The study finds wide discrepancies in the level of KCC awareness and KCC holding across districts. Awareness is low at 34% in Sitamarhi district and highest at 96% in Sidharth Nagar, though both are located in the Terai region. In general, awareness is high in UP followed by WB and Bihar. Of the 2,794 households surveyed, 1,205 (43%) households reported having a KCC card in their family and, like awareness, card holding is diverse. The card holding is the lowest in WB (just 4% of the 498 households surveyed in Malda have KCC) and highest in UP.

Factors Impacting Take-up

Networks seem to have a strong impact on KCC adoption and renewal. Whereas the banking network has increased adoption and renewal, private networks (friends, relatives, etc.) have decreased both. Some households have had negative experiences in acquiring or renewing the card and they have influenced many not to apply for or renew KCC.

Adoption is influenced by education level, landholding size, financial literacy, and farmers' awareness. Adoption is influenced also by external factors: the land record issues that hinder potential loan applications, and agricultural loan waiver announcements. Also, banks are not obligated to meet the priority sector lending (PSL) agriculture sub-target because the RBI provides them that flexibility. Consequently, and given also that the repayment rate is higher for self-help groups (SHG) than KCC, banks prefer to extend loans under SHGs. However, despite some negative incentives, the banking sector has improved KCC penetration in the study area.

A challenge in WB is the long, cumbersome informal channel for KCC loan applications that involves intermediaries from the Village Pradhan to the Agriculture Development Office (ADO), Block Development Office (BDO), and, finally, to the bank. The research found bank-level operational bottlenecks. And, during both KCC card sanctioning and loan withdrawal, farmers face challenges: a lengthy, tedious loan procedure; high interest rates (due to delayed payment); negative experiences of other farmers who have taken loans under KCC; and the fear of taking loans due to concerns of indebtedness. The uncertainty in agriculture, given its dependence on weather conditions, also contributes to farmers' hesitation in opting for KCC loans. Notably, the findings indicate that farmers who possess greater awareness of the KCC scheme and its benefits are more likely to adopt the scheme and continue renewing it in the future. This underlines the importance of enhancing farmers' awareness and understanding of the KCC scheme to facilitate higher adoption rates and promote financial inclusion in the agricultural sector.

Why the Take-up Rate Differs by District

Firstly, districts exhibit varying levels of bank effort at awareness and outreach. The extent to which information about the KCC scheme reaches farmers differs, impacting their willingness to adopt it.

Secondly, the agricultural landscape and the demographic composition of farmers also differ across districts, influencing the adoption rate of KCC. Factors such as cropping patterns, farm size, and economic conditions can play a role in farmers' decision-making.

The availability and accessibility of formal credit facilities vary from one district to another. Differences in the reach and functionality of financial institutions can affect farmers' access to credit, including KCC.

The presence of other formal and informal credit options in certain districts can influence farmers' choices, potentially diverting them from opting for KCC.

Cultural and social factors play a role in shaping the adoption rate. Farmers' fear of

becoming indebted and their level of trust in financial institutions can influence their decision to adopt KCC. By considering the characteristics unique to each region, strategies can be designed effectively to enhance KCC adoption and promote financial inclusion.

Social Network Challenges

This study identified three predominant social network challenges that impact the adoption rate.

Firstly, farmers rely heavily on word-of-mouth communication within social networks, where little information is available on the KCC scheme or its benefits.

Secondly, dealing with formal financial institutions, particularly banks, adversely affect farmers' trust and perception, and negative experiences spread rapidly among their social networks within rural communities.

Thirdly, when considering the adoption of new technology, farmers often seek advice and guidance from their social networks, and so social influence and norms play a crucial role.

We found that influential members of the farmer community, such as Mukhiyas, who have had negative experiences with banks, are more likely to discourage other farmers from adopting KCC.

Successfully addressing these challenges holds the potential to leverage network theory-based targeting, thus increasing the KCC adoption rate. Policymakers can play a pivotal role in surmounting these social network barriers and fostering an environment conducive to KCC adoption. By effectively addressing information dissemination, improving farmers' trust in financial institutions, and leveraging positive social influence, the adoption rate of KCC can be pushed up.

Use of RuPay Card

The study examined the acceptability and activation challenges associated with RuPay cards, revealing five major hurdles.

Firstly, farmers demonstrate a markedly low level of awareness and familiarity in

utilizing and accepting RuPay cards.

Secondly, the issue is exacerbated by the inadequacy of infrastructure and connectivity in rural areas: access to automated teller machines (ATM) and point-of-sale (POS) machines is limited and transaction notifications are not delivered via mobile phones.

Thirdly, due to their socio-economic status and lower literacy levels, farmers tend to default to cash transactions.

Fourthly, farmers encounter complexities in the activation process and face documentation requirements while obtaining RuPay cards. Many of them being daily wage earners, they tend to forgo obtaining RuPay cards due to these factors.

Lastly, challenges associated with banks, such as bank amalgamations, and technical issues like the non-availability of chips, have led to shortages of RuPay cards, thereby preventing issuance to farmers.

The Impact of Saturation Drives

The government conducted its saturation drive in two phases. This study assessed the drive's impact and found that the saturation drive was successful in improving the KCC adoption rate, and, in all the three study states, phase 2 was more successful. The drive's positive impact extended beyond the adoption of composite KCC and stimulated the uptake of separate KCC extension to animal husbandry and fisheries farmers. The uptake of KCC Animal Husbandry and Dairy Farming (AHDF) extensions increased notably during the saturation drive but declined after it ended. To explain this trend, farmers' experiences with banks provide valuable insights.

Firstly, for AHDF KCC extension, banks required more documents, potentially discouraging some farmers.

Secondly, farmers preferred the composite KCC because, they argued, the working capital requirements for AHDF activities could not be adequately met with a separate KCC extension.

Role of Business Correspondents (BC)

While BCs raise awareness of government schemes, including KCC, inadequate incentives have limited their role in driving KCC take-up.

Policy Implications and Future Actions

The findings highlighted the importance of implementing specific policies and actions to enhance KCC saturation and availability. Implementing targeted awareness campaigns, streamlining documentation processes, and enhancing financial literacy among farmers can enhance KCC adoption. Fostering trust in formal financial institutions, improving RuPay card infrastructure, and incentivizing BCs could bolster KCC adoption rates and contribute to rural economic development. We suggest two key policy measures that can solve many ground-level challenges policy implementers face.

First, introducing a Credit Guarantee Fund for KCC Loan (CGFKCC) can boost KCC adoption. By providing a guarantee against default, the scheme enhances lending confidence by reducing lender risk and increasing loan availability to farmers. This scheme can promote financial inclusion, stimulate agricultural growth, and support rural development. However, successful implementation and continual monitoring are essential for the scheme's sustainability and effectiveness.

Second, end-to-end digitalization is crucial in addressing the challenges farmers face in availing KCC loans. Automating the application process can expedite loan disbursement, deepen the KCC base, and encourage farmers to opt for formal credit channels. Integration with Know Your Customer (KYC) databases and digitalized land records can improve transparency and reduce fraud. However, ensuring farmers' financial and digital literacy is necessary for safe and secure digitalization.

By incorporating these policy measures, policymakers can bridge the credit gap, promote financial inclusion, and accelerate agricultural growth. Effective implementation, complemented by financial literacy programmes and capacity-building initiatives, will maximize the benefits of these policies and revolutionize the rural credit delivery system.

CHAPTER 1

CONTEXT AND BACKGROUND LITERATURE

1.1 Introduction

The performance of the agricultural sector plays a significant role in the growth of the Indian economy. To sustain the growth of the agricultural sector, credit plays a crucial role. Indian farmers often encounter problems in accessing credit.

The Government of India (GoI) introduced the Kisan Credit Card (KCC) scheme in 1998-99. This flagship scheme, designed with care by National Bank for Agriculture and Rural Development (NABARD), aims to ease rural indebtedness and poverty by providing farmers easy, timely credit. The scheme has proven effective. Empirical studies show that the KCC scheme has enabled small and marginal farmers to realize higher returns, make timely loan repayments, improve their awareness of the agricultural market, and reduce both indebtedness and dependency on moneylenders (Nahatkar et al., 2002; Singh and Sekhon, 2005; Vedini and Durga, 2007; IFPRI, 2021).

Although the KCC scheme is popular, policymakers are concerned about the feedback from assessment studies: (i) it should involve less paperwork; (ii) the interest rate should be lower; (iii) in times of hardship or crop failure the scheme should allow for some rebate or flexibility in instalment payments; and (iv) the credit limit should be higher (NABARD, 2009; Bista et.al., 2012). Keeping farmers' priorities and requirements in mind, the scheme now covers consumption expenditure, maintenance of farm assets, and term loans for agriculture and allied activities. Over and above financing crop production inputs, the KCC scheme covers beneficiaries under the Personal Accident Insurance Scheme and the Atal Pension Yojana. Paperwork has been reduced and interest subvention introduced for timely payment. Recently, the scheme was extended to cover livestock and fishery owners.

Yet, in some places, take-up has fallen short of expectations, and performance varies widely by region. Performance is particularly poor in eastern India (Uttar Pradesh

(UP), Bihar and West Bengal (WB)). The service is provided by three types of financial institution – regional rural banks (RRB), commercial banks, and cooperative banks. Cooperative banks show poor results. Studies by government and independent researchers assess the impact of the scheme and the constraints to it (NABARD, 2019; IFPRI, 2021; Diwas et al., 2012; Bista et al., 2012; Kumar et al., 2011). The observations from such assessments have been incorporated to improve the scheme from time to time. Despite the upgradation, however, take-up has not improved in certain regions (IFPRI, 2021; NABARD, 2009, 2019).

Eastern India is relatively poor. The dependency on agriculture is high, as is the concentration of small and marginal farmers. They need institutional finance (Bista et al., 2012; Kumar et al., 2011). Yet, in some parts of eastern India, KCC take-up is low. Whereas 56% of operational landholders in India are covered under the KCC scheme, coverage is only 17% in Bihar, 91% in Odisha, 59% in WB, and 44% in Jharkhand (Agricultural Census, 2015-16). If one considers the total number of agricultural landholders in WB, the actual share is 44%. Of the nearly 71 lakh farm households in West Bengal, 52 lakhs are active, and the scheme covers only 31-32 lakhs of them (Agricultural Census, 2015-16).

Again, in most of these poorly performing states, the adoption rate varies widely by district. In Bihar, for example, the number of cards issued grew 11.4%, amount advanced 31.7%, and amount advanced per KCC account by 18.2%, but three districts – East Champaran, Begusarai, Samastipur – acquired more than 5 percent of the total cards issued (Bista et al., 2012).

1.2 Factors Affecting Credit Uptake

A variety of measures have been taken to rejuvenate farm credit, but credit flow to the agriculture sector remains quantitatively and qualitatively poor. The institutional sources of credit meet 51 percent of the farm sector's credit requirements (Rao, 2003). Farmers approach non-institutional sources because institutional lending is inadequate, costly, and cumbersome (Singh and Kingra, 2008). The supply of institutional credit is inadequate because if factors like institutional lending malpractices, sophisticated procedures, and undue delays whereas farmers need credit

frequently and lack security or assets to give as collateral (Singh, 1971; Singh H., 1971; Singh, 1973; Sharma, 1978; Nahatkar et al., 2002; Rao, 2003).

Microcredit is one of the critical inputs in agriculture and an effective means of rural development in India. One of the objectives of the microcredit policy is to minimize the role of moneylenders in the flow of agricultural credit and increase access to credit through formal means. (Singh and Sekhon, 2005). The rural development goal is not easy to achieve just by increasing the flow of credit until the factors that affect access to credit are taken care of.

Access to credit is influenced by many factors. Credit access and adoption are influenced by factors at multiple levels. At the household level, factors like age, gender of household head, household size, farm size, education level, membership of a credit society influence the decision to adopt KCCs (Bista et al., 2012; Kumar et al., 2007; Prakash, 2016; Chandio et al., 2021). At the group or aggregative level, KCC holders say that adoption is deterred by insufficient credit limit, high interest, non-availability of loan in time, inflexibility in use of branch and in withdrawal, locational difficulty, and unmotivated bank officials.

Non-KCC holders are deterred by the ease of access to non-institutional loans, fear of being a defaulter, bad experience of peer group, lack of awareness, and unmotivated officials (Bista, et al., 2012). High transaction costs – travel expenses associated with repeated visits to banks, lost wages because of travel – instigate many farmers to depend on moneylenders as a primary source of credit (Chenaa, 2018; de Castro and Teixeira, 2012; Diwas et al., 2012; Pal and Laha, 2015). Good quality inputs – seed, manure, plant protection material – are not available timely in many areas and farmers cannot utilize KCC loans, disincentivizing non-adopters. Rainfall uncertainty, a major source of production risk, discourages rural farm households from taking agricultural credit from institutional sources (Abay et al., 2022). Caste equations and low awareness of lower and socially marginalized caste people also impact KCC take-up (Umanath et al., 2018; Karthick and Madheswaran, 2018, Kumar et al., 2018).

In the case of microcredit, one should worry about both the supply side and the demand side. On the demand side, the results of some studies indicate, uptake of

microfinance credit is influenced by the gender of the household head, number of trees, nature of business ownership, family labour, role in the poultry value chain, fear of loan default, lack of savings, and access to extension services (Anderson et al., 2018; Mango et al., 2018; Asante-Addo et al., 2017). The foremost problem KCC beneficiaries face is in finding a guarantor. Obtaining suitable security is another challenge, as is the involvement of too many intermediaries in marketing channels. Farmers fear misuse of their RuPay cards and hesitate to apply (Mani, 2016).

On the supply side, the biggest challenge bankers face is the recovery percentage of loans (Bhattacharjee et al., 2021; Kuhn and Bobojonov, 2021). Other supply-side constraints include bank charges on KCC accounts, the most common being annual charges, inspection charges, processing charges, ledger folio charges, cash handling charges, ATM issue charges, miscellaneous charges, SMS charges, though not very high (Mani, 2016). These charges vary from bank to bank, even branch to branch.

The KCC scheme has resulted in increasing agriculture and allied activities and in changing cropping patterns but amount utilization is low (Verma et al., 2017). The credit utilization pattern of KCC depends on education, occupation, credit acquisition, annual income, loan repayment, contact with credit agency, source of information, mass media exposure, risk orientation, economic motivation, and level of satisfaction. Also, the amount sanctioned for crop production and other activities is usually less than the required amount. Kuhn and Bobojonov (2021) indicate the relative importance of demand-side factors for credit applications, reflecting farmers' perceived risk of credit default and loss of collateral. Meanwhile, supply-side factors, such as real credit constraints and collateral requests, have a stronger influence on credit uptake rates and overall loan amounts.

The KCC scheme continues to underperform in the east and north-east. In Bihar, beneficiaries borrow money to purchase inputs and apply them in greater amounts; therefore, they pay more than non-beneficiaries per hectare to cultivate paddy, maize, wheat, and potato – all the four major crops (Kumar et al., 2011). In eastern India, access to credit heterogeneously impacts household groups based on education and social group, implying that credit policies should be made adaptable to farm

household type (Sonkar et al., 2020). However, ceteris paribus, access to credit has homogeneous effects on marginal, small, medium, and large farm households, suggesting that the impact of access to credit is neutral to scale. Technology diffusion is characterized by a learning environment in which farmers learn from people in their network before they adopt a technology. Because such an environment is missing in eastern India, KCC adoption is low (Beaman et al., 2021).

1.3 KCC, Farmer Income, and Agriculture Productivity

The literature and opinion on the economic impacts of KCC on the farming sector and on the impact of agricultural credit on agricultural output and productivity is divided (Yadav and Sharma, 2015). One opinion is that agriculture credit has a positive, significant impact on agricultural output. The other is that the impact of agriculture credit on agricultural output cannot be directly established.

The KCC scheme has become the main, if not only, vehicle of short-term credit to agriculture. Increasingly, it has been serving as a source of investment and consumption finance for farmers. The scheme has been in effect for more than 20 years. Given its long existence and the government's push at various levels, one would have expected to see some real increase in income and productivity. Access to KCC credit has increased household income and raised yields of major staple crops like paddy (Kumar et al., 2020; Sudhakar and Sahu, 2012). The rural credit programme has had a positive, but differentiated, impact on agricultural production: the impact was larger in the poorest region than in the regions characterized by intensive and commercial farming (Maia et al., 2020).

Credit availability and other offerings under KCC – interest subvention scheme (ISS), rebate for prompt repayment – have increased both total and net farm income and made farmers resilient to ecological and climatic stress (Mani, 2016). But a study based on secondary data does not find any evidence that the KCC scheme increases agricultural labour productivity or land productivity (Chanda, 2020).

CHAPTER 2

OBJECTIVES AND HYPOTHESIS

2.1 Objectives of the study

This study examines the issues related to low adoption of the KCC scheme in UP, Bihar, and WB. Adoption behaviour for any new technology is complex and is influenced by factors at multiple levels. The factors influencing the adoption of KCC are assumed to depend on three levels, i.e., at the level of the farmers (household), the financial system, and the entire operating ecosystem. Adoption of a new technology, be it a credit card or a mobile handset, is a complex, inherently social and developmental process. Individuals construct some unique perceptions of the technology that influence their adoption decisions over time.

Adoption behaviour is studied through the lenses of three adoption theories: Rogers's innovation diffusion theory, the Concerns-Based Adoption Model (CBAM), and the United Theory of Acceptance and Use of Technology (UTAUT) (Straub, 2009). For successful adoption, the facilitator must address cognitive, emotional, and contextual concerns considering both the formal and informal environment. Adoption behaviour has been a study of interest across disciplines and an active research area in developmental economics trying to explain the factors responsible for a fast or slow adoption rate of a new technological product. This study takes insights from theories and tries to study the KCC adoption behaviour with the help of multiple instruments, primary household surveys, bank surveys, and secondary data from various sources in UP, Bihar, and WB.

The study has the following specific objectives.

(i) Identify the factors, both incentivizing and inhibiting, that determine the adoption of the KCC programme. Other than household features like the size of landholding, education, awareness, etc. what external factors have a strong impact on the adoption rate?

(ii) Why is the scheme picking up in some areas but not in others? What explains the differential adoption rate of the scheme in different districts of the same state?

(iii) Is there any social network issue hindering adoption? Can network theory-based targeting result in a high adoption rate?

(iv) What has been the impact of recent innovations, i.e. introduction of RuPay cards and the extension of the scheme to include households engaged in fisheries and animal husbandry activities, on the adoption rate? What is the level of awareness and interest among farmers in this extension provision?

(v) Find out the success of RuPay card scheme in terms of cards issued, being used, and the level of acceptability of these cards by farmers.

(vi) What has been the impact of BC in the adoption/usage of KCC or the impact of financial inclusion on the adoption rate?

(vii) What are the impacts of the KCC saturation drive by covering the beneficiaries of PM Kisan under the KCC scheme on the increase of adoption rate?

(viii) How can the KCC scheme be better saturated? Any insights from the field?

These questions/issues are examined at three levels: the farmers' level (micro), the financial system level (macro), and the ecosystem level. The study used household surveys to explain the slow adoption at the farmer level, bank surveys to explain the slow adoption rate at the financial system level, and secondary data from RBI and other reports/sources to examine the slow adoption at the level of the ecosystem.

2.2 Design of Study and Methodology

The questionnaires were developed keeping the theoretical underpinnings in mind. The research objectives were to examine slow adoption, thus, the study collected information on both types of households, i.e., users and non-users of KCC. The household survey collected information on the sample household's identification,

social characteristics, income and its sources, agricultural assets, agricultural characteristics, awareness of KCC, the KCC detail of the taker household, and sources and uses of any other agricultural or non-agricultural household credits.

2.3 Sampling Method & Sample Size Calculation

A four-stage selection is adopted to sample the households so that the sample is representative of the state.

2.3.1 Stage 1: States selection:

In this stage, three states, namely Uttar Pradesh, Bihar, and WB are selected by NABARD itself given their very low adoption rates relative to other states in India. Prima facie, data and research show all these states are in the eastern part of India, which is relatively poorer with higher dependency on agriculture, a higher concentration of small and marginal farmers, who are more in need of institutional finance. Despite the requirement, these states had a very low rate of KCC cards taken up.

2.3.2 Stage 2: District selection:

Multiple criteria are used to select the districts. The final selection was based on the Poverty and Backwardness Score (PBS) of the districts. First, we selected four Agroecological zones from UP and two, each for Bihar and WB, and then the PBS scores were calculated for each of the districts falling under these agroecological zones.

Selection of Zones

The study regions (UP, Bihar, and WB) have multiple agroclimatic zones with districts having widely varying economic prosperity, rural infrastructure as well as KCC adoption rates. To maintain representativeness, the districts of the states were first clubbed into different groups.

I. Categorization of Districts in UP

1. North-West districts: Districts falling under Terai (zone 1), Western Plain (zone 2) and Central Western Plain (zone 3)

2. North-East districts: Districts falling under North-Eastern Plain (zone 7) and Eastern Plain (zone 8)

3. South-West and Central districts: Districts falling under South-Western Semi-Arid Plain (zone 4) and Central Plain (zone 5)

4. South and South-East districts: Districts falling under Bundelkhand (zone 6) and Vindhya Areas (zone 9)

II. Categorization of Districts in Bihar

1. Districts under the North-West Alluvial Plain Zone

2. Districts under the South Bihar Alluvial Zone (a)

III. Categorization of Districts in WB

1. Districts under the Gangetic Alluvial & Vindhyan Alluvial Zone

2. Districts under the Coastal Saline Zone

Next, one district from each of these groups was selected based on PBS and the process for calculating the PBS was done in two broad steps:

Step 1: Selection of socio-economic indicators to be considered.

Step 2: Normalization and aggregation of the selected indicators to create the PBS for each district.

Step 1: Selection of socio-economic indicators

The KCC scheme is designed to keep the requirements of poor, indebted farmers in mind. We looked for socio-economic indicators keeping such farmers/beneficiaries in mind. Worldwide, multiple socio-economic indicators are considered to measure poverty and backwardness. They are categorized into income, health, education, standard of living, and asset holdings such as land, houses, automobiles, etc. Usually, these indicators are used with some weights to measure poverty indices. When it

comes to poverty measurement indices, the Multidimensional Poverty Index (MPI)[1] is one comprehensive non-monetary poverty/deprivation measure widely used and referred to in policymaking. The MPI considers most of the socio-economic indicators important in research.

NITI Aayog calculates the national MPI by multiplying the headcount ratio (HCR)[2] with intensity.[3] NITI Aayog calculates and publishes the MPI for Indian districts. We use the MPI score for each district from NITI Aayog reports to derive the PBS for each district. We gathered MPI data for every district in our categorized zones for all three states from NITI Aayog's National Multidimensional Poverty Index Baseline Report based on NFHS-4 (2015-16).

Farmers eligible under the KCC scheme as beneficiaries include small farmers, marginal farmers, sharecroppers, oral lessees, tenant farmers, and SHGs. Thus, along with MPI, we take the percentage of small and marginal farmers in the district as the next indicator. Also, having a large number of small and marginal farmers as a percentage of total farmers in a district is representative of that district's farmers' backwardness as a whole. Moreover, MPI does not include land holdings due to its non-monetary nature. We took data on individual operational landholding (In Hectare) for each district from Agriculture Census 2015-16 conducted by the Department of Agriculture and Famers Welfare, GoI. We add up data on holding classes[4] - below 0.5, between 0.5-1.0, and 1.0-2.0 hectares of land to come up with individual operational land holdings for small and marginal farmers in each district.[5]

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1 United Nations Development Programme (UNDP) has been using the Multidimensional Poverty Index (MPI) in its flagship Human Development Report (HDR) since 2010. The MPI is the most widely employed non-monetary poverty index in the world (Godinot & Walker, 2020). It captures overlapping deprivations in health, education, and living standards (UNDP, 2010). It complements income poverty measurements because it measures and compares deprivations directly

2 HCR, the incidence, which shows the percentage of multidimensionally poor people.

3 Intensity shows the percentage of weighted deprivations the average multidimensionally poor persons suffer from.

4 In the agricultural census, the operational holdings are categorized into five classes: Marginal (1.00-2.00 hectare), Semi- Medium (2.00-4.00 hectare), Medium (4.00-10.00 hectare), Large (10.00 hectare and above)

5 Note: in the agricultural census, the operational holdings for small and marginal farmers are below 2 hectares.

Step 2: Aggregation of selected socio-economic indicators to create each district's PBS.

The PBS of the districts of all three states were calculated by clubbing MPI and a fraction of small and marginal farmers after allotting weights to select the top deprived districts from each categorized zone. The formula used is as follows:

Poverty and Backwardness score (PBS) = 0.4* MPI score + 0.6 *share of Small and Marginal farmers in the respective district.

$$pbs = 0.4 * mpi_{score} + 0.6 * share\_smf \quad (1)$$

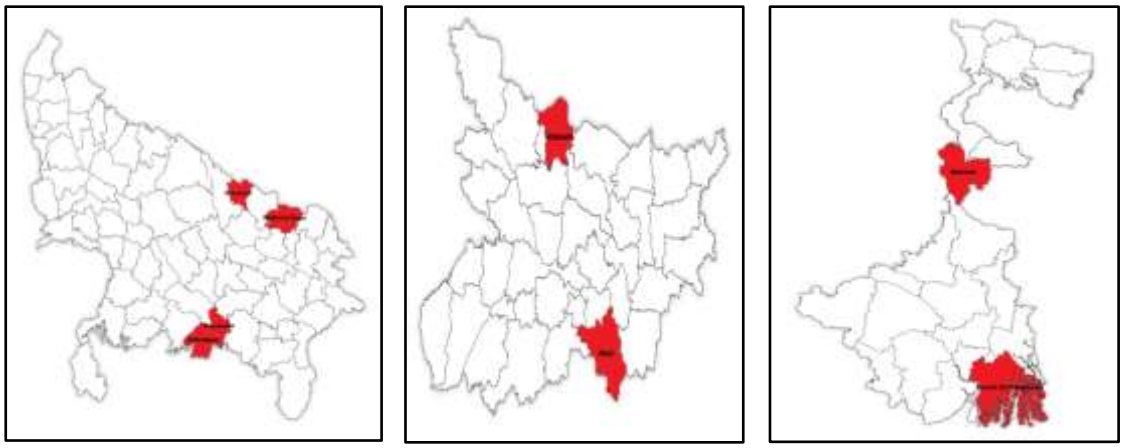
Where 0.4 is the weight attached to the MPI score and 0.6 weight attached to the small & Marginal farmers' fraction. Rather than giving equal weight, a higher weight was given to the share of small and marginal farmers as the KCC scheme is mainly focused on rural farmers, and it is the small and marginal farmers that are in dire need of credit. Appendix Table A- shows the scores of the districts falling under these groups. We selected the top deprived district (i.e., Districts having the highest PBS) for each group (Note: There are a total of eight groups – Four from UP, two each from Bihar and WB) to study the KCC adoption rate and factors affecting it. Districts selected in each group in the three states as per the PBS are the ones shown in Table 2.1 and Figure 2.1.

Table 2.1: Districts selected as the Study area

Districts Selected In UP	
Zone	**Districts Selected**
North-West	Shrawasti
South-West & Central	Kaushambi
North-East	Siddharth Nagar
South & South-East	Chitrakoot,
Districts selected in Bihar	
North-West Alluvial Plain Zone	Sitamarhi
South Bihar Alluvial Plain	Jamui
Districts selected in WB	
Gangetic Alluvial & Vindhyan Alluvial	Malda
Coastal saline zone	South 24 Parganas

2.3.3 District Sample size calculation

We followed a representative random sampling technique to select the sample size from each district to represent the KCC holders in the state (Since data for district-wise KCC holders was not available, we took the number of crop loan accounts in a state as its proxy). The number of households to be surveyed was decided through a sampling formula (Eq.2).



UP BIHAR WB

Figure 2. 1: Study area districts in UP, Bihar, and WB.

$$n = \frac{N * Z_{\alpha}^{2} * p * q}{e^{2} * (N-1) + Z_{\alpha}^{2} * p * q} \quad (2)$$

Where n is the sample size to be studied from a district, N is the total population or total number of households in the district, Z is 95% critical value, and p (q = 1-p) is population proportion. We have considered two different values of N for each selected district. (i) the total number of individual (household) land holdings (TIH) [6] (ii) the total number of land holdings (TH)[7] in the respective district (See Appendix Table- A1). It is to be noted that land holdings are taken as representative of the households in the studied district. We considered two Z statistics corresponding to

[6] Individual land holdings: If the holding is being operated either by one person or by a group of persons who are members of the same household, such holding will be considered as an individual holding.

[7] Total Number of land holdings: the total of Individual land holdings, Joint land holdings & Institutional land holdings for all size classes (i.e., all the land holdings from Below 0.5 to 20 and above hectares).

90% and 95% confidence intervals and p as the ratio of crop loan accounts to the total number of individual land holdings in the respective district. Lastly, e, the error margin is taken to be 3% and 5% respectively. This way we calculated the sampling size for each selected district with different values of the parameters (N, Z, and e) and did eight iterations in total (See Table 2.2). Keeping the budget and time constraint in mind, the total sample size was fixed at 4,137 having parameter values e=0.03, Z=1.96, N=TH. Once sample size (n) is decided, households to be surveyed are selected randomly.

Table 2.2:Calculation of sampling size for each selected district, considering different values of parameters (N, Z, and e)

States	Name of the districts	Sample size (approx.) for e=0.03, Z=1.96, N=TIH	Sample size (approx.) for e=0.03, Z=1.96, N=TH	Sample size (approx.) for e=0.05, Z=1.96, N=TIH	Sample size (approx.) for e=0.05, Z=1.96, N=TH	Sample size (approx.) for e=0.03, Z=1.64, N=TIH	Sample size (approx.) for e=0.03, Z=1.64, N=TH	Sample size (approx.) for e=0.05, Z=1.64, N=TIH	Sample size (approx.) for e=0.05, Z=1.64, N=TH
UP	Siddharth Nagar	625	351	226	127	438	246	158	89
UP	Shrawasti	849	611	307	220	596	428	215	154
UP	Chitrakoot	836	478	303	172	587	335	212	121
UP	Kaushambi	988	584	358	211	694	409	251	148
Bihar	Sitamarhi	277	276	100	100	194	194	70	70
Bihar	Jamui	402	348	145	125	282	244	102	88
WB	Malda	517	516	186	186	362	362	130	130
WB	South 24 Parganas	973	972	350	350	681	681	245	245
	Total	**5,467**	**4,137**	**1975**	**1,491**	**3,835**	**2,899**	**1,384**	**1,044**

2.3.4 Stage 3: Block selection:

Two blocks are selected from each selected district of the survey states (i.e., UP, Bihar, and WB) after discussing with the respective District Development Managers (DDM) of NABARD. Since no information on block-level KCC use is available publicly, we took the help of DDMs to find one block with higher KCC prevalence or uptake and another with a lower uptake. We selected 16 blocks in total from eight districts to be surveyed from three surveyed states. Selecting such blocks helped in the equal representation of KCC and non-KCC cases in the sample.

2.3.5 Block sample size estimation

The block-level sample selection was made representative of the district sample by using block weights. The following formula (Eq.3) is used.

$$n_{ih} = \frac{N_h}{\sum_h N_{ih}} * n_i \quad (3)$$

Where n_{ih} is the sample size of the h[th] block of the i[th] district. N_{ih} is the total number of individual land holdings (TH) in the h[th] block of i[th] district, $\sum_h N_{ih}$ is the total of all individual holdings of the two selected blocks (h=2) and n_i is the total number of samples to be studied in the i[th] district. The ratio $\frac{N_h}{\sum_h N_{ih}}$ is the block weight for the h[th] block of the i[th] district. Using this formula, the sample size of all 16 blocks was calculated (Table 2.3).

Table 2. 3: Sample size of selected blocks

State	District	District HH sample size	Blocks	Blocks HHs sample size
UP	Shrawasti	611	Gilaula	318
			Hariharpur Rani	293
	Sidharth Nagar	351	Mithwal	235
			Lotan	116
	Kushambhi	584	Manjharpur	294
			Kaushambhi	290
	Chitrakoot	478	Karwi	271
			Pahari	207
Bihar	Sitamarhi	276	Dumra	198
			Bokhara	78
	Jamui	348	Jamui	211
			Barhat	137
WB	Malda	516	Kaliachak l	331
			Kaliachak ll	185
	South 24 Parganas	972	Pathar Pratima	526
			Kulpi	446
	Total	**4,136**		**4,136**

2.3.6 Stage 4: Villages selection:

Finally, we selected four villages in each of the selected blocks. Villages in a block are selected in such a way that we have a village in all four directions, i.e., one each in the North, East, West, and South direction of block headquarters. While choosing villages we try to minimize the proximity of a selected village from the block headquarters to be cost-efficient in the survey. Also, we selected those villages which by and large have approximately the same number of households. This way the village selection was random and at the same time had some similar characteristics and features**.**

2.3.7 Villages HHs Sample Size Calculation

Like blocks, the village sample of a block was calculated based on village weight (Eq. 3). Village weight was the proportion of the total number of households in the village to total households in all four villages of the block. The sample of the k^{th} village of the h^{th} block was calculated using the below formula (Eq. 4).

$$v_k = \frac{N_{kh}}{\sum_{k=1}^{4} N_{kh}} * n_h \quad (4)$$

Where v_k is the sample size of the k^{th} village, N_{kh} is the total number of households of the k^{th} village in h^{th} the block, the denominator is the sum of the total number of households of all four villages under h^{th} block, and n_h is the sample size of the h^{th} block.

Using Eq.4 the sample for a block was distributed proportionally among all the four selected villages of the block. Table 2.3 also shows these numbers.

2.4 Household and Bank Survey

Two sets of survey instruments, one for households and one for banks, were used to conduct the survey. The household survey (attached at the end of the report) had multiple sections like household characteristics, asset holdings, agricultural activities, production, disasters encountered, KCC awareness, usage, problems faced, other types of household credit used, and comparison with KCC. This exhaustive

questionnaire was bilingual (both Hindi and English) and pre-tested with multiple people before being finalized. It underwent the scrutiny of the Ethics Committee of the Institute of Economic Growth before being used in the field. The bank questionnaire (attached at the end) was short and focused on extracting information on KCC at the macro level. Both these surveys were conducted simultaneously starting with mid-December 2022 and finishing around mid-March 2023. Due to heavy fog in the Terai region and similarity in responses across districts in a state, we dropped the survey in the Shrawasti district to avoid too much of delay and very marginal gain after covering this district. The survey started with Sitamarhi in Bihar and ended with South 24 Parganas in WB. Difficult and remote areas and non-cooperation and hostility of household heads, especially the ones who have defaulted in repaying KCC loans force us to reduce the sample size in each surveyed block/village. Table 2.4 shows the surveyed sample in each of the blocks.

Table 2. 4: Block-wise list of households surveyed

Districts	Blocks	Number of HHs surveyed
Chitrakoot		
	Karwi Mafi	236
	Pahadi	196
Jamui		
	Barhat	109
	Jamui	207
Kaushambi		
	Kaushambi	189
	Manjhanpur 243	247
Malda		
	Kaliachak 1	318
	Kaliachak 2	180
Sidharth Nagar		
	Lotan	118
	Mithwal	239
Sitamarhi		
	Bokhra	80
	Dumra	103
South 24 Parganas		
	Kulpi	258
	Pathar Pratima	314

CHAPTER 3

RESULTS

3.1 Sample Features

The household survey helped explore the determinants of accessing the KCC scheme as well as factors incentivizing and disincentivizing the farmers who have been considering opting for KCC loans for their agricultural activities. The survey also shed light on the links between the scheme innovations (such as RuPay cards, Saturation drives, and the extension of the scheme to cover loans for animal husbandry, and fisheries) and the adoption rate. First, the broad features of the sample are presented which is then followed by the analysis of each research question systematically. Table 3.1 and Figures 3.1 to 3.2 shed light on the broad features of the sample.

Table 3. 1: Broad features of sample household

Variable	Mean	Std. Dev	Min	Max
Family size	6.5	3.66	1	52
Number of women in HH	3.12	2.04	0	20
Number of earning members	1.59	0.95	0	9
Number of working women	0.39	0.73	0	9
Number of boys going to school	1.03	1.16	0	19
Number of girls going to school	0.96	1.08	0	9

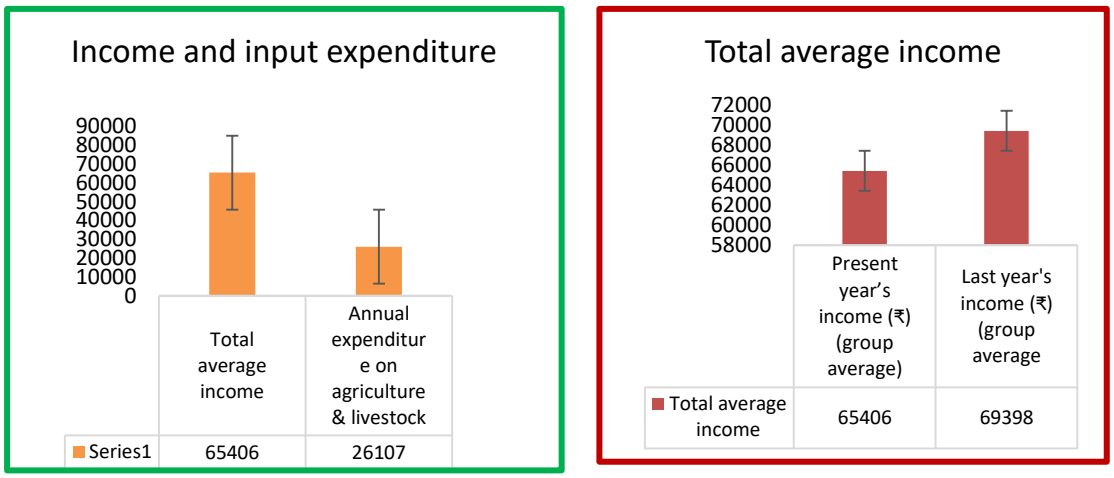


Figure 3. 1: Annual average income (in ₹) of sample households

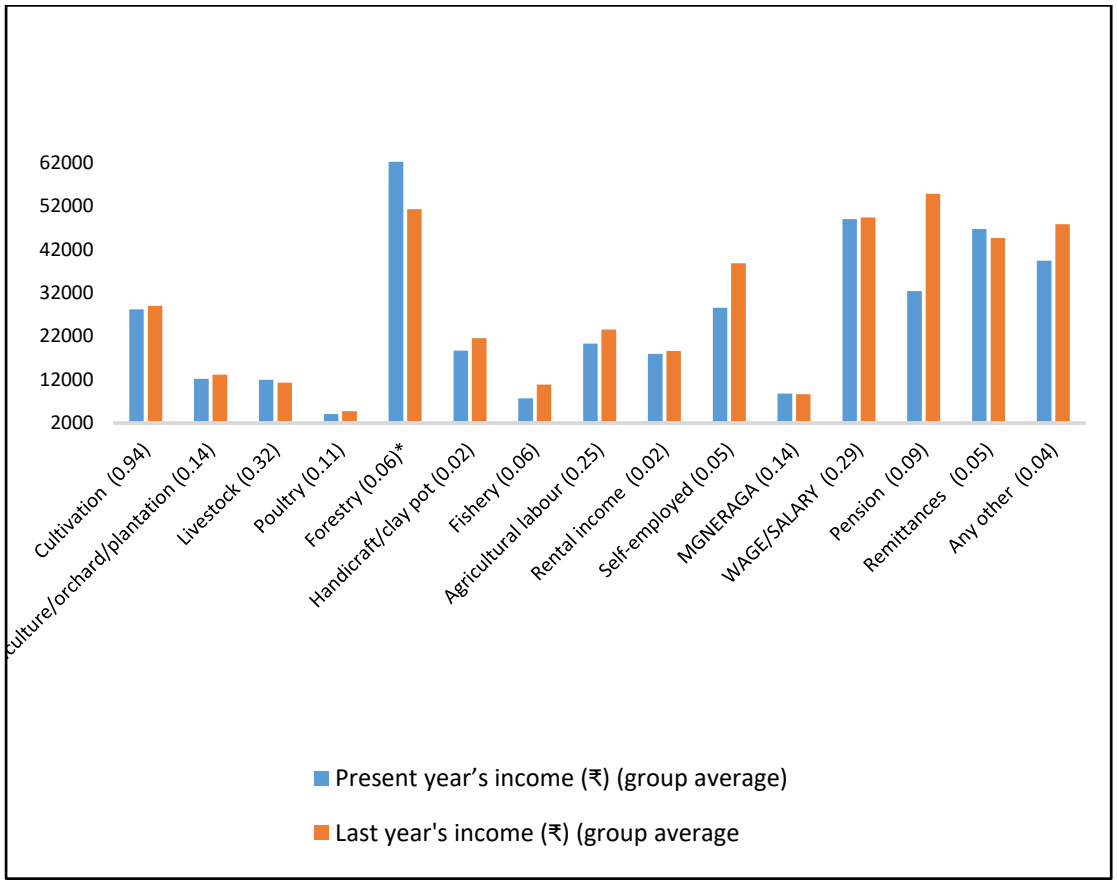


Figure 3. 2: Composition of income of sample households from different sectors in the last two years (the figures in parenthesis show the proportion of sample households engaged in the activity) *Forestry as a source of income was reported only from WB.

On average, the household size consisted of 6.5 members, half of them being women. On average, families have two working members and the average annual income was just Rs. 65,408, nearly 40% of it coming from agriculture and associated activities.[8] The present year's (i.e., 2022) income is seen to be lower than the previous year's (i.e., 2021) income (Rs. 69,398). Figure 3.2 shows the composition of income from different activities and it clearly shows cultivation, which is the main work of 94% of

[8] Income was estimated by asking respondents to tick their list of income-generating activities and then to report the output or revenue generated, and the expenditures incurred on those activities during the year. Such information was asked for the last two consecutive years. The survey was done from December 22 to March 23. So, the present year income pertains to the year 2022 and the previous year, to 2021.

the households, is not paying well. Incomes from forestry, wages/salary, etc. are much higher but few households are engaged in these types of work. The other detailed picture from Figure 3.2 is that the present year's income from livestock, forestry, remittances, and wage/salary is either higher or the same (though marginally in some cases) than the previous year's income whereas it is lower for all other activities. The present year's income from agriculture is seen to be marginally lower compared to the previous year. However, this picture is not uniform across districts. The comparison of incomes from different activities as shown in Figure 3.2 at the level of the districts shows the present year's income to be higher than the previous year's for maximum activities including cultivation in Chitrakoot, Sidharth Nagar, Sitamarhi, and Jamui districts and lower in Kaushambi, Malda, and South 24 Parganas. Of the income from 15 activities reported in Figure 3.2, sample households in Malda, reported a decrease in the present year's income from only agriculture-related activities whereas households in South 24 Parganas reported a decrease in 11 activities and households in Kaushambi reported a decrease in all of the 15 activities. Thus, lower reported income from Kaushambi and South 24 Parganas seems to have led to a lower average income in present year compared to the previous year of the sample households.

We now move on to examine the specific research questions as per the objectives and the survey conducted to answer these broader questions one by one.

3.2 Main Findings

3.2.1 KCC Awareness and take-up

As mentioned before, this study focuses on seven backward districts of three states. Districts covered are Chitrakoot, Kaushambi, and Sidharth Nagar from UP, Sitamarhi and Jamui from Bihar, and Malda and South 24 Parganas from WB. Table 3.2 shows the level of awareness and take-up of the KCC cards in these districts.

Table 3.2: Level of KCC awareness and take-up in the study area

1	2	3	4	5	6
District	**KCC awareness/ response (2/1)**	**KCC holders (3/1)**	**KCC with PM Kisan (4/3)**	**KCC without PM Kisan (5/3)**	**Awareness of PRI (prompt repayment initiative) (6/3)**
Chitrakoot (432)	387 (90%)	258 (60%)	185 (72%)	73 (28%)	167 (65%)
Kaushambi (436)	409 (94%)	335 (77%)	237 (71%)	98 (29%)	226 (67%)
Sidharth Nagar (357)	343 (96%)	329 (92%)	251 (76%)	78 (24%)	101 (31%)
Jamui (316)	207 (66%)	118 (37%)	99 (84%)	19 (16%)	63 (53%)
Sitamarhi (183)	63 (34%)	38 (21%)	23 (61%)	15 (39%)	26 (68%)
Malda (498)	350 (70%)	20 (4%)	14 (70%)	6 (30%)	11 (55%)
South 24 Parganas (572)	331 (58%)	107 (19%)	69 (64%)	38 (36%)	103 (96%)

Note: In the first column, the bracketed figures are the sample size of the districts and in other columns, the bracketed figures are percentages.

Table 3.2 shows a wide discrepancy regarding the level of awareness and KCC holding across districts. Awareness is low at 34% in Sitamarhi district and highest at 96% in Sidharth Nagar, though both are located in the Terai region. In general, awareness is very high in UP followed by WB and then Bihar. Of the 2,794 households surveyed, 1,205 (43%) households reported having a KCC card in their family and like awareness, card holding is also seen to be very diverse. The card holding is the lowest in WB (just 4% of the 498 households surveyed in Malda have KCC) and highest in UP. Most of the KCC card holders are availing of the PM Kisan scheme as well. The PRI schemes (mainly interest subvention) seemed to be less known to people who have taken up the KCC cards except South 24 Parganas. Figure 3.3 shows the landholding size of KCC holders in hectares and the distribution of

KCC holders as per their landholding sizes. It clearly shows the maximum number of KCC households (61%) to have less than one hectare of land. Nearly 96% of the sample households who have KCC cards have less than three hectares of land or belong to marginal and small farmer class reflecting the upholding of the social justice clause in owning KCC cards.

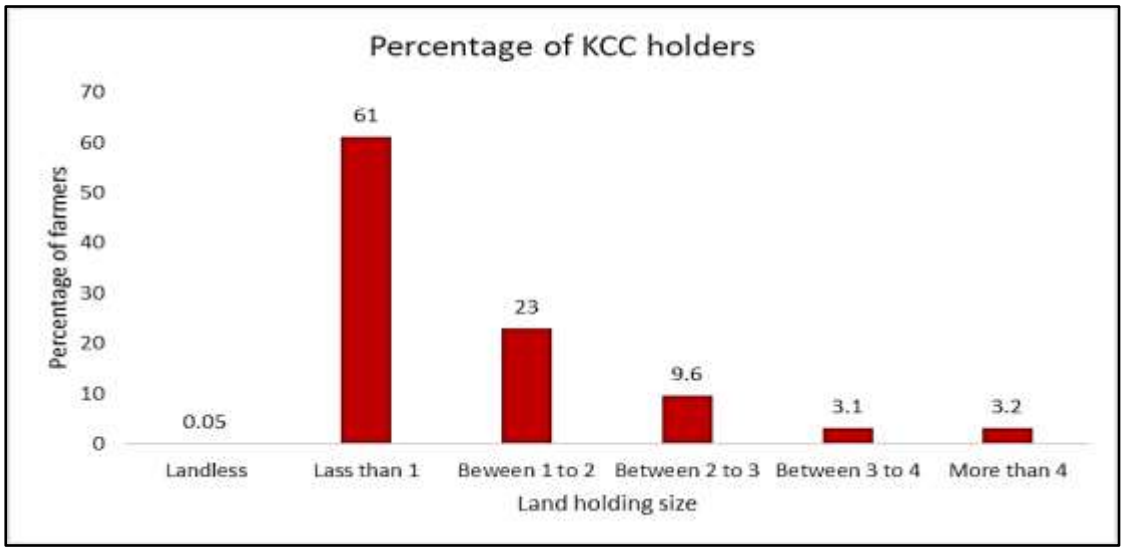


Figure 3. 3: The distribution of KCC card holders as per their landholding size (in hectares)

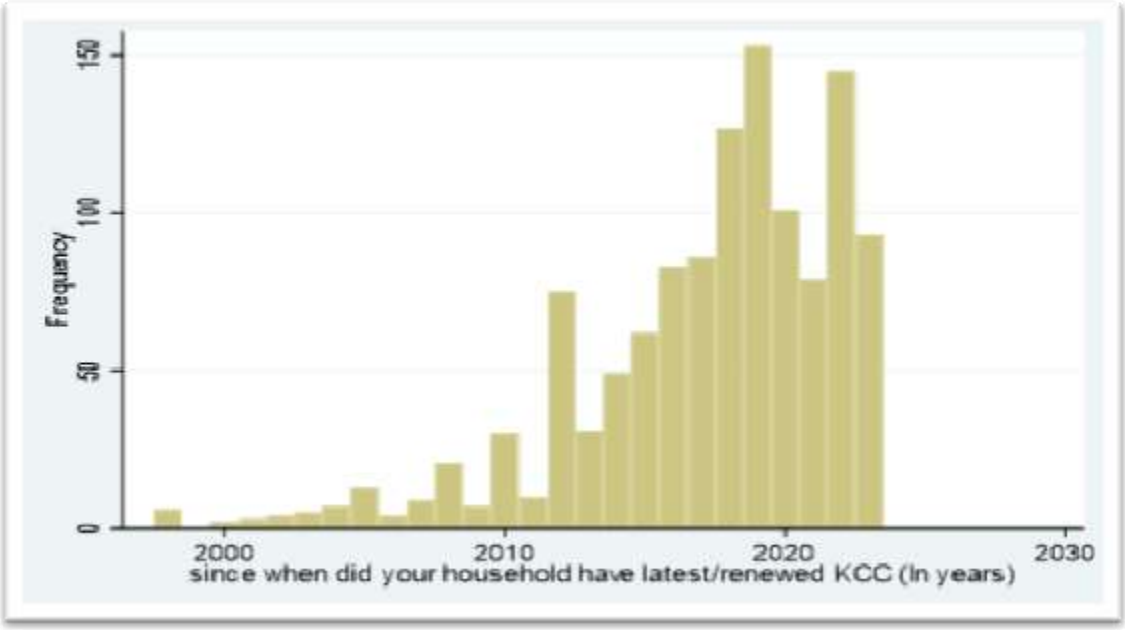


Figure 3. 4: Period of KCC holding with the households (The x-axis shows the year of having the first KCC card and the y-axis shows the number of households).

Figure 3.4 shows some households to have had KCC since 1998, but the adoption rate has picked up only after 2012, and the maximum renewal/issue happening after 2017 in the study area. These right-skewed histograms indicate some impacts of the saturation drives undertaken by governments. The impacts of saturation drives are discussed in more detail in this chapter towards the end.

3.2.2 External Factors Impacting Overall KCC Adoption Rate

The adoption rate of KCC can be influenced by several factors, the most common as per theory and earlier studies are education, landholdings of farmers, and awareness about the KCC scheme among farmers. Our study also suggests that education level, landholding, and awareness have a high degree of association with the KCC scheme among farmers, but apart from these features some external factors have a very strong impact on the adoption rate. As per the household survey, most of the farmers are aware of the KCC scheme and many are interested in taking up KCC cards as well. However, many factors force them not to go for the KCC loan. Out of all farmers who are aware of the KCC scheme, 31% have not opted for it (Table 3.3).

Table 3. 3: Reasons for not taking up a KCC card despite being aware

Reasons	Percentage of farmers giving this reply
Not Needed loan	16.7%
Could not meet the collateral requirement	12.9%
A lengthy and tedious procedure from the bank sides	64.7%
Distance from bank branch	4.6%
Other loan sources are a better option	3.7%
The experience of other farmers who have taken loans under KCC is bad	11.6%
Other reasons	52.9%

As we can see, two main reasons cited by farmers for not taking up cards despite being aware are 'A lengthy and tedious procedure from bank' and other reasons. Other

reasons are majorly brokerage, complex and lengthy process at ADO-BDO Office (WB only), issues with personal documents, etc. However, we tried to find out the factors systematically impacting KCC adoption and ran logistic regressions to identify the variables affecting uptake. This regression is estimated for the entire sample as well as for the three study states separately (Table 3.4).

Table 3. 4: Logistic regression (Marginal effect of factors on the probability of adopting KCC cards)

Dependent variable	**Have KCC card (having kcc=1, not having kcc=0)**				
Explanatory Variables		Entire study area	Bihar	UP	WB
Source of KCC information	FPO	-0.125*** (3.23)	-0.079 (0.95)	-0.047 (1.25)	-0.06** (1.99)
	Banks	0.227*** (7.1)	0.256*** (3.51)	0.034 (1.19)	0.084*** (2.5)
	Relatives	-0.094*** (3.1)	0.015 (0.16)	-0.063*** (2.82)	-0.071* (1.76)
PM Kisan card holder		0.166*** (5.48)	0.026 (0.3)	0.04* (1.84)	0.065** (2.11)
Taken-LIC		-0.131*** (3.54)	-0.289*** (3.11)	-0.067** (2.14)	-0.033 (1.00)
Membership of any local group including SHGs		0.019 (0.31)	-0.118 (1.15)	-0.025 (0.51)	0.588*** (2.90)
Have insured crops		0.335*** (12.94)	0.334*** (4.89)	0.207*** (10.55)	0.122*** (2.63)
Have faced natural disasters in the last five years	Flood	0.221*** (7.3)	0.014 (0.12)	0.088*** (4.01)	0.105** (2.54)
	Draught	0.085*** (2.76)	-0.13 (1.2)	0.068*** (3.24)	-0.167*** (4.60)
	Unseasonal rain	0.104*** (3.31)	-0.026 (0.35)	0.053** (2.07)	0.065** (2.06)
	Hailstorms	0.034 (0.96)	0.219*** (2.79)	0.022 (1.02)	0.002 (0.04)
	Cyclones	-0.433*** (12.11)	-0.191 (0.88)	Dropped	-0.028 (0.73)
	Other disasters	0.134*** (3.2)	0.086 (0.6)	-0.003 (0.12)	Dropped
Size of land holdings		0.063*** (3.57)	0.066 (1.11)	0.008 (0.64)	0.085*** (3.26)
N		1,741	254	897	575
Pseudo R2		0.27	0.18	0.23	0.22
Log Likelihood value		-863.75	-142.23	-330.51	-236.81
LR Chi2 (14)		634.44	60.68	201.24	133.59
Pro of Chi2>0		0.00	0.00	0.00	0.00

Table 3.4 shows the impact of some important variables in pushing up the uptake of KCC cards. Networks, especially the banking network have played a significant role in increasing the KCC take-up, whereas private networks like relatives and friends have played a negative role and have dissuaded people from having the cards. Most surprising is the role of FPOs, especially in WB, whose way of disseminating KCC information does not seem to have helped, but rather has dissuaded people to go for KCC. People facing natural disasters like floods, unseasonal rain, etc. have a higher take-up of KCC which means KCC cards are helping people in climate change adaptation.

Another interesting result is that people with PM Kisan cards and crop insurance also have higher KCC whereas people with life insurance have not opted for KCC. Probably the tying up of KCC with insurance and PM Kisan cards has provided good results.

Many households reported brokerage and different other types of payment asked by people in charge of making papers ready for KCC as one of the reasons for not having KCC. However, any payment-related variable got dropped from the regression as this variable has zero values for every household not having a KCC. We explore the role of this variable again when we analyse the renewal rates of KCC in the next section.

3.2.3 Factors Impacting KCC Loan Take-up

As per the survey, some farmers have taken up KCC cards but have not withdrawn the KCC loan amount for final consumption. Out of all farmers who took KCC cards, 11% of farmers did not withdraw the KCC loan amount from the bank. There could be many reasons for this. The farmers reported the important ones to be the following (Table 3.5).

Table 3. 5: Reasons for not withdrawing KCC loan amount despite having the card

Reasons	Percentage of farmers giving such reply
Not Needed loan	52%
High rate of interest	18%
Would not be able to repay KCC loan	7%
The uncertainty of crops due to disaster	9%
Distance from bank branch	5%
Other sources are a better option	3%
The experience of other farmers who have taken loans under KCC is bad	2%
Others	3%

When farmers say that they do not require the loan, the possible reasons could be the fear of indebtedness, they could be found dealing with the banks cumbersome, lack of investment opportunities in farming, etc. Some farmers mention high interest rates as the reason. KCC loan interest rate is the lowest among all the sources farmers have for loans. Two possible reasons farmers mention this as a reason could be: a) Farmers are not aware of the Interest subvention scheme (ISS) under KCC. This is most likely the reason because there is little awareness among farmers about the ISS, even 55% of farmers who took KCC loans were not aware of the ISS let alone those who did not take loans. b) Banks do not easily pass on the benefit of an ISS to farmers as they return loans usually with a delay, so there is the notion among the farmers that the lowest interest rate in a KCC loan is 7 percent.

3.2.4 KCC Renewal by Farmers

Renewal refers to the process of extending the KCC after its five-year expiration period. A high renewal rate indicates that farmers realize the benefits and usefulness of the KCC scheme. More awareness and realization by farmers about its benefits can ultimately help in the adoption rate of KCC through farmers' networks. Also, the higher renewal rate of KCC in a region implies farmers are facing fewer issues from

the bank side in their banking activities. Renewal rate is the renewal of a KCC credit card by a KCC holder farmer at least once time since the issuance of KCC. Out of a total of 1,205 KCC holders in our survey, 408 KCC holders renewed KCC at least one time. Of those who renewed KCC, 36 percent renewed it more than once. Like take-up, the renewal rate is also widely diverging across districts. The KCC has not been renewed in either Sidharth Nagar or Sitamarhi districts. Renewal in Jamui and Malda is low. One reason could be that the KCC has been acquired recently and renewal is not required yet (Table 3.6).

Table 3.6: KCC card renewal rate among KCC holder farmers

Districts	Renewal rate (%)
Chitrakoot	57%
Jamui	16%
Kaushambi	46%
Malda	25%
Siddharth Nagar	No observation
Sitamarhi	No observation
South 24 Parganas	79%

If farmers are aware of the benefits of the scheme, they are more likely to continue it given other external factors such as loan wavier, brokerage, land record documentation, and other issues from the bank side are taken care of. A low rate of renewal indicates that either the farmers are not getting the benefits or other external factors are not being taken care of. To identify the significant factors affecting the renewal of KCC, we estimate a logistic model to explore the role of networks and other exogenous factors (Table 3.7).

Table 3. 7: Logistic regression (Marginal effect of factors on the probability of renewing KCC cards)

Dependent variable	**Have renewed KCC card (renewed kcc = 1, not renewed kcc = 0)**				
Explanatory Variables		Entire study area	Bihar	UP	WB
Source of KCC information	FPO	0.085* (1.61)	0.052 (0.72)	0.208** (2.4)	0.053 (0.51)
	Banks	0.13*** (3.67)	0.109* (1.75)	0.061 (1.23)	0.043 (0.37)
	Relatives	0.036 (1.03)	0.011 (0.17)	0.01 (0.26)	-0.061 (0.65)
PM Kisan card holder		-0.04 (1.12)	-0.091 (0.90)	-0.013 (0.35)	-0.071 (0.83)
Taken-LIC		0.1 (0.26)	0.113 (1.06)	-0.015 (0.32)	0.094 (0.93)
Membership of any local group including SHGs		0.111 (1.42)	0.105 (0.94)	0.206* (1.94)	--
Have insured crops		0.151*** (4.41)	-0.017 (0.26)	0.108*** (2.9)	0.244** (2.50)
Have faced natural disasters in the last five years	Flood	-0.173*** (5.05)	-0.08 (1.29)	-0.245*** (7.13)	0.273 (1.41)
	Draught	-0.25*** (7.75)	--	-0.164*** (4.64)	-0.268 (0.98)
	Unseasonal rain	-0.06* (1.68)	0.051 (0.78)	-0.092** (2.17)	-0.12 (1.3)
	Hailstorms	-0.159 *** (4.79)	-0.077 (1.33)	-0.16*** (4.61)	-0.026 (0.18)
	Cyclones	0.289*** (4.43)	--	-0.133* (1.77)	0.086 (0.74)
	Other disasters	0.029 (0.69)	--	0.015(0.38)	--
Size of land holdings		0.001 (0.39)	-0.055 (1.11)	0.0005 (0.19)	0.048 (0.58)
Family size		-0.011** (2.31)	0.003 (0.24)	-0.007 (1.38)	-0.015 (0.83)
Number of earning members in the family		0.023 (1.18)	-0.004 (0.09)	0.028 (1.47)	-6.40E-02 (1.03)
Income from agriculture last year		0.000001 (1)	3E-07** (2.01)	-0.0000001 (1.04)	0.00E+00 (0.54)
Income from agriculture last to last year		0 (0.95)	-3E-07* (1.79)	0.00000012* (1.55)	0.00E+00 (0.56)
N		1,008	120	738	121
Pseudo R2		0.22	0.11	0.22	0.24
Log Likelihood value		-495.85	-46.51	-347.99	-53.64
LR Chi2 (14)		275.71	11.83	199.82	34.51
Pro of Chi2>0		0.00	0.755	0.00	0.007

Table 3.7 brings out the role of networks in helping people to renew the KCC. Information from both FPOs and banks is seen to have motivated people to renew it, FPOs in UP and banks in Bihar. Though at the state level, the level of significance is not very high, on aggregate, these two institutions seem to have played a significant role in pushing up renewal rates. Households experiencing natural disasters were seen to have taken up KCC cards (Table 3.4) whereas as per Table 3.7, households experiencing disasters are not renewing KCC probably due to the issue of repaying loans. This argument is supported by the significance of the crop insurance variable. Whosoever has taken crop insurance is also renewing KCC as disaster loss is recovered from insurance and households are not facing repayment issues. The significance of last year's income from agriculture in some cases also indicates that crop failure is the main reason for the non-renewal of KCC. The fear expressed by farmers regarding disasters and the inability to repay loans (Table 3.5) is supported by these results.

Next, we summarize our field experience, findings from FGDs, bank surveys, and data analysis of the possible factors affecting both KCC take-up and renewal.

3.2.4.1 Agricultural loan wavier is one of the main external factors that leads to low disbursement of KCC loans by banks:

As per the bank survey, more than 60% of bank managers cited loan waiver as one of the major reasons behind the non-repayment of KCC loans. Loan waiver schemes disrupt credit discipline as they may act as temporary solutions and can prove to be a moral hazard in the future. This is because those farmers who can afford to pay their loans might not pay it expecting a waiver. These loan waiver schemes by the Centre and state governments induce reckless behaviour among good borrowers because if they choose to pay back their KCC loan they feel to be at a loss when a loan waiver is announced later on and thus, decide not to pay. This leads to the hesitation among banks not to disburse loans easily to targeted farmers who can afford to repay loans. Farm loan wavier by governments especially when state finances are already stretched is dangerous not just for banks' overall agricultural loan portfolio but for a bank balance sheet because of rising non-performing assets (NPA) under KCC and this

problem is more severe for RRBs because KCC loans have a higher share in total outstanding loans in their balance sheet. This moral hazard is one of the major issues raised by bank managers for wilful default by KCC holder farmers when surveyed. These findings are in line with an earlier RBI report on the internal working group to review agricultural credit 2019, which also drew a correlation between the farm loan waivers announced by the states and the growing defaults in those states.

3.2.4.2 Land record issues are a significant concern, not just for KCC but in general for any agricultural loans

In all three survey states, we found that several farmers are willing to take KCC loans but unable to do so because of outdated, incomplete, or prone to dispute land records. Around 16 percent of non-KCC holders, who are eager to have one, reported incomplete and outdated land record issues. To address these issues and cover these farmers under KCC following steps can be helpful.

a) ***Regular updating and maintenance****:* Land records must be regularly updated and maintained to reflect changes in ownership, transfers, and other relevant information. This includes promptly recording transactions such as sales, inheritance, or partitions. Timely recording and updating of records will increase agricultural loan uptake against collateral by farmers.

b) ***Public awareness and education***: It is essential to raise awareness among farmers about the importance of land records and their titles. NABARD, Government Departments, and other stakeholders can conduct awareness campaigns and establish special camps for farmers to update land records.

c) ***Integration with Financial Institutions****:* Improving access to credit for farmers requires linking land records with financial institutions. Banks and other lenders can use digital land records as collateral for loans, enabling farmers to obtain credit based on their land holdings. This integration facilitates easier access to formal credit and reduces dependence on informal sources with high interest rates.

d) ***Digitalization of land records***: The digitalization of land records is crucial to ensure accurate and accessible documentation by lenders. Digitalization can help

eliminate discrepancies, reduce fraud, and provide a transparent and efficient system for land ownership verification. This may result in ease of loan and a reduction in the time taken to get a loan by a farmer.

3.2.4.3 Banks have ways to not feel pressure to push for KCC even if they are unable to meet KCC loan targets decided by the government.

Banks are more comfortable and willing to extend SHG loans under the National Rural Livelihoods Mission (NRLM) instead of KCC to meet their PSL targets because of the following reasons: SHG loan (comes under the Micro enterprises sub-target of PSL) mechanism by its very design has a very high repayment rate unlike KCC (comes under agricultural sector lending sub-target of PSL), considering it bank are ready to extend loan easily under it to SHG groups. And by doing so banks are able not only to meet but overshoot microcredit loan sub-target under their PSL obligation. The RBI recognizes that banks may face variations in demand and borrower preferences across different sectors, making it challenging to meet each sub-target precisely. To address this, RBI allows banks under its "Master Circular on Priority Sector Lending – Targets and Classification" to adjust their lending within the priority sector categories while ensuring the overall PSL target is met. So, given this flexibility banks go for SHG lending and focus less on KCC loans which not only have very low repayment rates but are also difficult to recover. As evident from Figure 3.5, the households are much more dependent on SHG groups with 61% procuring their financial needs from them.

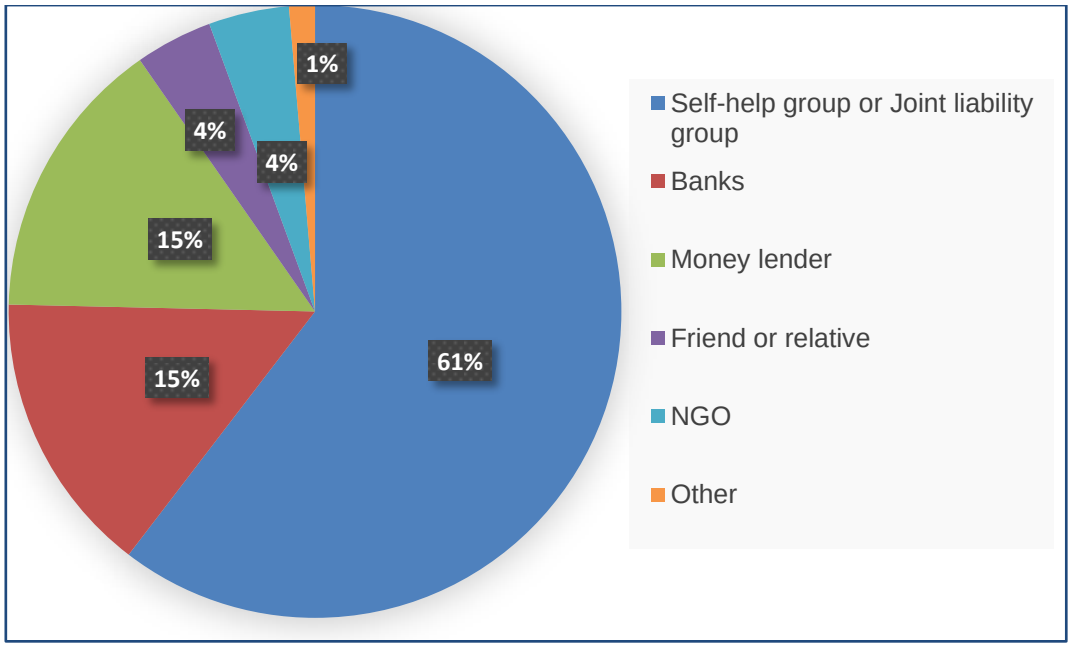


Figure 3.5: Major Non-KCC loan sources used by the percentage of households

3.2.4.4 Long, cumbersome, and peculiar channel for KCC loans in the State of WB which increases the rejection rate and takes on average much more time relative to other surveyed states to KCC loan get sanctioned.

One of the main reasons for low adoption in WB is the channel through which KCC loan applications reach lenders. First, few farmers go to banks for KCC loans. If they do, banks tell them to apply to the ADO for land inspection. Farmers receive application forms from the mukhiyas, who in turn get them from the bank. After filling out the application form with the inputs of KCC loan applying farmers, village Pradhans or Mukhiyas submit these to the ADO office. The application is then passed on to the BDO office from ADO office and ultimately to the concerned bank from BDO office. This whole process takes around two or three months on average. Once the banks receive the applications, they take two or three weeks to process them, although they cite a maximum time of one week for the KCC loan to get sanctioned. Both the channels and the problems banks cause, disincentivize the farmers from applying for KCC loans (Figure 3.6).

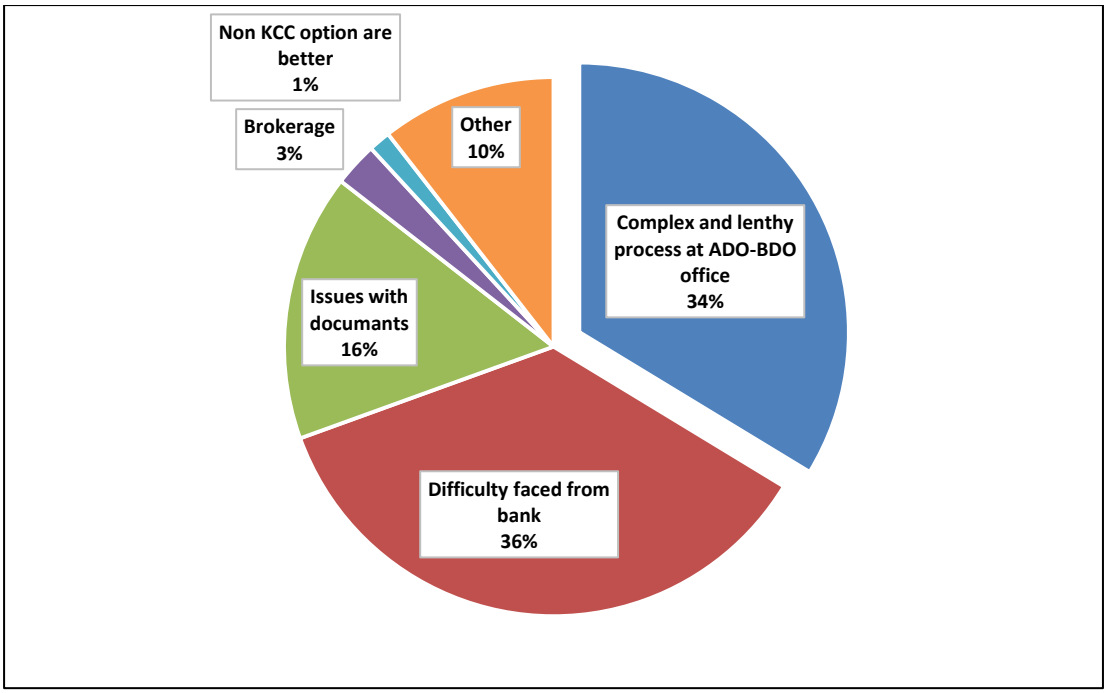


Figure 3. 6: Percentage of households giving reasons for not taking a KCC loan in the state of WB

3.2.5Explanation of the differential adoption rate in different districts of the same state.

3.2.5.1 Awareness and outreach:

The level of awareness and outreach efforts by banks and financial institutions in different districts can significantly impact the adoption rate of KCC. Our study found that districts with proactive campaigns and effective communication strategies are likely to have higher adoption rates compared to districts with limited awareness and outreach. In the study region, banks that successfully conducted the campaigns and saturation drives were able to achieve a much better adoption rate in their service areas.

3.2.5.2 Agricultural landscape and farmer demographics:

The agricultural landscape and composition of farmers in each district, such as the prevalence of different agricultural practices, agricultural assets holding, etc., can influence the adoption rate of KCC. For example, those farmers who own more agricultural assets are more likely to have KCC. A higher proportion of the farmers

who owned tractors also seem to have KCC as per the survey data (Table 3.8). Some 74% of tractor owners in Chitrakoot, 78% in Kaushambi, 94% in Sidharth Nagar, 50% in Jamui, and 40% in Sitamarhi have KCC, but such percentages are very low in WB.

Table 3. 8: Farmers affluent in agricultural assets (say Tractor) and access to KCC loan.

Districts	Number of farmers who owned tractor	Number of farmers who owned tractors and have KCC (percentages in bracket)	Percentage of tractor ownership among sampled households	Coefficient of correlation between tractor ownership and having KCC (r)
Chitrakoot	34	25 (74%)	8%	0.11**($p < 0.05$)
Jamui	21	11 (52%)	7%	0.07 ($p > 0.1$)
Kaushambi	36	28 (78%)	8%	-0.03 ($p > 0.1$)
Malda	18	1 (6%)	4%	0.02 ($p > 0.1$)
Siddharth Nagar	49	46 (94%)	14%	-0.002 ($p > 0.1$)
Sitamarhi	25	10 (40%)	14%	0.23* ($p < 0.1$)
South 24 Parganas	17	5 (29%)	3%	($p > 0.1$)

However, the tractor ownership being sparse in the districts (column 4, Table 3.8), the coefficient of correlation between having KCC and owning tractors is very low or insignificant in different districts as a large number of KCC holders do not own tractors as small or marginal farmers have been incentivized to have KCC. A high percentage of asset owners having KCC gives a clear message. If farmers in one district of a state have relatively better agricultural assets than in other districts and if they adopt more modern technologies, machines, and new and better agricultural practices, KCC adoption in that district could be better. Cropping patterns, landholding size, and farmers' socio-economic characteristics can also play a role in determining the willingness and need for farmers to adopt KCC.

3.2.5.3 Availability and Accessibility of Credit Facilities:

The availability and accessibility of formal credit facilities, including KCC, can vary across districts. Districts with well-established banking infrastructure, widespread branch networks, and convenient access to credit facilities are more likely to have higher adoption rates. On the other hand, districts with limited banking presence or inadequate access to financial services may experience lower adoption rates. Our finding also points to this, In the Sitamarhi district of Bihar, 40% of farmers who were aware of the KCC scheme but did not take a KCC loan cited one of the major reasons is the distance of the bank branch from their home, that means banking presence is quite low in this district and because of this we see only 20 % of all farmers surveyed have KCC. Whereas the same figure is 38% in the Jamui district of Bihar where out of 89 farmers who are aware of KCC but do not have KCC, no farmers cited distance from the bank branch as one of the reasons for not taking a KCC loan.

3.2.5.4 Penetration of other credit options from formal and informal financial institutions for Households:

As per the survey findings, more availability of other credit options in a district has depressed the KCC loan adoption rate (Table 3.9).

Table 3.9: Non-KCC loan adoption rate in different districts

Districts	Other Agricultural loan adoption rate (%)	KCC loan adoption rate (%)
Chitrakoot	9.95	59.72
Jamui	34.49	37.34
Kaushambi	11.70	76.83
Malda	9.64	4.02
Siddharth Nagar	8.96	92.16
Sitamarhi	37.16	20.77
South 24 Parganas	16.43	18.71

As seen from Table 3.7, wherever there is a high dependence on other agricultural loans, the KCC loan adoption rate is less and vice versa**.** Except for UP, the penetration of non-KCC loans is higher in other states indicating the non-attractiveness of the KCC loans there. Of the different non-KCC sources, maximum dependency is seen to be on self-help group financing (36%), money lenders (15%), and private banks (13%) followed by friends and relatives (11%). Such users reported convenience (76%), low interest rate (36%), and no collateral need (13%) as some of the attractions to go for such loans.

3.2.5.5 Supportive Policies and Government Initiatives:

The extent of support and facilitation provided by state and local governments can influence the adoption rate of KCC. Districts with favourable policies, government-led initiatives, subsidies, and incentives for KCC adoption are likely to witness higher uptake compared to districts with limited or ineffective support mechanisms. Our study finds a very high correlation between the number of PM Kisan beneficiaries and the number of KCC card holders both in the block as well as in the district. The correlation coefficient at the block level is 0.75 and at the district level, it is 0.69.

3.2.5.6 Cultural and Social Factors: Cultural and social factors can also play a role in the adoption rate of KCC. Factors such as

a. **The perception of credit**: One of the major reasons mentioned by farmers in our study for not taking loans despite being aware of it is that they are afraid to take loans. They fear indebtedness in general and particularly uncertainty in agriculture will make them unable to pay back loans.

b. **Ease of working with formal financial institutions**: In our survey, farmers also cited one of the major reasons for not taking a loan is issues like delays from the bank side in sanctioning loans, more documents demanded by the bank, rejection of loan application, the bank dening loan citing old age and no landholding for collateral, high rate of interest on the failure of repayment, etc. Such experiences

may be due to the lack of clarity of banking procedures by farmers but these bring down not only trust in banks but also in all formal financial institutions which is why they still prefer to take loans from informal sources of credit such as friends/relatives, money lenders, and agricultural traders.

c. **Traditions and Practices**: Traditions and widespread practice in districts related to agricultural practices can influence farmers' decision-making process and their willingness to adopt KCC: In our study, we notice that those farmers who use modern agricultural machines such as tractors are more likely to have KCC.

d. **Implementation Challenges**: The presence of implementation challenges, such as procedural complexities, paperwork requirements, delays in processing applications, or issues related to documentation and verification, can hinder the adoption of KCC. Districts with smoother and more efficient implementation processes are likely to have higher adoption rates.

It is important to note that these factors are interconnected and can influence each other. The differential adoption rate of KCC in different districts is a result of the interplay of various factors specific to the local context. A more comprehensive analysis considering these factors can help understand the variation and guide efforts to improve KCC adoption in districts with lower rates.

CHAPTER 4

WAYS TO BETTER SATURATE THE KCC SCHEME

This chapter presents results and suggestions which are based on field observations, researchers' intuitive observations, and suggestions received during the formal and informal discussions with bank officials, village heads, and farmers.

4.1 Credit Guarantee Fund for KCC loan (CGFKCC)

Implementing a Credit Guarantee Fund for KCC loans (CGFKCC) as a trust fund to guarantee payment against default in KCC loans extended to eligible farmers by banks. This suggestion came out strongly in the course of our focus group discussion with banks. The credit guarantee scheme for KCC loans can potentially help increase the saturation and availability of loans to farmers. A credit guarantee scheme provides a form of insurance to the lending institutions, mitigating their risk of default by providing a guarantee on a portion of the loan amount. Here is how it can be beneficial to better saturate KCC loans:

(a) **Enhanced Lending Confidence**: With a credit guarantee in place, banks and financial institutions may feel more confident in extending credit to farmers, particularly those with limited collateral or perceived higher credit risk. In our survey, small and marginal farmers cited limited or no landholding as one of the reasons for their non-availability of KCC despite being aware of the KCC scheme. The guarantee acts as a safety net, ensuring that a portion of the loan amount will be covered in the event of default by distressed farmers.

(b) **Reduced Risk for Lenders**: The credit guarantee scheme reduces the risk exposure of lenders by shifting a portion of the credit risk to the guaranteeing trust. This can encourage banks to lend to a broader segment of farmers, including those who may have been previously considered ineligible or high-risk due to lack of collateral or credit history.

(c) **Increased Loan Availability**: In the course of the survey, we found out that farmers majorly faced challenges from the bank side. The challenges are Bank deliberately delayed loans, rejected applications without citing proper reasons, denied loans citing no collateral, bank employees troubled, mistreated, and made them wait when they visited a bank branch for the loan, etc. and these compelled them to give up. Out of the total farmers in our survey who get KCC loans from banks, 57% reported[9] they faced difficulty in getting loans from banks. By providing a credit guarantee, the scheme can facilitate greater access to credit for farmers who would otherwise face all these mentioned challenges in obtaining loans. This can help increase the saturation of KCC loans, ensuring that a larger number of farmers can benefit from the scheme's features.

(d) **Promoting Financial Inclusion**: The credit guarantee scheme can contribute to promoting financial inclusion by extending credit to farmers who are otherwise underserved by the formal banking sector. This can help address the credit gap and provide opportunities for small and marginalized farmers to access formal credit, thereby supporting their agricultural activities and livelihoods.

(e) **Stimulating Agricultural Growth**: Increased availability of credit through the credit guarantee scheme can provide farmers with the necessary funds to invest in inputs, technology, and other agricultural activities. This, in turn, can contribute to improved productivity, increased agricultural output, and overall rural development.

However, it is important to note that the success of a credit guarantee scheme depends on effective implementation, monitoring, and evaluation. Proper risk assessment, transparent procedures, and efficient functioning of the guaranteeing trust are crucial to ensure the scheme's sustainability and desired outcomes. Additionally, complementary measures such as financial literacy programmes, capacity building for farmers, and ensuring the availability of adequate credit infrastructure are important to maximize the benefits of the credit guarantee scheme and support the overall development of the agricultural sector.

[9] In the survey, we have a total of 1205 farmers who have taken KCC loans, out of which 57% (682 farmers) reported that they faced difficulties from banks in getting loans.

4.2 End-to-End Digitalization

(a) End-to-end digitalization could solve these challenges associated with KCC loans. It would also solve general bottlenecks for agri loans: charges in getting loans from banks, no time limit in loan disbursement, the problem of collateral, improper land records, financial institutions' negligible eagerness to lend the farmers due to high default rate, lower awareness of credit system among farmers, and the already simplified one-page form for KCC loans. This will make it time and cost-effective not just for farmers but for lenders as well given common banks' issues such as staff shortages, increasing workload, limited or low reach in rural areas, and ever-increasing customer base.

(b) With automation, there will be a deepening of the KCC base with more farmers opting for this product given the ease with which credit becomes available and accessible. Also, the time from applying for credit to its disbursal can be diminished significantly which is still after government and RBI guidelines to 14 days from the receipt of complete application is in the range of on average 3-4 weeks in Kaushambi and Chitrakoot district of Uttar Pradesh and 3-4 months in Malda and South 24 Parganas district of WB as per our survey. Farmers who have relied on non-formal and costly credit channels will find it easier to access formal credit channels via the KCC and this is expected to drive further take-up. However, this automation should be placed with utmost safety and security given farmers' low financial and digital literacy.

(c) Digitalization of KCC loans will play a pivotal role in facilitating credit flow to unserved and underserved farmers by making the credit process seamless, less error-prone and hassle-free process, faster, and more efficient. Also, integrating it with KYC databases and digitalized land record databases has the potential to address major issues such as the prevalence of fraud and corruption around KCC facilities farmers. Most importantly, this could make life easier for farmers as well as for banks in terms of ease of application and elimination of required associated paperwork. If implemented efficiently, this has the potential to transform the rural credit delivery system of the country.

4.3 Increasing adoption rate through social network

In all three surveyed states, the adoption of KCC loans can be influenced by various social network issues. Some possible social network issues that might be impacting the adoption of KCC loans include:

4.3.1 Limited Information Sharing:

In many rural communities, there may be limited information sharing about financial products and services. Lack of awareness and understanding about the benefits of KCC loans can hinder adoption rates. Farmers may rely heavily on word-of-mouth communication within their social networks, and if information about KCC loans does not reach them effectively, they may be less likely to adopt them.

4.3.2 Trust and Perceptions:

Trust plays a significant role in financial decisions. If there is a lack of trust in financial institutions or there are concerns about hidden costs, high interest rates, or complicated procedures, farmers may be reluctant to adopt KCC loans. Also, if farmers within a network have positive experiences with farm loans and share their success stories, it can enhance trust and influence others to adopt similar financial solutions. Conversely, negative experiences or rumours within a network can create distrust and discourage farmers from applying for farm loans.

The survey reports 21% of farmers quoting high interest rates as the prime reason for not going for KCC loans and some 26% saying that they are unhappy with complicated bank procedures. Thus, improving trust, simplifying procedures, and providing complete transparency by banks can increase the take-up of KCC.

For a customer, the following are the trust and perception pillars of a financial institution:

i. Transparent, timely, and seamless service by bank
ii. Kind attitude and behaviour to customer
iii. Complete and correct information about their products & services to customer
iv. Timely redressal of issues

As per the survey, some of these pillars are missing in the case of KCC loan services from the bank side and need to be restored

4.3.3 Social Influence and Norms:

Farmers often rely on social networks for advice and guidance. If influential members within their social networks discourage the use of formal credit because of any reason (genuine or in-genuine), it can deter farmers from considering not just KCC loans but also other formal credit loans from financial institutions. Social norms that favour traditional credit sources (See Figure 4.2) or discourage borrowing can also impact adoption rates. The survey reported some 29% of farmers, who go for agriculture loans other than KCC, still rely on informal sources of credit. This informal source of credit includes Friends/relatives, Money lenders, and agricultural traders. To bring all these farmers to the formal credit system from the informal one, network theory targeting explained in the next section can deliver the desired results.

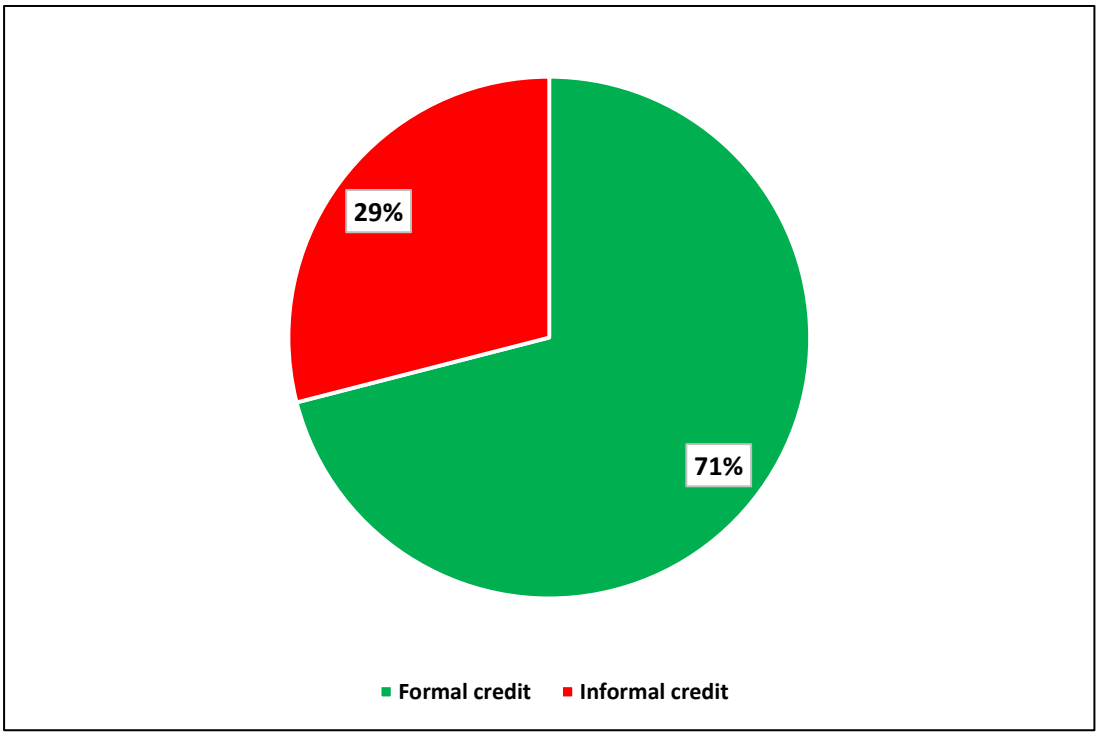


Figure 4.1: Credit sources of farmers who took agricultural loans other than KCC

4.3.4 Lack of Role Models:

The absence of successful examples or role models within social networks who have benefited from KCC loans can limit the diffusion of information and adoption. If farmers do not see their peers or respected individuals benefiting from such loans, they may be less motivated to apply for them. Stories of role models need to reach farmers either through financial institutions or influential members within their social networks. This will be highly helpful since the major sources of information about the KCC scheme to farmers as per our survey are friends/relatives and Banks. Some way to do it is to narrate the story of a role model in Street theatre, conducted by Bank and NABARD in collaboration, and paste banners and photos of role models in bank branches praising their sound banking activities such as repayment and benefits they get from KCC loan.

4.3.5 Access to Networks:

Farmers' access to social networks can also influence the adoption rate. Those who are isolated or have limited connections to influential individuals or community networks may face challenges in accessing information about KCC loans and may have lower adoption rates as a result. As per our survey, some farmers cited reasons for not taking a KCC loan that they have no one who can assist them in taking the KCC loan. This argument is generally provided by poor small and marginal farmer who earn their daily bread by working in the field and have very little time to go to the bank and to interact with their social network who can guide and provide information about financial products.

4.3.6 Cultural and Gender Dynamics:

Cultural norms and gender dynamics affecting the adoption of KCC loans. In farmers' communities, cultural practices or gender biases may restrict women's access to credit or discourage them from participating in financial decision-making. As we know land in a household is normally in the name of the male member of the household. So even if women are aware of the KCC loan they cannot decide to take collateral-based KCC loan due to this dynamic of society. Instead, she must rely on the male member of the

household for the same. These dynamics within social networks also hinder the adoption of KCC loans. In SHG loans, this gender dynamics do not work, and we see a very high take-up and adoption rate of SHG loans in our survey area (Figure 4.3).

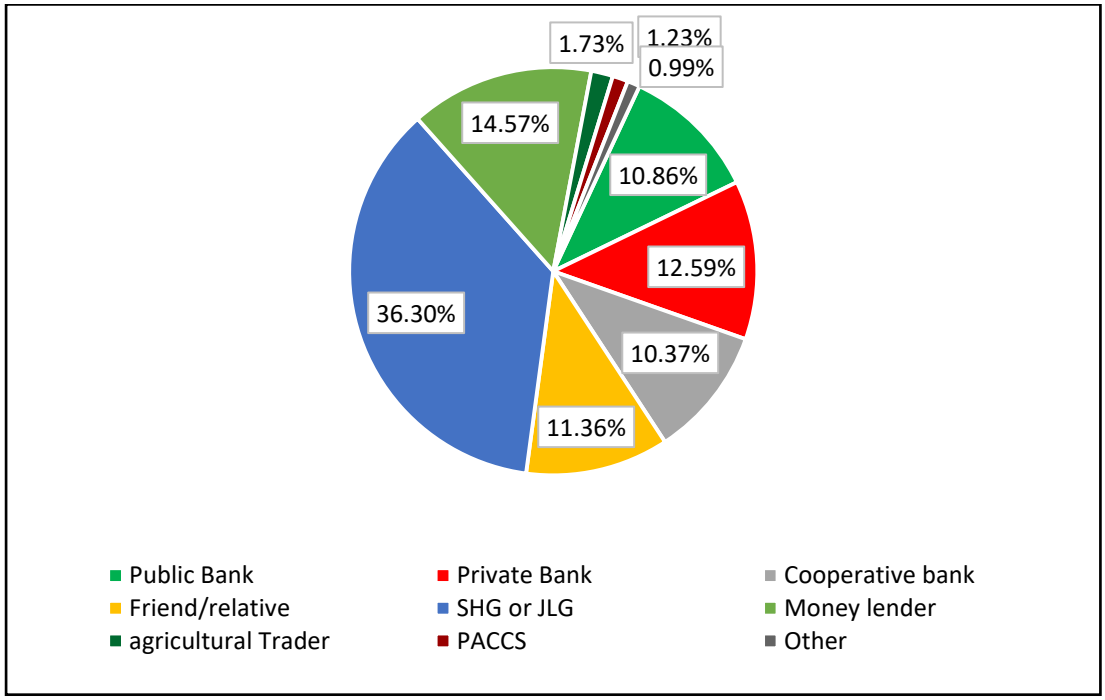


Figure 4.2: Share of different sources of credit for farmers in the study area.

Addressing these social network issues requires targeted interventions and strategies, such as:

i. Conduct awareness campaigns and financial literacy programmes to disseminate information about KCC loans and their benefits.

ii. Engaging local community leaders, respected individuals, and role models to advocate for KCC loans and share success stories.

iii. Strengthening ties between financial institutions and rural communities by establishing trust and addressing concerns related to interest rates, costs, and procedures.

iv. Promoting peer learning and knowledge sharing through community-level initiatives and platforms to facilitate information exchange about KCC loans.

v. Ensuring inclusivity and gender sensitivity in KCC loan programmes, addressing cultural barriers, and empowering women farmers to access and utilize credit effectively.

vi. Ensuring full digitization, starting from application to disbursement, will help eliminate all resistance to increasing KCC uptake.

By addressing these social network issues, it is possible to improve the adoption of KCC loans among farmers in India and enhance their access to formal credit for agricultural activities.

4.4 Network theory-based targeting to bring high adoption of the scheme.

Network analysis is a powerful tool to get insight into a comprehensive understanding of the factors influencing policy implementation and adoption within networks and communities to push for the adoption of a new technology. Network theory, Rogers's innovation diffusion theory, the CBAM, and the UTAUT are all significant frameworks in the fields of technology adoption and policy implementation (Straub, 2009; Hall and Hord, 2006; Venkatesh et al., 2003). Each theory offers valuable insight into how ideas, innovations, or technologies spread through networks and communities.

- **Network Theory**

Network theory provides a framework for understanding the structure and dynamics of relationships within a network. It focuses on the relationships between entities and how information, influence, or resources flow through these connections. In the context of policy implementation, network theory can help identify the key actors or nodes within a network that can influence the adoption of policies or initiatives. By understanding the network structure and dynamics, policymakers can target interventions more effectively. This theory helps enhance the understanding of how policies diffuse and gain acceptance within communities or organizations, thus improving policy implementation strategies.

- **Rogers's Innovation Diffusion Theory**

Everett M. Rogers's innovation diffusion theory (Roger, 2003) explains how innovations spread through social systems over time. It identifies different categories of adopters and factors that influence the rate of adoption, such as the perceived relative advantage, compatibility, complexity, trialability, and observability of innovation. This theory provides a framework for understanding the adoption process and predicting the rate of adoption within a population. It offers insights into the factors influencing the acceptance of policies or innovations, helping policymakers design more effective implementation strategies.

- **Concerns-Based Adoption Model (CBAM)**

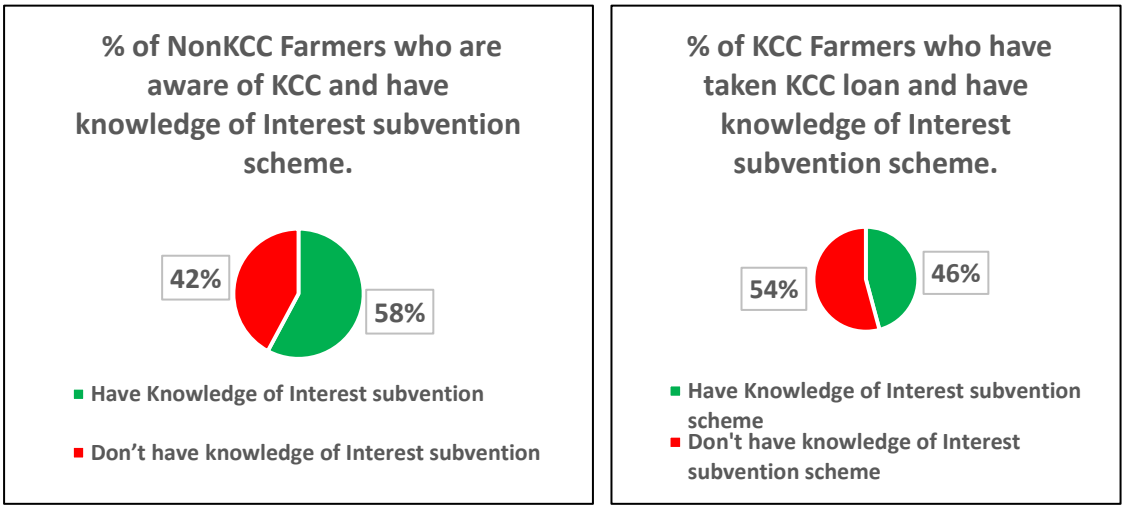
The CBAM framework focuses on the concerns and needs of individuals during the process of adopting an innovation. It identifies the stages of concern individuals may experience, such as awareness, informational, personal, management, and consequence concerns. CBAM provides a structured approach for understanding and addressing the concerns of stakeholders during the implementation of innovations or policies. Taking insights from this model could help policymakers anticipate and address the concerns of stakeholders during policy implementation, thereby facilitating adoption and implementation.

- **United Theory of Acceptance and Use of Technology (UTAUT)**

The UTAUT model integrates elements from various technology acceptance theories to predict and explain user acceptance and usage behaviour of technology. It identifies key determinants of user acceptance, including performance expectancy, effort expectancy, social influence, and facilitating conditions. This theory provides insights into the factors influencing the acceptance and use of technology-enabled policy implementation tools or platforms, guiding the design of interventions to enhance user acceptance and usage.

Network theory-based targeting can be used to identify influential community members or opinion advocates within a farmer's community and by leveraging the principles and concepts of network theory – such as connections, interactions, and influence patterns to strategically target key individuals, one can expect to improve

adoption rate. This approach recognizes that individuals are often connected to others in various ways, such as social relationships, communication channels, or professional connections. As observed from the figures 4.4 below, there is a high knowledge gap among farmers regarding the KCC. Non-takers have more knowledge on interest subvention schemes than the takers, 58% vs 46%. Using networks can help to disseminate the right and timely information about KCC and its benefits such as interest subvention and this will increase take-up.



(a) (b)

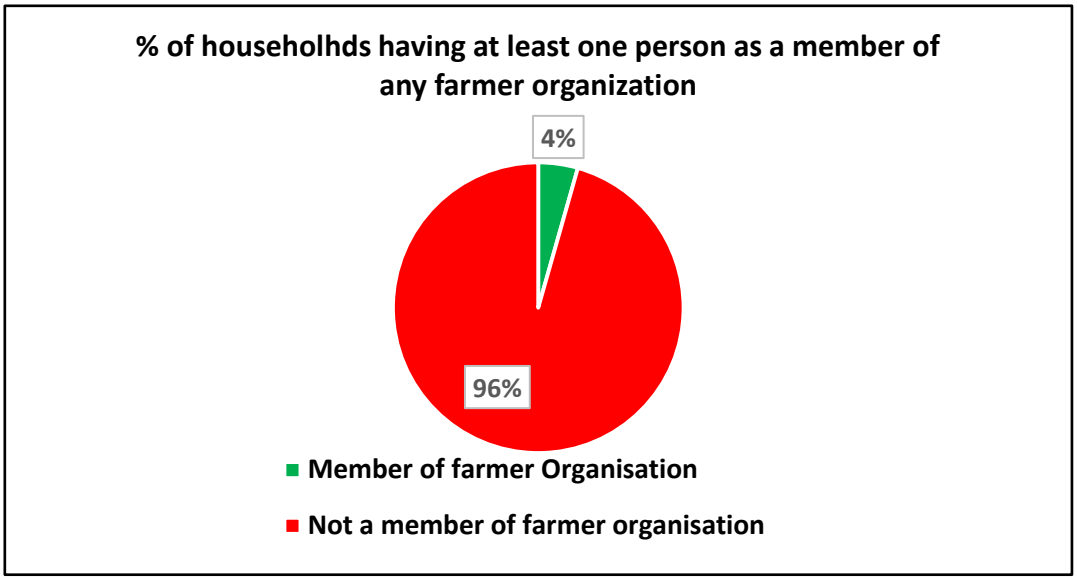
Figure 4. 3: Farmers' Knowledge of Interest Subvention Scheme (ISS). (a) Show the ISS knowledge of non-KCC farmers. (b) Show the ISS knowledge of KCC farmers

There are other key elements related to network theory-based targeting to increase the KCC adoption rate.

4.4.1 Farmers' attributes

Each farmer can have attributes and characteristics that are relevant for targeting purposes such as he can be a member of a farmer organization (Figure 4.5 a), getting monetary benefits from a government scheme through direct benefit transfer (DBT) such as PM Kisan or PM Awas Yojana (Figure 4.5 b & c). In rural setup, still,

majority of farmers use bank branches to withdraw money from their accounts because of reasons such as RuPay/ATM Card not being issued by the bank, very few ATMs in rural areas to withdraw money, fear that their account can be hacked with this card and money can be withdrawn by other if they activate such card, so they do not even ask for it from banks (Figure 4.5 d). Farmers' attributes such as the above can be considered to disseminate KCC information and benefits.



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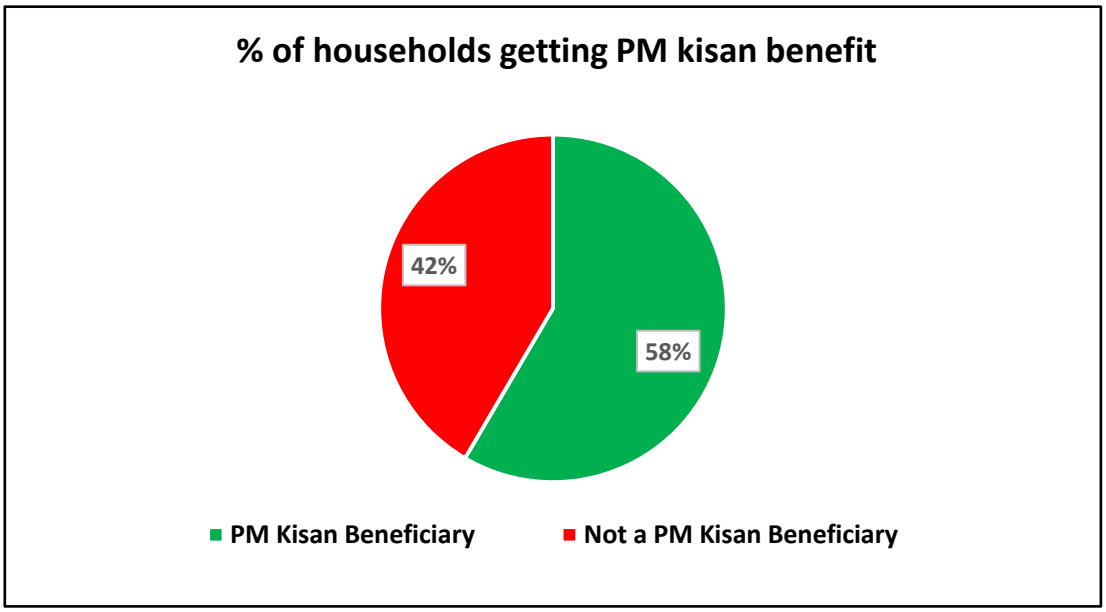

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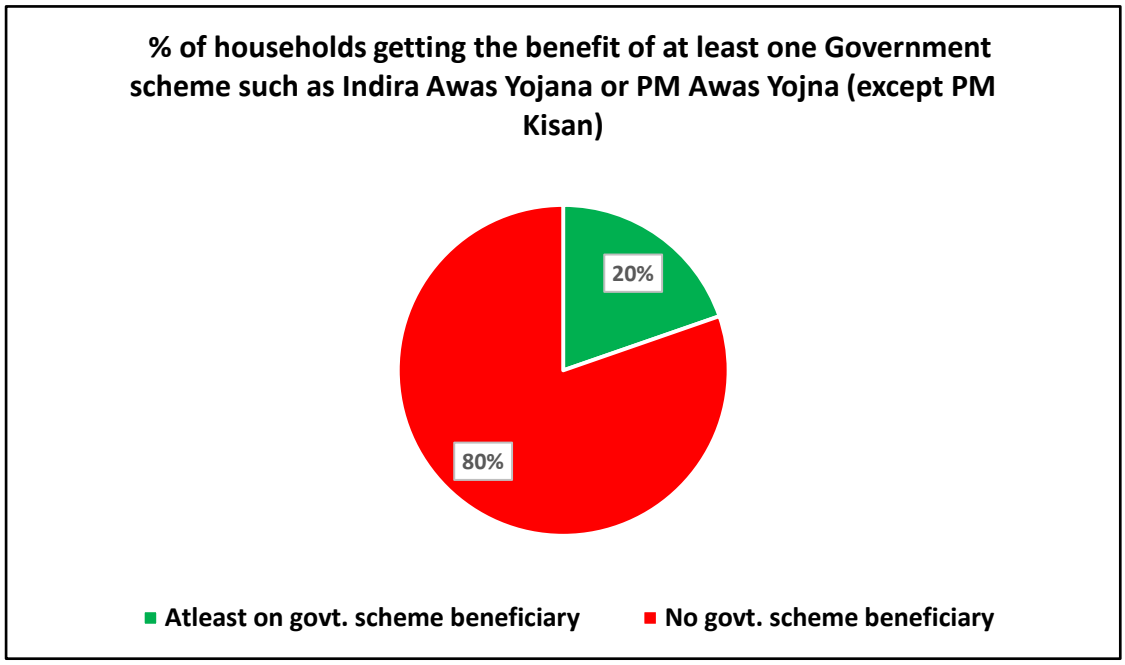

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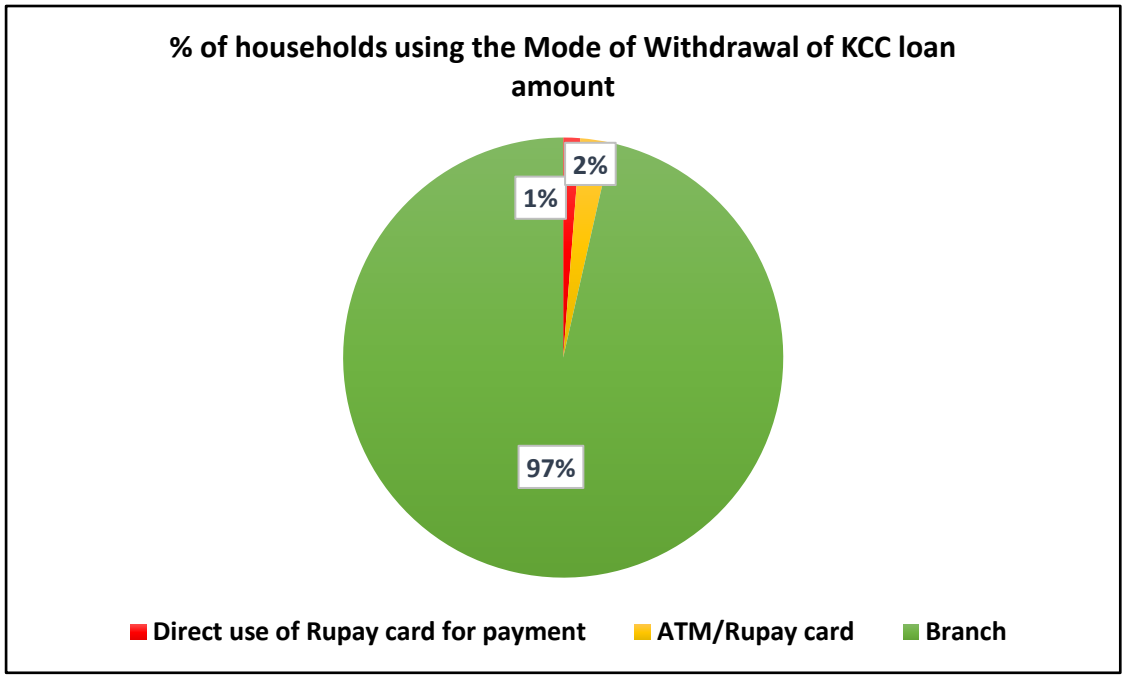
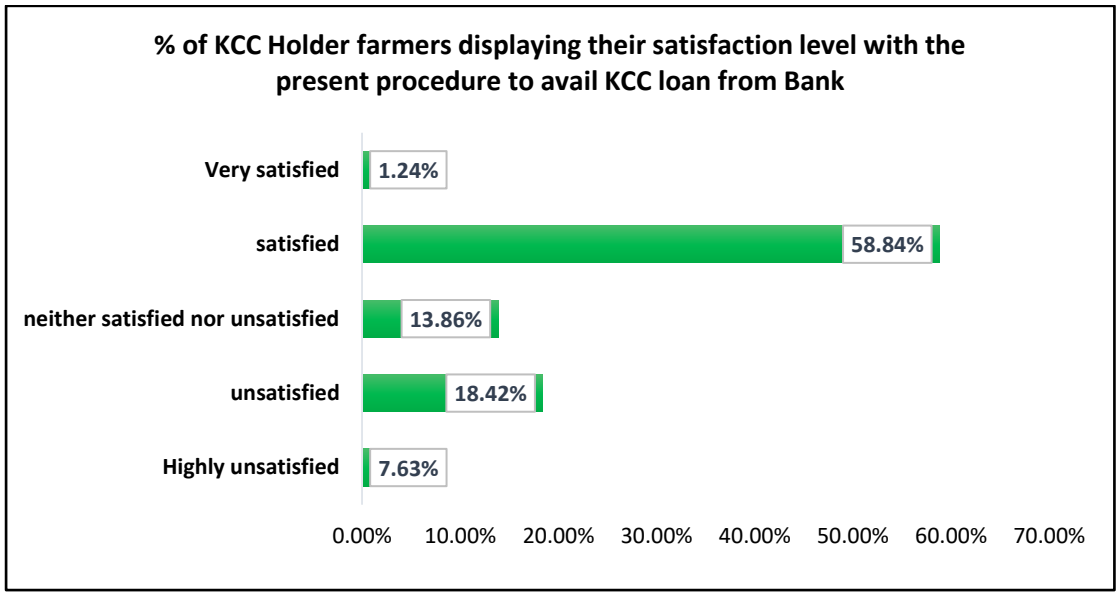


(d)

Figure 4. 4: (a, b, c, d): Differences in Farmers' attributes in the study area.

4.4.2 Recognize links and Connections:

Links or connections among farmers' communities represent the relationships or interactions between farmers. These connections can be directed (one-way such as Pradhan transferring KCC knowledge to other farmers) or undirected (two-way) such as farmers sharing their experience to avail of KCC loan and its subsequent advantages and disadvantages with their friends, relatives, and neighbours (Figure 4.6), and they can have different strengths or weights. Improving the experience of farmers and influential persons in taking KCC loans can improve the adoption rate.



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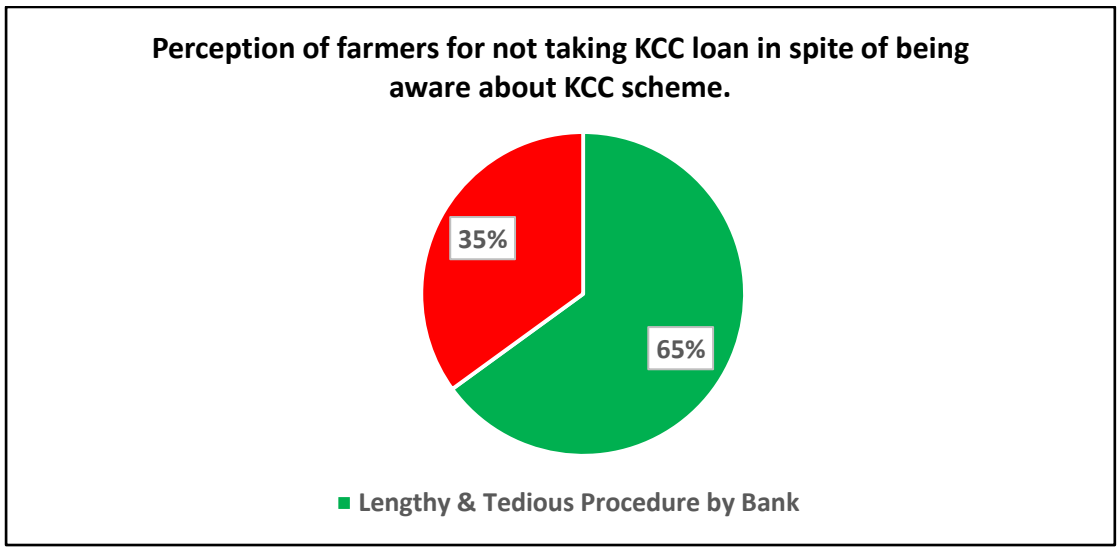

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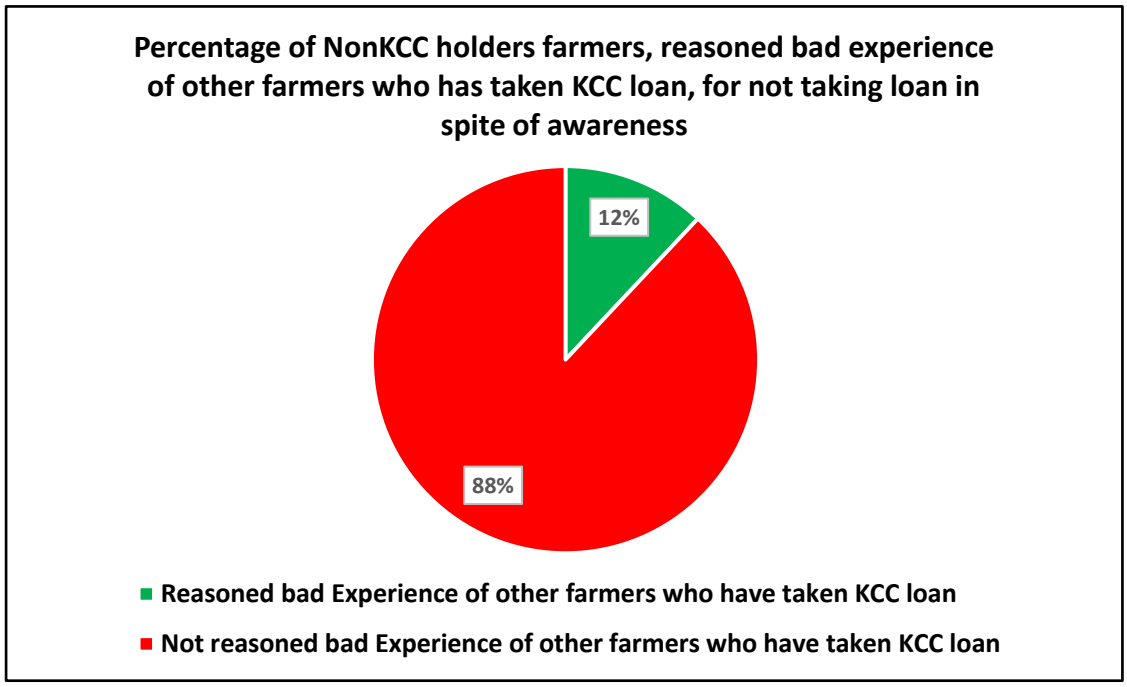

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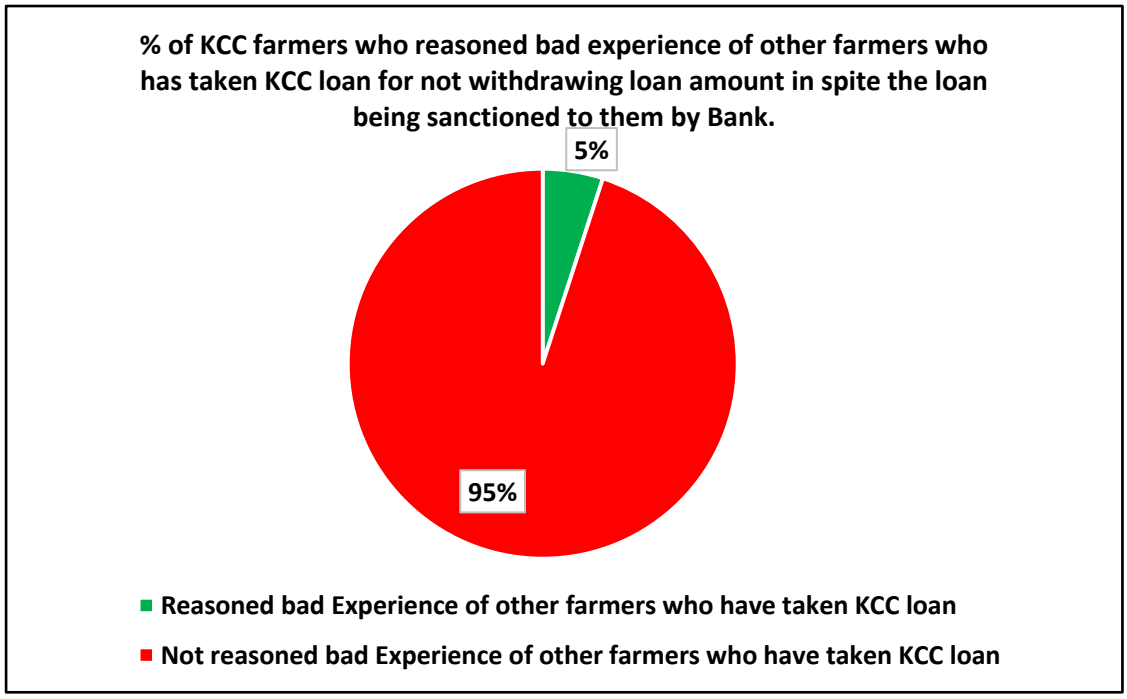

(d)

Figure 4. 5: (a, b, c, d): Farmers' satisfaction and knowledge of other's experiences on KCC loans.

Such myriad experiences can be used to link farmers with each other or with some successful agri-entrepreneurs of the region who have made the best use of the KCC loans.

4.4.3 Clustering:

Farmers' communities often exhibit clustering structures, where they are more densely connected than farmers in other clusters. Identifying these clusters, say a specific panchayat or group of villages, can help in targeting specific groups within the community.

4.4.4 Diffusion and spread:

Network theory considers how information, behaviours, or influences spread within a network. By understanding how ideas or actions can propagate through a network, targeted interventions can be designed to maximize impact.

In this KCC study, we found out how the information about the KCC scheme is being spread in farmers' communities by asking farmers about the source of information for the KCC scheme. who are aware of the scheme (Figure 4.7).

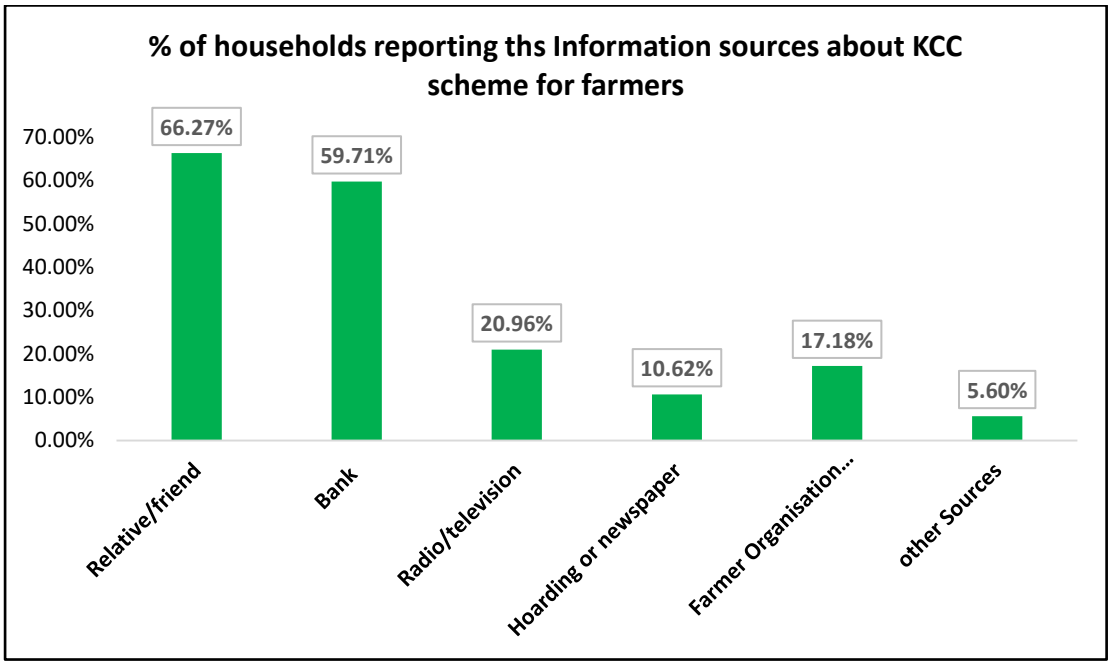

Figure 4. 6: Source of information about the KCC scheme

When applying network theory-based targeting, Policy implementers can leverage these concepts to identify influential individuals, opinion leaders, or communities within a network. By strategically targeting these key persons or communities, they can amplify their messages, drive behaviour change, or achieve specific goals more effectively.

4.5 RuPay cards, their acceptability, and activation

The acceptance and activation of RuPay cards issued as KCC among farmers can vary based on several factors. While specific data on acceptability and activation rates may vary, the following factors can influence these outcomes:

4.5.1 Awareness and Familiarity:

Farmers' acceptance of RuPay cards as a form of KCC may depend on their awareness and familiarity with electronic payment systems. In rural areas, where technological literacy and access to financial services may be limited, farmers may not be fully aware of the benefits and functionality of RuPay cards. Lack of awareness can lead to lower acceptance rates. As per the survey, this hypothesis stands true, very negligible KCC holder farmers use RuPay cards for withdrawal or direct payment (Table 4.1)

Table 4. 1: Mode of withdrawal of KCC loan amount

Mode Of Withdrawal	Number of Households	Proportion Of KCC Cardholders
RuPay card	15	0.01
ATM	25	0.02
Bank branch	1,169	0.99

Just 1% (15 households, nine from Sidharth Nagar, three from Kaushambi, and one each from Sitamarhi, Malda, and South 24 Parganas) of the KCC loan users have made use of the RuPay cards. This shows a near complete lack of confidence in the ATM system by the loanee farmers.

4.5.2 Infrastructure and Connectivity:

The availability and functionality of card payment infrastructure and connectivity in rural areas can affect the acceptability of RuPay cards. Limited access to ATMs, POS terminals, non-delivery of transaction notifications over their mobile phone, and inadequate network coverage may deter farmers from actively using their RuPay cards. As per our bank visits, Bank managers in some districts such as Siddharth Nagar, Jamui, and Sitamarhi mention the non-availability of sufficient ATMs. Also, as per the survey, only 54% of KCC holder farmers receive notification of any transaction in their account on their mobile.

4.5.3 Preference for Cash Transactions:

In most cases, farmers may prefer cash transactions due to a lack of trust in electronic payment systems or a familiarity with traditional cash-based transactions. This preference for cash can lower the acceptance and utilization of RuPay cards among farmers. Out of all KCC holder farmers, 99% of farmers withdrew their loan amount from bank branches in cash (Table 4.1).

4.5.4 Activation Process and Documentation Requirements:

The activation of RuPay cards is a crucial step in their usability. Farmers may face challenges in completing the activation process, which may involve submitting required documentation or visiting banking institutions for verification. Factors such as lack of documentation, cumbersome procedures, or limited access to banking facilities can hinder the activation of RuPay cards. Banks pose numerous problems for farmers, like unnecessary documentation requirements such as a No Objection Certificate (NOC) from other banks to redress their issues. This may be the reason that many farmers did not activate the RuPay cards issued to them.

Expanding digital platforms for card issuance and activation, providing the best possible timely support and guidance to farmers, and implementing measures to ensure safe and convenient access to financial services online can help the situation.

4.5.5 Banks-specific issues and non-availability of cards:

Bank-specific issues can contribute to the non-availability and lower acceptance rates of RuPay cards among farmers. These issues that banks cited include bank mergers or amalgamations, which disrupted the card issuance process and led to delays in providing RuPay cards to eligible farmers. Additionally, Banks mentioned the instances where ATM card suppliers face a shortage of ATM chips or other technical difficulties, resulting in a limited supply of RuPay cards to Banks to issues.

In some cases, according to our survey, some banks have not made it compulsory to issue RuPay cards to farmers who do not specifically request them. This lack of compulsion resulted in a lower number of RuPay cards being issued, leading to limited availability of cards among farmers. Consequently, farmers who would otherwise have RuPay cards may not have access to them due to such practices.

Addressing these bank-specific issues requires effective coordination between financial institutions, government bodies, and relevant stakeholders. Banks need to ensure a smooth card issuance process, even during periods of mergers or technical challenges. They should also promote the issuance of RuPay cards to eligible farmers, making them aware of the benefits and encouraging adoption.

Furthermore, the regulatory body can play a crucial role in making it mandatory for banks to issue RuPay cards to eligible farmers, ensuring wider availability and promoting uniformity in card distribution. Timely resolution of ATM chip shortages and other technical difficulties is essential to maintain a steady supply of RuPay cards.

By addressing these bank-specific issues and ensuring the availability of RuPay cards to farmers, the acceptability and activation rates of RuPay cards as KCCs can be enhanced. This, in turn, will contribute to improving financial inclusion and empowering farmers with convenient and secure electronic payment options for their agricultural activities.

Financial institutions and relevant authorities need to address these challenges by conducting awareness campaigns, enhancing infrastructure, simplifying activation procedures, and providing necessary support to farmers to increase the acceptability and activation rates of RuPay cards as KCCs.

4.6 Impact of saturation drives on the adoption rate.

The livestock sector is crucial to the Indian economy, comprising one-third of the agriculture and allied sector gross value added (GVA) and having 8% CAGR. At the same time, animal husbandry, dairying, and fisheries activities play a significant role in generating farmer income, particularly among women and among landless, small, and marginal farmers. Given the need to support this extremely important economic activity, which has traditionally suffered from a lack of organized credit, the RBI issued a directive in the year 2019 to all banks for issuing KCCs to animal husbandry and fisheries farmers (AHDF KCC). Also, two KCC saturation drives were organized by the government in the past two years to cover the beneficiaries of PM KISAN under the KCC scheme. Table 4.2 shows the AHDF KCC applications sanctioned in both phases in three surveyed states and all India levels.

Table 4. 2: KCC AHDF Applications sanctioned under saturation Drive (phase-1 & Phase-2)

States	Phase-1	Phase-2	Grand Total of Phase-1 & Phase-2
Uttar Pradesh	657,376	3,354,070	425,004
Bihar	153,132	271,872	4,011,446
West Bengal	66,363	1,534,151	1,600,514
All India	4,343,019	25,166,789	29,509,808

Source: Indiastat (Source: RBI and Parliament Questions and Answers)

The saturation drive in both phases led to an increase in the adoption rate, but phase 2 had a higher impact in all three states (Table 4.2).

As per the survey, the maximum KCC cards issued to farmers in surveyed states are in the saturation drive year 2020 to 2022 (Figure 4.8). Some 10% of farmers used the KCC loan amount as working capital for the maintenance of farm assets and activities allied to agriculture like dairy animals, and inland fishery. Also, the impact of the saturation drive can be seen in the renewal of the KCC cards. Out of the total KCC holders' farmers, 33% of farmers renewed their KCC at least one time. And those who renewed, 55% renewed it during the period of saturation drives.

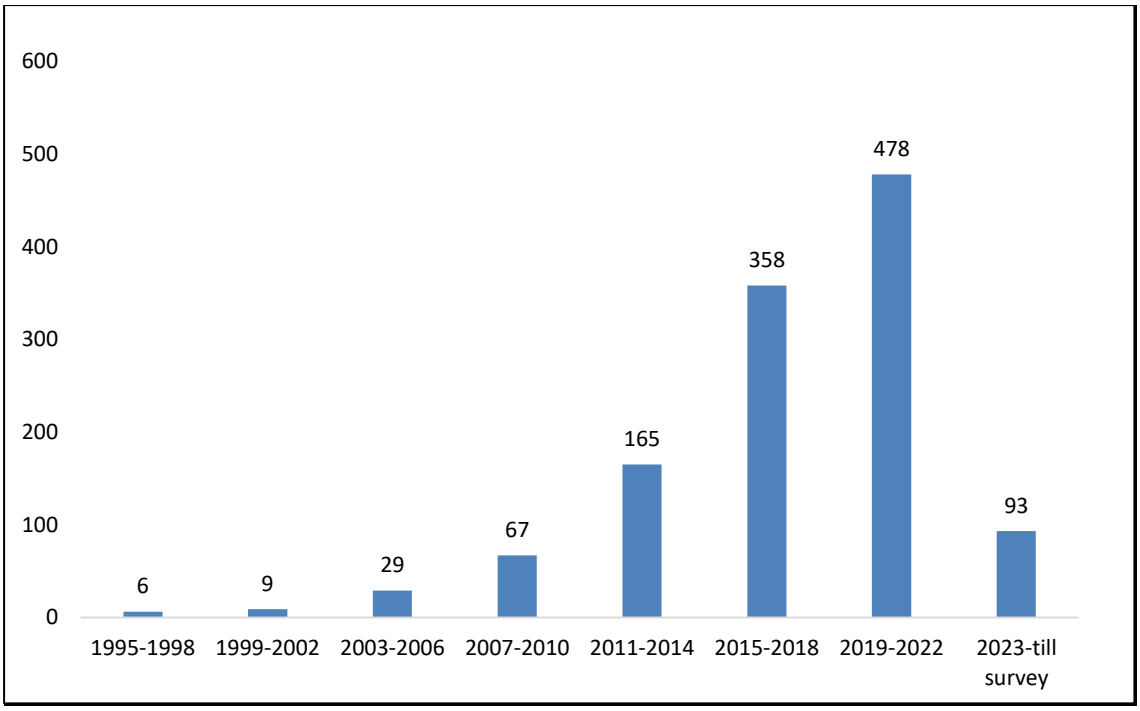

Figure 4. 7: KCC cards issued per year (the survey was completed in March 2023)

4.7 KCC scheme extension to animal husbandry and fisheries farmers and their Impact on adoption rate

As per NSSO's 68th round survey, there are 10 crore AHD farmers across the country, so the government looks at the ample scope for expansion of this scheme to cover other dairy farmers as well as other animal husbandry activities and fisheries. The KCC scheme was extended to the farmers engaged in animal husbandry and fisheries for their working capital requirement in the year 2018.

When we compare the number of AHDF KCC applications sanctioned, during both saturation drives individually and after the saturation drive for the year 2022-2023, we can see the number of applications sanctioned fell drastically after the saturation drive in all three states. The reason could be that during the saturation drives banks were under pressure to sanction KCC loans and were more conducive issuing loans.

Table 4. 3: KCC AHDF Applications sanctioned for the year 2022-2023 up to 22-07-2023 in UP, Bihar, and WB.

States	Number of KCC sanctioned
Uttar Pradesh	35,896
Bihar	6,099
WB	6,299
All India	333,167

Source: Indiastat (Original source: RBI and Parliament Questions and Answers)

4.7.1 Reasons for low uptake of AHDF KCC loan

As per the survey, 91.64 percent of households reported their annual income in the last year below Rs.1.5 lakhs, and the average amount of maximum permissible limit for KCC in the surveyed year is Rs. 83,534. As per government guidelines and rules, one can get a loan up to Rs. 2 lakhs for activities related to animal husbandry and fisheries, through a separate KCC. Farmers shared their experiences and mentioned that the working capital requirement in animal husbandry which includes recurring costs, towards feeding, veterinary aid, insurance of the milch animals, labour, water, and electricity could not be covered given the loan amount the bank is willing to sanction under a separate KCC and the income of the household. So, they prefer to take a loan under crop KCC.

In our informal group discussion with farmers, they also added that the bank documents requirement for separate KCC for animal husbandry and fisheries is much more demanding than the crop KCC and banks also prefer to sanction composite KCC rather than separate KCC for AHDF. This way those landless farmers who do not do crop farming and depend on animal husbandry and fisheries activities for their survival are most likely being left out of the benefit of the KCC scheme.

4.8 Impact of BC on the adoption rate

In present banking scenarios, banking correspondents play a crucial role in the delivery of doorstep banking services to customers at affordable cost. BCs have been

considered very instrumental in not only reaching out to new customers for bringing them under the banking ambit but also sharing the workload of branches due to which customer footfall to the branches has reduced significantly and branches have been able to focus more on core banking activities. BCs also play a significant role in increasing awareness about government schemes for rural households such as PM Kisan and KCC. As per our FGDs, at the time of saturation drives many banks provided the list of PM Kisan beneficiaries to BCs which in turn brought the leads to the bank for KCC loan. However, BCs failed to increase the KCC adoption rate to a significant level because of low or no incentive for them to bring KCC lead to banks. Most of the time they focus on non-KCC loans such as farm machinery loans which have high incentives attached to them. Banks should be directed to attach incentives for BCs for KCC as well so that they bring more leads for it and help in taking the KCC scheme to meet its saturation level in their respective regions.

CHAPTER 5

CONCLUSION AND POLICY IMPLICATIONS

5.1 Conclusion

In our study states – UP, Bihar, WB – KCC adoption is influenced by education level, landholding size, financial literacy, and farmer awareness. The external factors are land record issues that hinder potential loan applications, and agricultural loan waiver announcements. Also, banks are not obligated to meet the PSL agriculture sub-target because the RBI provides them that flexibility. The repayment rate for SHG loans exceeds that for KCC loans. Consequently, banks prefer to extend loans to SHGs.

In WB, another challenge is the long, cumbersome informal channel for KCC loan applications that involves multiple intermediaries – from the Village Pradhan to the ADO office, BDO office, and finally to the bank. Our research shows bank-level operational bottlenecks. And, during both sanctioning and loan withdrawal, farmers face challenges. Banks deny loans to small and marginal farmers without landholdings. The loan application procedure is lengthy and tedious. The interest rate is high. Farmers are concerned about indebtedness and fear taking loans because agriculture is dependent on weather conditions and uncertain and because they know other farmers who have had negative experiences applying for or taking KCC loans. Farmers aware of the KCC scheme and its benefits are more likely to adopt and renew it. Therefore, enhancing farmers' awareness and understanding of the KCC scheme would improve adoption and promote financial inclusion in the agricultural sector.

Through FGDs and surveys, this study identifies why KCC adoption differs by district.

Firstly, bank outreach determines the extent to which information on the KCC reaches farmers; because outreach differs by district, farmers' willingness to adopt the scheme varies.

Secondly, the agricultural landscape, and demographic composition of farmers, differs by district.

Farmers' decision-making is influenced by cropping pattern, farm size, and economic conditions. The availability and accessibility of formal credit facilities, including the KCC scheme, vary by district, and so differences in the reach and functionality of financial institutions affect access to credit. The presence of other formal and informal credit options in districts may influence farmers and divert them away from opting for the scheme. Cultural and social factors shape the adoption rate. Farmers' fear of becoming indebted and their level of trust in financial institutions can influence their decision to adopt KCC.

Understanding these factors of differential adoption rates is essential for policymakers to tailor region-specific, context-sensitive interventions that address the challenges farmers face in each district and become more effective at promoting KCC adoption and financial inclusion.

Three social network challenges hinder KCC adoption.

Firstly, farmers rely heavily on word-of-mouth communication within their social networks, where information on the KCC scheme or its benefits is lacking.

Secondly, farmers' negative experiences of formal financial institutions, particularly banks, adversely affect their trust and perception, and word spreads rapidly in rural communities and among farmers' social networks.

Thirdly, social influence and norms play a crucial role, as farmers considering the adoption of new technology seek advice and guidance from their social networks.

Influential members of the farmer community, like Mukhiyas, who have had negative experiences with banks, are likely to be more effective at discouraging other farmers from adopting the KCC scheme.

If policymakers can address these challenges by disseminating information, improving farmers' trust in financial institutions, and leveraging positive social influence and targeting based on network theory, they can improve KCC adoption and bolster financial inclusion in rural communities.

Our study reveals five acceptability and activation challenges associated with RuPay cards.

Firstly, few farmers are aware of the RuPay card, and fewer farmers are familiar with utilizing it.

Secondly, rural infrastructure is inadequate: access to ATMs and POS machines is limited. And connectivity is poor: transaction notifications are not delivered to mobile phones.

Thirdly, due to low socio-economic status and literacy, farmers tend to default to cash transactions.

Fourthly, RuPay cards require documentation, and activation is complex; since many farmers earn a daily wage, not a regular income that comes to their bank account, they tend to forgo RuPay cards.

Lastly, bank amalgamations and the non-availability of chips have led to shortages of RuPay cards and prevented issuance.

The government conducted its saturation drive in two phases. Our study assessed the drive's impact and found that adoption improved. In all three study states, phase 2 demonstrated greater success than phase 1. The positive impact of the saturation drive extended beyond the adoption of composite KCC as it also stimulated the uptake of separate KCC extension to animal husbandry and fisheries farmers. But uptake of KCC AHDF extensions increased during the saturation drive and declined when it ended. Farmers' experiences with banks explain this trend.

Firstly, banks require documentation for a separate AHDF KCC extension, potentially discouraging some farmers.

Secondly, farmers prefer the composite KCC because, they argue, the working capital requirements for AHDF activities could not be adequately met with a separate KCC extension. These factors likely influenced the declining uptake of KCC AHDF after the saturation drive ended.

Business correspondents raise awareness about government schemes, including KCC, but inadequate incentives limit their role in driving KCC take-up.

5.2 Implication for Policy and Future Actions

The nature of factors influencing KCC adoption is multifaceted. To improve saturation and availability, policymakers should take a holistic approach in implementing policies and actions: they should target awareness campaigns, streamline documentation processes, enhance financial literacy among farmers, foster trust in formal financial institutions, improve RuPay card infrastructure, and incentivize BCs properly.

We suggest two policy measures that can solve many ground-level challenges policy implementers face.

First, introducing a Credit Guarantee Fund for KCC loans – a CGFKCC scheme – would provide lenders a guarantee against default, reducing risk and enhancing confidence, and, in turn, increasing the availability of loans, boosting KCC adoption, promoting financial inclusion, stimulating agricultural growth, and supporting rural development. For the scheme to be effective and sustainable, however, implementation must be successful and monitoring continual.

Second, in addressing the challenges farmers face in taking KCC loans, end-to-end digitalization is crucial: automating the application process can expedite disbursement, deepen the KCC base, and encourage farmers to opt for formal credit channels. Integration with KYC databases and digitalized land records can improve transparency and reduce fraud. For digitalization to be safe and secure, however, farmers must be made financially and digitally literate.

Incorporating these policy measures can help Policymakers Bridge the credit gap, promote financial inclusion, and accelerate agricultural growth. Effective implementation, complemented by financial literacy programmes and capacity-building initiatives, will maximize the benefits of these policies and revolutionize the rural credit delivery system.

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APPENDIX

Appendix Table A1: Selected districts based on Poverty and Backwardness Index in each zone						
State	**Zone**	**Sub-zone**	**Name of the district**	**Multidimensional Poverty Index**	**Percentage of small & Marginal farmers**	**Poverty & backwardness Score**
UP	**North-West**	Tarai (Zone 1)	Bahraich	0.3910	0.9644	0.7351
UP	**North-West**	Tarai (Zone 1)	Shrawasti	0.4120	0.9469	0.7329
UP	**North-West**	Central Western Plains (zone 3)	Budaun	0.2980	0.9671	0.6995
UP	**North-West**	Western Plains (Zone 2)	Bulandshahr	0.1530	0.9546	0.6340
UP	**South-West & Central**	Central Plains (zone 5)	Kaushambi	0.2910	0.9693	0.6980
UP	**South-West & Central**	Central Plains (zone 5)	Sitapur	0.2820	0.9613	0.6896
UP	**South-West & Central**	Central Plains (zone 5)	Hardoi	0.2460	0.9649	0.6774
UP	**South-West & Central**	South-Western Semi-arid Plain (Zone 4)	Kansiram Nagar	0.2370	0.9580	0.6696
UP	**North-East**	North-Eastern Plain (Zone 7)	Balrampur	0.3730	0.9458	0.7167
UP	**North-East**	North-Eastern Plain (Zone 7)	Gonda	0.3010	0.9787	0.7076
UP	**North-East**	North-Eastern Plain (Zone 7)	Siddharth Nagar	0.2860	0.9727	0.6980
UP	**North East**	Eastern Plain (Zone 8)	Bara Banki	0.2210	0.9759	0.6739
UP	**South & South-East**	Bundelkhand (Zone 6)	Chitrakoot	0.2550	0.9148	0.6509
UP	**South & South-East**	Vindhyan Area (Zone 9)	Mirzapur	0.2010	0.9209	0.6329
UP	**South & South-East**	Bundelkhand (Zone 6)	Sonbhadra	0.2430	0.8830	0.6270
UP	**South & South-East**	Bundelkhand (Zone 6)	Banda	0.1860	0.8584	0.5894
Bihar	**Zone 1**	North-West Alluvial Plain Zone	Sitamarhi	0.3340	0.9885	0.7267
Bihar	**zone 1**	North-West Alluvial Plain Zone	Purba Champaran	0.3390	0.9807	0.7240
Bihar	**zone 1**	North-West Alluvial Plain Zone	Sheohar	0.3110	0.9773	0.7108
Bihar	**zone 1**	North-West Alluvial Plain Zone	Samastipur	0.2940	0.9820	0.7068
Bihar	**Zone 2**	South Bihar Alluvial Zone	Jamui	0.3250	0.9782	0.7169

Bihar	**zone 2**	South Bihar Alluvial Zone	Banka	0.2910	0.9696	0.6982
Bihar	**zone 2**	South Bihar Alluvial Zone	Nawada	0.2610	0.9814	0.6933
Bihar	**zone 2**	South Bihar Alluvial Zone	Sheikhpura	0.2600	0.9812	0.6927
West Bengal	**Zone 1**	Gangetic Alluvial Zone & Vindhyan Alluvial Zone	Uttar Dinajpur	0.2130	0.9513	0.6560
West Bengal	**Zone 2**	Gangetic Alluvial Zone & Vindhyan Alluvial Zone	Malda	0.1630	0.9631	0.6430
West Bengal	**Zone 2**	Gangetic Alluvial Zone & Vindhyan Alluvial Zone	Murshidabad	0.1250	0.9681	0.6309
West Bengal	Zone 2	Costal Saline Zone	South 24 Parganas	0.1290	0.9874	0.6440

HOUSEHOLD SURVEY QUESTIONNAIRE

Household Survey Questionnaire to know the causes of low uptake of Kisan Credit Card in the states of UP, Bihar, and WB.

INTRODUCTION OF THE SURVEY

नमस्ते! मेरा नाम है:---------- हम आपके राज्य के गाँवों में एक सर्वे करने जा रहे हैं जो की किसान क्रेडिट कार्ड योजना के कम उपयोग और कम उपयोग के कारणों को जानने के लिए हैं । यह अध्ययन नाबार्ड की मदद से आर्थिक विकास संस्थान, दिल्ली द्वारा किया जा रहा है। प्रो. सौदामिनी दास इस परियोजना की प्रमुख अन्वेषक हैं। अध्ययन तीन राज्यों, यूपी, बिहार और पश्चिम बंगाल में किया जा रहा है।

आपके घर को स्वैछिक रूप से चुना गया है और इस सर्वेक्षण में आपकी भागीदारी स्वैच्छिक है। मैं आपसे आपकी घरेलू सुविधाओं, कृषि विशेषताओं, घरेलू ऋण आवश्यकताओं के बारे में कुछ प्रश्न और किसान क्रेडिट कार्ड के बारे में कुछ विस्तृत प्रश्न पूछूंगा। सर्वेक्षण में लगभग 1 घंटा लगेगा। एक सफल सर्वेक्षण के लिए, यदि आप भाग लेते हैं और सर्वेक्षण के अंत तक अपने उत्तर देते हैं तो हम इसकी अत्यधिक सराहना करेंगे। कृपया ध्यान दें कि आपकी सभी जानकारी पूरी तरह से गोपनीय होगी, अनुसंधान दल के अलावा किसी अन्य के साथ साझा नहीं की जाएगी और हमारे विश्लेषण में सभी उत्तरदाताओं के औसत आंकड़ों का ही उपयोग किया जाएगा। ऐसी सभी सूचनाओं का उपयोग केवल शोध उद्देश्यों के लिए किया जाएगा। और शोध के दौरान या उसके बाद किसी भी समय, आपकी व्यक्तिगत पहचान किसी के सामने प्रकट नहीं की जाएगी। यदि आप उत्तर नहीं देना चाहते हैं तो आप किसी भी प्रश्न को छोड़ सकते हैं या सर्वेक्षण के दौरान कभी भी मुझसे अपना संदेह पूछ सकते हैं।

आपसे एकत्र किए गए डेटा को आर्थिक विकास संस्थान में अनुसंधान दल के साथ संग्रहीत किया जाएगा, उनके द्वारा विश्लेषण किया जाएगा और अंतिम रिपोर्ट नाबार्ड के साथ साझा की जाएगी। परिणामों का उपयोग नाबार्ड द्वारा केसीसी नीति संशोधन तैयार करने के लिए किया जाएगा।

CONSENT FORM

क्या आप इस सर्वेक्षण में भाग लेने के लिए सहमत हैं? (हां नहीं)

यदि नहीं, तो उत्तरदाता को धन्यवाद दें, सर्वेक्षण समाप्त करें, और अगले घर में चले जाएँ

यदि हां, तो कानूनी रूप से स्वीकार्य प्रतिनिधि से निम्नलिखित कहने के लिए कहें: "मैं _____ इस साक्षात्कार में भाग लेने के लिए सहमत हूं।"

इस प्रपत्र पर आपके हस्ताक्षर का अर्थ है:

- आपको और प्रतिवादी को अध्ययन के उद्देश्य, प्रक्रियाओं, संभावित लाभों और जोखिमों के बारे में सूचित कर दिया गया है।
- आपको हस्ताक्षर करने से पहले सवाल पूछने और अपनी शंकाओं को स्पष्ट करने का मौका दिया गया है।
- आप स्वेच्छा से इस अध्ययन में भाग लेने के लिए सहमत हुए हैं।

Signature

Date_____

इस सर्वेक्षण में भाग लेने के लिए समय निकालने के लिए धन्यवाद।

क्या इस परिवार के पास किसान क्रेडिट कार्ड है? (हां-1, नहीं-2) _____

(यह प्रश्न गणनाकारों के लिए यह सुनिश्चित करने के लिए है कि गांव में कम से कम 50% उत्तरदाताओं के पास केसीसी कार्ड हैं)

घर की पहचान					
	राज्य	ज़िला	तहसील	गांव	परिवार

[1] नमूना घर की पहचान			
A	साक्षात्कार की तिथि :	G	घर के मुखिया का नाम
B	उत्तरदाता का नाम:	H	घरेलू मुखिया की उम्र:
C	उत्तरदाता की उम्र:	I	लिंग: (पुरुष-1, महिला-2):
D	उत्तरदाता की योग्यता (आइटम 5 के कोड देखें):	J	जांचकर्ता का नाम:
E	उत्तरदाता का मोबाइल नंबर:	k	जांचकर्ता का मोबाइल नंबर
F	लिंग (पुरुष-1, महिला-2):		

[2] घरेलू विशेषताएं		**कोड संख्या**
1	*घरेलू आकार (संख्या में)- आपके घर में कितने सदस्य हैं?*	
2	*आपके घर में* महिलाएं कितनी हैं? (बच्चे + वयस्क)	
3	*आपके घर में* कमाने/काम करने वाले सदस्यों की संख्या कितनी हैं?	
4	कामकाजी महिलाओं की संख्या कितनी हैं?	
5	परिवार के मुखिया की शिक्षा कितनी हैं? (निरक्षर-1, प्राथमिक-2, माध्यमिक-3, उच्चतर माध्यमिक-4 और उच्चतर माध्यमिक-5)	

6	परिवार में उच्चतम शिक्षा कितनी हैं? [ऊपर से कोड का प्रयोग करें]		
7	वर्तमान में स्कूल जाने वाले बच्चों की संख्या कितनी हैं?		लड़के:
			लड़कियाँ:
8	आपका धर्म क्या हैं (हिंदू धर्म -1, इस्लाम -2, ईसाई धर्म -3, सिख धर्म -4 अन्य -5)		
9	आप किस सामाजिक समूह में आते हैं? (सामान्य-1, अनुसूचित जाति-2, अनुसूचित जनजाति-3, ओबीसी-4)		
10	आपकी आवास इकाई क्या हैं? (आपका अपना खुद का हैं -1, किराए पर -2, रिश्तेदार -3, अन्य -5)		
11	आपके आवास इकाई संरचना का प्रकार क्या हैं? (पक्का-1, अर्ध-पक्का-2, टिन शेड-3, कच्चा-4, अन्य-5)		
12	आपके घर का पीने के पानी का प्रमुख स्रोत क्या हैं?(नल-1, नलकूप/बोरहोल/सबमर्सिबल/हैंडपंप-2, बोतलबंद पानी-3, अन्य-4)		
13	क्या आपके घर में वाटर प्यूरीफायर/आरओ है? (हां-1, नहीं-2)		
14	क्या आपके घर में शौचालय की सुविधा है? (हां-1, नहीं-2)		
15	आपके परिवार का पारंपरिक (पैतृक) व्यवसाय क्या हैं (वर्णन करें):		
16	आपके घर में कौन से कार्ड हैं? (हां -1, नं -2)	***आधार कार्ड***	
		मनरेगा जॉब कार्ड	
		आयुष्मान भारत हेल्थ कार्ड	
		अंत्योदय राशन कार्ड	
		बीपीएल राशन कार्ड	
		मृदा स्वास्थ्य कार्ड	
		अन्य (निर्दिष्ट करें)	

17	***घरेलू आय और स्रोत***			
17.1	**आपके परिवार की पिछले एक साल के दौरान कुल घरेलू आय कितनी रही?**	***अनुमानित वार्षिक आय (रु.) सीमा***		**उपयुक्त को चिन्हांकित करें**
		2,00,000 रुपये से अधिक और उसके बराबर		
		1,50,000 रुपये से 2,00,000 रुपये		
		1,00,000 रुपये से 1,50,000 रुपये		
		रु. 80,000 से 1,00,000 रु		
		60,000 से 80,000 रुपये		
		40,000 रुपये से 60,000 रुपये		
		40,000 रुपये से कम और उसके बराबर		
17.2	**आय उत्पन्न करने वाली गतिविधियाँ**	**(हां-1, नहीं-2)**	**पिछले साल की कमाई?**	**दो साल पहले कितनी कमाई हुई थी?**
17.2.1	*खेती से*			
17.2.2	*बागवानी / बाग / वृक्षारोपण से*			
17.2.3	*पशुधन पालन से*			
17.2.4	*मुर्गी पालन से*			
17.2.5	*वानिकी उत्पादन से*			
17.2.6	*हस्तशिल्प/ मिट्टी के बर्तन इत्यादि बनाने और बेचने से*			
17.2.7	*मछली पालन से*			

17.2.8	*खेतिहर मजदूरी से*			
17.2.9	*घर, जमीन, मशीन इत्यादि के प्राप्त किराये से*			
17.2.10	*गैर-कृषि उद्यम/स्वरोजगार (जैसे दुकान, सिलाई, इस्त्री इत्यादि से)*			
17.2.11	*मनरेगा से प्राप्त आय से*			
17.2.12	*मजदूरी / वेतनभोगी रोजगार से*			
17.2.13	*पेंशन से*			
17.2.14	*धन प्रेषण से*			
17.2.15	*कोई अन्य (निर्दिष्ट करें)*			

[3] घरेलू संपत्ति					
संपत्ति		**है या नहीं? (हां-1, नहीं-2)**	**संख्या / मात्रा**	**यदि 'नहीं' क्या आप इसे किराए पर लेते हैं? (हां-1, नहीं-2)**	**रख रखाव में सालाना खर्च कितना होता हैं (रु.)**
[A] ***कृषि संपत्ति***					
A.1	हल/कृषक (लकड़ी/लोहा)				
A.2	कुल्हाड़ी/हसिया/कुड़ी-राफा				
A.3	छिड़कनेवाला यंत्र				
A.4	बैलगाड़ी				
A.5	ट्रैक्टर				

A.6	मोटर गाड़ी				
A.7	थ्रेशर				
A.8	ट्राली				
A.9	चारा काटने की मशीन				
A.10	जनरेटर				
A.11	मछली पकड़ने के उपकरण				
A.12	समरसिबल पंप				
A.13	अन्य मशीनरी (निर्दिष्ट करें)				
[B] मत्स्य पालन और पशुधन					
B.1	अंतर्देशीय मत्स्य पालन और जलीय कृषि (हेक्टेयर)				
B.2	समुद्री मत्स्य पालन और मेरीकल्चर				
B.3	गाय				
B.4	भैंस				
B.5	सांड				
B.6	बकरी				
B.7	सुअर				
B.8	गिंयाँ				
B.9	अन्य (निर्दिष्ट करे)				

[4] घरेलू कृषि विशेषताएँ				
18	*क्या आपके परिवार के पास कोई जमीन है? (हां-1, नहीं-2)*			
19	***[यदि आइटम 18 में 'हाँ' हैं तो]) साक्षात्कार की तिथि के अनुसार कितनी भूमि (हेक्टेयर)***	***खुद का***		
20		लीज पर लिया गया जमीन		
21		पट्टे पर देना/साझा फसल		
22		कोई अन्य प्रकार की		
23		कुल जमीन (19+20+21+22)		
24	*क्या आपके परिवार के पास ब्लॉक/तहसील के बाहर भी कोई जमीन है?* (*हां*-1, *नहीं*-2)			
25	**[यदि मद 24 में हाँ हैं तो],** कितने हेक्टेयरजमीन हैं?			
26	पिछले एक साल के दौरान कृषि गतिविधियों के लिए कुल कितनी भूमि का उपयोग किया गया (हेक्टेयर में)?			
27	**पिछले साल की खेती**	**फसल का नाम**	**भूमि क्षेत्र उपयोग किया जाता है**	**उत्पादित मात्रा**
27.1	पिछले साल खरीफ के सीजन में कौन सी फसलें उगाई थी	1.		
		2.		
		3.		
27.2	पिछले साल आपने रबी सीजन में कौन सी फसलें उगाई थी	1.		
		2.		
		3.		
27.3	पिछले साल आपने ग्रीष्म ऋतु में कौन सी फसलें उगाई थी	1.		
		2.		
		3.		
28	क्या आपका परिवार कृषि योग्य भूमि की सिंचाई करता है? (हाँ-1, नहीं-2)			
29	***[यदि मद 28 में हाँ हैं तो]*** *सिंचित भूमि का हेक्टेयर?*			

30	सिंचाई के साधनों का उल्लेख कीजिए। - **यदि एक से अधिक हैं, तो कोड हैं तो उन सभी को टिक मार्क करना** : नहर-1, खुद का पंप/बोर/बोरिंग/ट्यूबवेल-2, तालाब-3, नदी-4, पानी की टंकी-5, सरकारी। नलकूप-6, कूप-7, छिड़काव सिंचाई-8, कोई अन्य (विनिर्दिष्ट करें)-9	
31	आपका परिवार खेती के लिए किस प्रकार के बीजों का उपयोग करता है? (स्थानीय/पारंपरिक बीज-1, संकर बीज-2, विदेशी बीज (जीएम)-3, अन्य (विनिर्दिष्ट करें)-4	
32	आपके परिवार में खेती के लिए अधिकतर किस प्रकार के उर्वरक का उपयोग किया जाता है? (जैविक खाद/गोबर-1, रासायनिक खाद/यूरिया/डीएपी/पोटाश/एनपीके-2, दोनों-3, कह नहीं सकते-4)	
33	आपका परिवार कितनी बार खेती में कीटनाशकों का उपयोग करता है? (हमेशा-1, कभी-कभी-2, आवश्यकता पड़ने पर-3, कभी नहीं-4)	
34	क्या आपका परिवार सभी फसलों के लिए आपके खेतों में कीटनाशकों का उपयोग करता है? (हां-1, नहीं-2)	
35	*पिछले एक वर्ष में, क्या आपके परिवार को प्राकृतिक आपदाओं के कारण किसी फसल हानि का सामना करना पड़ा है? (हां-1, नहीं-2)*	
36	***[यदि आइटम 35 में 'हाँ' है तो],** मुख्य आपदाएँ कौन-सी थीं*	**आपदाएं (सभी प्रासंगिक पर निशान लगाएं)**
		बाढ़
		सूखा
		चक्रवात
		बेमौसम बारिश

		ओलावृष्टि		
		गरम लहरें		
		अन्य(निर्दिष्ट करे)		
37	*इन आपदाओं के कारण पिछले 5 वर्षों में आपने कितनी बार फसल का नुकसान किया है?*	***आपदाओं***	**संख्या**	
		बाढ़		
		सूखे		
		चक्रवात		
		बेमौसम बारिश		
		ओलावृष्टि		
		गरम लहरें		
		अन्य निर्दिष्ट करे)		
38	*क्या आपका परिवार उगाई गई फसलों का बीमा करता है? (हाँ-1, नहीं-2)* ***यदि हाँ तो कब से?***	**हां-1, नहीं-2**	**कब से (वर्षों में)**	**प्रीमियम (वार्षिक)**
39	क्या आपके घर में कोई भी सदस्य वर्तमान में किसी किसान संगठन का सदस्य है? (हां-1, नहीं-2) **[यदि 'नहीं' है तो मद 41 पर जाएं]**			
40	***[यदि आइटम 39 में 'हाँ' हैं तो] वह कौन से सदस्य हैं और किस किसान संगठन का सदस्य है/हैं (कोड का उपयोग करें)?*** ***कोड: कृषक उत्पादक संगठन-1, सहकारी समिति-2, विशेष सहायता समूह/संयुक्त दायित्व समूह-3, कृषि***	***परिवार के सदस्य***	**हां-1/नहीं-2**	**किसान संगठनों के नाम**
		स्वेम		
		दादा		
		पिता		

	किसान सहकारी समिति*-4,* ***अन्य*** *(****निर्दिष्ट करें****)- 5*	*माता*		
		चाचा		
		बेटी		
		भाई		
		बेटा		
		अन्य		

41	*क्या आपके परिवार ने व्यक्तिगत दुर्घटना बीमा योजना या जीवन बीमा योजना ली है? (हां-1, नहीं-2), यदि 'हां' तो कितने सदस्यों के लिए?*	**(हां-1, नहीं-2)**	**कितने परिवार के सदस्यों के लिए? (कितने नंबर)**
42	***[यदि मद 41 में 'हाँ' है तो]*** *ली गई सभी दुर्घटना और जीवन बीमा योजनाओं के नाम का उल्लेख करें?*		
43	*क्या आपके परिवार को पीएम-किसान योजना के तहत कोई पैसा मिला है? (हां-1, नहीं-2)*		
44	*क्या आपका परिवार सरकारी योजनाओं जैसे 'इंदिरा आवास योजना' या 'प्रधानमंत्री आवास योजना' या किसी अन्य योजना के तहत कोई लाभ प्राप्त करता है? (हां-1, नहीं-2)* ***(कृपया योजना के नाम का उल्लेख करें)***	***हां-1, नहीं-2***	**योजना का नाम**

[5] किसान क्रेडिट कार्ड			
45	*क्या आप किसान क्रेडिट कार्ड योजना के बारे में जानते हैं?* ***(हां-1, नहीं-2) (यदि 'नहीं' है तो सीधे घरेलू क्रेडिट ब्लॉक के आइटम 51 पर जाएं)***		
46	**[यदि आइटम 45 में 'हां' है]** तो आपके परिवार को किसान क्रेडिट कार्ड के बारे में कैसे पता चला? (सही निशान)	**जानकारी का श्रोत**	**जवाबों का क्रम**
		रिश्तेदार / दोस्त	
		बैंक	

		रेडियो/टेलीविजन पर सुना	
		होर्डिंग या अखबार में विज्ञापन देखा	
		किसान संगठन (सहकारिता, एफपीओ, एसएचजी, आदि)	
		कोई अन्य (निर्दिष्ट करें)	
47.1	क्या आपके घर में किसान क्रेडिट कार्ड है? (हां-1, नहीं-2) **(यदि 'हां' है तो आइटम 47.2.1 पर जाएं)**		
47.2	**[आइटम 47.1 में 'नहीं' होने पर ही पूछें अन्यथा छोड़ दें]** क्या कारण हैं कि किसान क्रेडिट कार्ड के बारे में जानने के बावजूद आपके पास किसान क्रेडिट कार्ड नहीं है? **(अल्पविराम द्वारा अलग किए गए सभी प्रासंगिक कारणों के कोड का उल्लेख करें)** कोड: ऋण की आवश्यकता नहीं -1, संपार्श्विक आवश्यकता को पूरा नहीं कर सका -2, बैंक की ओर से एक लंबी और थकाऊ प्रक्रिया -3, बैंक शाखा से दूरी -4, अन्य स्रोत बेहतर विकल्प -5, अन्य किसानों का अनुभव जिन्होंने लिया है केसीसी के तहत ऋण खराब है -6, अन्य (निर्दिष्ट करें) -7		
47.2.1	क्या आपका परिवार किसान क्रेडिट कार्ड के तहत शीघ्र पुनर्भुगतान (ब्याज सब्सिडी) के लिए ब्याज सबवेंशन योजना/प्रोत्साहन के बारे में जानता है? (हां-1, नहीं-2) **[यदि आइटम 47.1 में 'नहीं' है तो घरेलू क्रेडिट ब्लॉक के आइटम 51 पर जाएं]**		
47.3	आपके परिवार के पास किसान क्रेडिट कार्ड कब से है?		**साल**
47.4	क्या आपके परिवार ने किसान क्रेडिट कार्ड के तहत ऋण लिया है? (हां-1, नहीं-2)		
48	***[यदि मद 47.4 में 'नहीं' और मद 47.1 में 'हां' है]*** *तो आपके परिवार ने* किसान क्रेडिट कार्ड *के तहत ऋण नहीं लेने के प्रमुख कारण क्या हैं? (नीचे कोड)* ***(सभी प्रासंगिक कारणों के कोड का उल्लेख करें)***		

	कूट: ऋण की आवश्यकता नहीं-1, ब्याज की उच्च दर-2, इसे चुकाने में सक्षम नहीं-3, आपदा के कारण फसलों की अनिश्चितता-4, बैंक शाखा से दूरी-5, अन्य स्रोत बेहतर विकल्प-6, केसीसी के तहत ऋण लेने वाले अन्य किसानों का अनुभव खराब है -7, अन्य (निर्दिष्ट करें) -8		
48.1	***[यदि आइटम 47.4 में 'नहीं' और आइटम 47.1 में 'हां' है]*** *क्या आपका परिवार* किसान क्रेडिट कार्ड *के तहत ब्याज सबवेंशन स्कीम/त्वरित भुगतान (ब्याज सब्सिडी) के लिए प्रोत्साहन के बारे में जानता है? (हां-1, नहीं-2)*		
49.1	आपके परिवार को किस बैंक से किसान क्रेडिट कार्ड मिलता है? (**टिक मार्क करें, बैंक का नाम भी लिखें)**	**बैंक का प्रकार**	**बैंक का नाम**
		व्यावसायिक बैंक	
		सहकारी बैंक	
		क्षेत्रीय ग्रामीण बैंक	
49.2	***क्या आपके परिवार को आपके बैंक खाते में किसी लेनदेन के लिए आपके पंजीकृत मोबाइल नंबर पर सूचना/संदेश मिलता है जिसमें बैंक द्वारा* किसान क्रेडिट कार्ड *राशि जमा की जाती है? (हां-1, नहीं-2)***		
49.3	*क्या आपका परिवार जानता है कि* किसान क्रेडिट कार्ड *के तहत आपको ऋण प्रदान करने के लिए बैंक द्वारा प्रोसेसिंग शुल्क के रूप में कितनी राशि ली जाती है? (हां-1, नहीं-2)*		
49.3.1	***[यदि 49.3 में 'हाँ']*** *कितना?*		
49.4	*क्या आपके घर या बैंक, जिससे आप* किसान क्रेडिट कार्ड *लेते हैं, ने आपकी भूमि और उगाई गई फसल का निरीक्षण करने के लिए कोई निरीक्षण शुल्क का भुगतान किया है? (हां-1, नहीं-2)*		
49.4.1	*? **[यदि 49.4 में 'हाँ']** कितना?*		
49.5	*क्या आपका परिवार बैंक से* किसान क्रेडिट कार्ड *ऋण प्राप्त करने के लिए आवश्यक कागजी कार्रवाई के लिए पटवारी या किसी अन्य सरकारी अधिकारी को कोई पैसा देता है? (हां-1, नहीं-2)*		
49.5.1	***[यदि 49.5 में 'हाँ']*** *कितना?*		
49.6.	*क्या आपका परिवार* किसान क्रेडिट कार्ड *प्राप्त करने के लिए उपरोक्त* ***(आइटम***		

	49.3, 49.4, और 49.5) *के अलावा किसी अन्य राशि/धन का भुगतान/खर्च करता है? (हां-1, नहीं-2)*		
49.6.1	***[यदि 'हाँ' 49.7.1 में]*** *कितना?*		
49.6.2	**[यदि 'हाँ' 49.7.1 में]** भी, किस बात पर निर्दिष्ट करें?		
49.7	*चालू वर्ष के लिए आपके परिवार की किसान क्रेडिट कार्ड सीमा/अधिकतम अनुमत सीमा क्या है? (रुपये में)*		
49.8	*किसान क्रेडिट कार्ड के तहत इस ऋण के लिए आप किस ब्याज दर का भुगतान कर रहे हैं? (**प्रतिशत में, प्रति वर्ष**)*		
49.9	*क्या आपके परिवार को ब्याज अनुदान योजना का लाभ मिलता है? (हां-1, नहीं-2)*		
49.10	*क्या आपने या आपके परिवार ने ऋण लेने के लिए बैंक द्वारा निर्धारित किसान क्रेडिट कार्ड सीमा पर्याप्त है? (हां-1, नहीं-2)*		
49.11	*जिस बैंक शाखा से आपने ऋण लिया था, उस संबंधित बैंक शाखा में किसान क्रेडिट कार्ड के तहत ऋण प्राप्त करने की प्रक्रिया से आप या आपका परिवार कितने संतुष्ट थे? (अत्यधिक असंतुष्ट-1, असंतुष्ट-2, न संतुष्ट न असंतुष्ट-3, संतुष्ट-4, अति-संतुष्ट-5)*		
49.12	*चालू वर्ष में आपके परिवार ने किसान क्रेडिट कार्ड के तहत निकासी सुविधा का कितनी बार उपयोग किया? (संख्या में)*		
49.13	***किसान क्रेडिट कार्ड से निकासी की कुल राशि इस वर्ष की अधिकतम स्वीकार्य सीमा? (रुपये में)***		
49.14	*किसान क्रेडिट कार्ड जारी होने के बाद से कुल निकासी राशि? (रुपये में)*		
49.15	निकासी का तरीका?	**मोड**	**हां-1, नहीं-2**
		सीधे भुगतान के लिए रुपे कार्ड (जैसे पीओएस या अन्य ई-कॉमर्स लेनदेन)	
		एटीएम	

		बैंक शाखा	
49.16	*वर्तमान में केसीसी के तहत बैंक को कुल कितनी राशि देय है? (रुपये में)*		
49.17	*क्या आपके परिवार ने किसान क्रेडिट कार्ड ऋण प्राप्त करने के लिए संपार्श्विक के रूप में किसी प्राथमिक सुरक्षा की पेशकश की है? (हां-1, नहीं-2)*		
49.18	***[यदि मद 49.17 में 'हां' है, अन्यथा मद 49.19 पर जाएं]*** *किसान क्रेडिट कार्ड ऋण प्राप्त करने के लिए संपार्श्विक के रूप में दी जाने वाली प्राथमिक सुरक्षा का वर्तमान बाजार मूल्य क्या है? (रुपये में)*		
49.19	*आपके परिवार ने किसान क्रेडिट कार्ड के तहत जो ऋण लिया था, उसका उपयोग मुख्यतः किन उद्देश्यों के लिए किया गया था?* ***(यदि उत्तरदाता एक से अधिक उत्तर देता है, तो उन सभी प्रतिक्रियाओं के लिए कोड का उल्लेख करें) (कोड नीचे दिए गए हैं)*** *कोड: फसलों की खेती के लिए अल्पकालिक ऋण आवश्यकताओं को पूरा करने के लिए -1, फसल कटाई के बाद के खर्च -2, उत्पादन विपणन ऋण -3, किसान परिवार की खपत आवश्यकताओं -4, कृषि संपत्ति के रखरखाव के लिए कार्यशील पूंजी और कृषि से जुड़ी गतिविधियों जैसे डेयरी पशु, अंतर्देशीय मत्स्य आदि -5, कृषि और संबद्ध गतिविधियों जैसे पंप सेट, स्प्रेयर, आदि के लिए निवेश ऋण की आवश्यकता -7, अन्य (निर्दिष्ट करें) -8*		
49.20	*लोगों का कहना है कि बैंकों से कर्ज लेने में उन्हें तरह-तरह की दिक्कतों का सामना करना पड़ता है। बैंक से किसान क्रेडिट कार्ड ऋण प्राप्त करने में आपको या आपके परिवार के सदस्यों को कितनी कठिनाई का सामना करना पड़ा? (बहुत-1, थोड़ा-2, कोई बात नहीं-3, कह नहीं सकते-4)*		
49.21	***(यदि मद संख्या 49.20 में 'बहुत अधिक' या 'थोड़ा' है)*** *तो आपको किस प्रकार की कठिनाइयों का सामना करना पड़ा?*	***कठिनाइयाँ***	**हां-1, नहीं-2**
		बैंक ने जानबूझकर कर्ज देने में देरी की	
		बैंक ने कर्ज देने में पारदर्शिता नहीं बरती	
		बैंक की ब्याज दर बहुत अधिक थी	
		लंबी कागजी कार्रवाई	
		बैंक अधिकारियों ने पैसे या अन्य लाभ की मांग की	

		बैंक अधिकारी कम भुगतान के डर से ऋण अग्रेषित करने में हिचकिचा रहे हैं	
		अन्य निर्दिष्ट)	

[6] घरेलू ऋण			
51	*Have your household taken any loan for farming in the last five years? (Yes-1, No-2)* ***(If 'No' then jump to item 53.1) क्या आपके परिवार ने पिछले पांच वर्षों में खेती के लिए कोई ऋण लिया है? (हां-1, नहीं-2) (यदि 'नहीं' है तो आइटम 53.1 पर जाएं)***		
52	***[यदि मद 51 में हाँ]*** *तो क्या यह किसान क्रेडिट कार्ड योजना के तहत था या कोई अन्य? (केसीसी-1, कोई अन्य-2, दोनों-3) (यदि 'केसीसी' है तो आइटम 53.1 पर जाएं और यदि 'कोई अन्य' या 'दोनों' हैं तो अगले आइटम पर जाएं)*		
52.1	. **[यदि मद 52 में कोई अन्य या दोनों हैं]** तो गैर-केसीसी योजना का नाम दें।	**योजना का नाम**	
52.2	*From where did you take this Non-KCC loan? आपने यह गैर-केसीसी ऋण कहां से लिया?*	**गैर-केसीसी ऋण स्रोत (सभी प्रासंगिक पर टिक मार्क करें)**	
		सार्वजनिक / सरकार। बैंक	
		निजी बैंक	
		सहकारी बैंक	
		Friend or relative दोस्त या रिश्तेदार	
		स्वयं सहायता समूह या संयुक्त देयता समूह	
		साहूकार	
		कृषि व्यापारी	
		कमीशन एजेंट / आढ़तिया	
		प्राथमिक कृषि सहकारी ऋण समितियाँ (PACCS)	
		अन्य (निर्दिष्टकरे)	
52.3	*इस खेती/कृषि ऋण के लिए उपरोक्त स्रोत को चुनने का क्या कारण था? (नीचे कोड)*	**कारण (सभी प्रासंगिक पर टिक मार्क करें)**	
		सुविधाजनक	
		कम ब्याज दर	
		ऋण के लिए कोई अन्य स्रोत/माध्यम नहीं	

		जानता	
		अन्य स्रोतों से ऋण राशि की अपर्याप्तता	
		कोई संपार्श्विक आवश्यकता नहीं	
		अन्य (निर्दिष्ट करे)	
52.4	*आपके परिवार ने यह गैर-केसीसी कृषि ऋण किस ब्याज दर पर लिया?* ***(प्रतिशत में, प्रति वर्ष) [यदि 52.2 में एक से अधिक हैं तो अल्पविराम के साथ सभी ब्याज दर का उल्लेख करें]***		
52.5	*क्या आपका परिवार इस गैर-केसीसी कृषि ऋण के लिए गिरबी के रूप में कोई प्राथमिक सुरक्षा प्रदान करता है? (हां-1, नहीं-2)*		
52.5.1	***[यदि मद 52.5 में 'हाँ' है]*** *कृपया निर्दिष्ट करें कि यह क्या है?*		
52.6	*(****यदि आइटम 52.5 में 'हां' है, अन्यथा आइटम 52.7 पर जाएं****) इस गैर-केसीसी कृषि ऋण का लाभ उठाने के लिए गिरबी के रूप में दी जाने वाली प्राथमिक सुरक्षा का वर्तमान बाजार मूल्य क्या है? (रुपये में)*		
52.7	*आपके परिवार ने खेती के लिए जो ऋण लिया था, उसका उपयोग मुख्यतः किन उद्देश्यों के लिए किया गया था?* ***(यदि उत्तरदाता एक से अधिक उत्तर देता है, तो सभी प्रासंगिक उत्तरों पर निशान लगाएं)***	**उद्देश्य (सभी प्रासंगिक पर टिक मार्क करें)**	
		जमीन खरीदना	
		उर्वरकों की खरीद	
		बीज, कीटनाशक	
		खेती के उपकरण जैसे ट्रैक्टर, थ्रैशर आदि खरीदें	
		बेटे के व्यापार के लिए	
		बच्चों की शिक्षा के लिए	
		बेटी की शादी के लिए	
		साहूकार को पैसा लौटाने के लिए	
		बैंक का पुराना कर्ज लौटाने के लिए	
		मवेशी या अन्य पशुधन खरीदने के लिए	
		घरेलू उपभोग व्यय	
		अन्य निर्दिष्ट करे)	

53.1	*क्या आपके परिवार ने पिछले पाँच वर्षों में कृषि के अलावा किसी अन्य कार्य के लिए ऋण लिया है? (हां-1, नहीं-2)* ***(यदि 'नहीं' है तो सर्वेक्षण को यहीं समाप्त करें)***	
53.2	***(यदि मद 53.1 में 'हाँ' है) कहाँ से?*** *(कोड: बैंक-1, एनजीओ-2, साहूकार-3, अन्य (निर्दिष्ट करें)-4)*	
53.3	आपके परिवार ने यह गैर-कृषि ऋण किस ब्याज दर पर लिया? **(प्रतिशत में, प्रति वर्ष)**	
53.4	***आपके परिवार ने निम्नलिखित में से किस प्रमुख गैर-कृषि कार्य के लिए यह ऋण लिया है?***	**गैर कृषि कार्य (सभी प्रासंगिक पर टिक मार्क करें)**
		चिकित्सा के लिए
		मकान खरीदने/बनाने के लिए
		व्यापार के लिए
		बच्चों की पढ़ाई के लिए
		शादी के लिए
		कार, मोटरसाइकिल जैसी घरेलू संपत्ति की खरीदारी के लिए
		अन्य (निर्दिष्ट करे)
53.5	*क्या आपका परिवार इस ऋण के लिए कुछ गिरवी के रूप में कोई प्राथमिक सुरक्षा प्रदान करता है? (हां-1, नहीं-2)*	
53.5.1	*यदि मद 53.5 में 'हाँ' है तो कृपया बताएं कि यह क्या है?*	
53.6	***(यदि आइटम 53.5 में 'हाँ' है, अन्यथा इस आइटम को न पूछें और सर्वेक्षण को यहीं समाप्त करें)*** *इस ऋण का लाभ उठाने के लिए संपार्श्विक के रूप में पेश की गई प्राथमिक सुरक्षा का वर्तमान बाजार मूल्य क्या है? (रुपये में)*	

राष्ट्रीय कृषि और ग्रामीण विकास बैंक, मुंबई

NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT
