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# Evaluating the Kisan Credit Card (KCC) Scheme: A Review of Institutional Constraints, Socio-Economic Impacts, and Policy Directions

**Ali hasan[1], Ruqaiya bano[2*], Bharat lal meena[3]**

[1]Department of agriculture, IIAST, Integral University, Lucknow, INDIA.
Email: aliworld007@gmail.com
[2]Department of agriculture, IIAST, Integral University, Lucknow, INDIA.
Email: ruqaiyab@iul.ac.in
[3]Department of agriculture, IIAST, Integral University, Lucknow, INDIA.
Email: bharatlalnbri143@gmail.com

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## ABSTRACT

The Kisan Credit Card (KCC) scheme is a vital initiative designed to provide farmers with timely and affordable access to credit, reducing their reliance on informal lending sources. Despite its importance, several institutional, financial, and socio-economic challenges such as complex application procedures, inadequate rural banking facilities, high default risks, and limited financial literacy continue to hinder its effectiveness. This review highlights major policy measures and best practices aimed at enhancing the adoption, accessibility, and efficiency of the KCC scheme. The integration of digital innovations, including online application systems, Aadhaar-based verification, mobile banking, and AI-supported credit monitoring, has simplified loan processing and strengthened financial security. Furthermore, expanding KCC eligibility to tenant farmers, sharecroppers, and women farmers has improved rural financial inclusion. Initiatives such as financial literacy programs, community-based awareness campaigns, and Financial Literacy Centers (FLCs) have also contributed significantly to educating farmers about digital banking and credit management. Although these developments mark substantial progress, continued investment in technology, policy reforms, and financial education is crucial to fully realize the potential of the KCC scheme and promote long-term financial stability and empowerment among India's farming community.

## 1. Introduction

The Kisan Credit Card (KCC) Scheme, introduced in 1998–1999 as a joint initiative of the Government of India, the Reserve Bank of India (RBI), and the National Bank for Agriculture and Rural Development (NABARD) (Mehta et al., 2016), was established to enhance farmers' access to institutional credit. The scheme aims to provide timely, flexible, and affordable credit to farmers, thereby reducing their dependence on informal credit sources that often charge exorbitant interest rates. It facilitates short-term credit for crop production, working capital for allied agricultural activities such as dairy, poultry, and fisheries, and, to a limited extent, for consumption purposes. Over time, the KCC scheme has undergone several modifications to align with evolving agricultural practices, financial policies, and technological advancements (Pandian, 2021). Notable improvements include the integration of digital transaction systems, smart cards, and RuPay debit cards, which have enhanced the efficiency, transparency, and accessibility of transactions. Moreover, the inclusion of insurance coverage for crops and farmers, along with concessional interest rates under specific conditions, has further strengthened the scheme's effectiveness. Despite these advancements, the effective utilization and accessibility of KCC remain constrained by various structural, administrative, and financial challenges (Thomas, 2022). One of the major impediments is bureaucratic inefficiency and the procedural complexity involved in availing credit through the KCC. Many small and marginal farmers face difficulties in completing the required documentation, and their limited financial literacy further restricts their ability to benefit fully from the scheme. In addition, inadequate banking infrastructure in rural areas exacerbates accessibility issues, resulting in delays in loan disbursement and limiting the scheme's reach among eligible beneficiaries. Tenant farmers, sharecroppers, and women farmers are particularly affected due to restrictive eligibility norms and lack of collateral, leading to increased financial exclusion among these vulnerable groups (Chinnala, 2024). Furthermore, although the scheme provides concessional interest rates, these benefits are often confined to a limited period, after which high-interest rates become a financial burden for farmers. Additional constraints, such as insufficient sanctioned credit limits, regional disparities in implementation, and difficulties in timely repayment, also contribute to the underutilization of KCC benefits. These issues hinder agricultural productivity and economic stability, underscoring the need for a systematic evaluation of the scheme's limitations and their broader implications for rural financial inclusion (Singh et al., 2022). This study seeks to critically analyze the major constraints impeding the effectiveness of the KCC scheme, focusing on administrative inefficiencies, financial barriers, and socio-economic factors that influence its adoption. By assessing these systemic obstacles, the research aims to provide evidence-based insights into existing policy gaps that must be addressed to enhance the scheme's overall impact. Strengthening the institutional credit framework is crucial for promoting inclusive financial growth, improving agricultural productivity, and ensuring long-term economic resilience among farming communities (Srivani, 2023). A significant area for potential improvement lies in leveraging digitalization and financial technology to simplify credit access. The integration of e-KCC platforms and mobile banking solutions can substantially reduce procedural delays, increase transparency, and provide seamless access to credit for farmers in remote areas (Gupta, 2023). Furthermore, policy interventions that simplify documentation requirements, expand rural banking infrastructure, and strengthen financial literacy initiatives can significantly enhance the reach and efficiency of the KCC scheme (Goyal, 2024). Addressing these challenges is essential to realizing the full potential of the program, fostering sustainable agricultural development, and ensuring economic security for small and marginal farmers. Therefore, a comprehensive evaluation of existing barriers and the implementation of targeted policy reforms are vital to making the KCC scheme more inclusive, efficient, and impactful in achieving its intended objectives.

| CRITERIA | INSTITUTIONAL CREDIT (KISAN CREDIT CARD) | INFORMAL CREDIT (MONEYLENDERS / TRADERS) |
|---|---|---|
| **CREDIT ACCESSIBILITY** | Available through banks and cooperative societies with eligibility criteria | Easily available at doorstep without paperwork |
| **LOAN PURPOSE SUPPORT** | Covers crop production, post-harvest needs, and allied activities | Often tied to a specific purpose benefiting lender |
| **BORROWER PROTECTION** | Regulated by government norms and banking laws | No legal protection; high vulnerability to exploitation |
| **TRANSPARENCY** | Clear documentation and interest structure | Hidden charges and unclear lending terms |
| **SOCIAL IMPACT** | Enhances financial inclusion and reduces dependency on informal sector | Creates indebtedness and socio-economic stress |
| **GOVERNMENT BENEFITS** | Interest subvention and insurance coverage included | No subsidy or risk coverage provided |
| **IMPACT ON CREDIT HISTORY** | Builds formal financial record for future benefits | No record; limits access to institutional schemes |

Table.1 Institutional credit under KCC improves financial security, while informal credit often results in long-term indebtedness for small and marginal farmers.

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**Challenges in Access and Utilization of the Kisan Credit Card (KCC) Scheme**

The effectiveness of the Kisan Credit Card (KCC) Scheme in facilitating agricultural credit accessibility largely depends on the strength and efficiency of the institutional frameworks governing its implementation. However, numerous administrative obstacles and procedural inefficiencies continue to hinder farmers from obtaining timely financial assistance (Mulay et al., 2023). Two major institutional constraints that undermine the effectiveness of the KCC scheme are the lengthy application and approval process, and inefficiencies in loan disbursement both of which significantly influence agricultural operations and financial decision-making among farmers. A key institutional challenge associated with KCC accessibility is the complex and time-consuming application process, which acts as a major deterrent, especially for small and marginal farmers. This complexity arises from stringent documentation requirements, extensive verification procedures, and bureaucratic hurdles embedded within the loan approval system. Applicants are required to provide land ownership records, identity proofs, revenue documents, and past credit histories many of which are often unavailable to tenant farmers, sharecroppers, and landless agricultural laborers (Venkatesh, 2015). The absence of an integrated and digitized application platform further worsens delays, creating a critical mismatch between fund availability and the timing of agricultural input procurement. Moreover, inconsistencies in credit evaluation criteria across various financial institutions lead to non-uniform approval rates. Although public sector banks play a leading role in KCC loan disbursement, regional disparities in banking penetration significantly restrict accessibility (Bordoloi and Das, 2015). Farmers in remote and economically weaker areas often experience prolonged procedural delays due to poor banking infrastructure and heavy dependence on intermediaries, which heightens their vulnerability to fraudulent practices. Furthermore, the continued reliance on manual documentation in many rural banks results in extended processing times, compelling farmers to depend on informal credit sources that typically charge excessive interest rates (Bhatore et al., 2020). Even after loan approval, inefficiencies in fund disbursement remain a critical barrier that diminishes the intended benefits of the KCC scheme. Institutional challenges such as excessive workloads in rural bank branches, limited staffing, and the lack of automation in agricultural loan processing contribute to significant delays in releasing funds (Hurley and Adebayo, 2016). These delays severely impact farming operations, as agriculture is highly seasonal and requires timely financial support to ensure productivity. Additionally, financial institutions often release only partial amounts of the sanctioned credit, citing high default risks and unstable market conditions. This practice disproportionately affects small and marginal farmers, who depend heavily on institutional credit to purchase essential inputs such as quality seeds, fertilizers, and crop protection materials. The mismatch between disbursement schedules and cropping cycles further increases farmers' financial stress, as delays force them to postpone input purchases or seek informal credit, which typically involves usurious interest rates (Fedullo et al., 2022). Another concern is the lack of an effective monitoring framework to ensure that disbursed credit aligns with farmers' actual financial needs. In many cases, financial institutions employ rigid and non-flexible loan structures that fail to consider crop-specific costs and seasonal variations in income, complicating repayment processes. Manual verification systems further exacerbate these inefficiencies, particularly in regions with poor internet connectivity and underdeveloped banking infrastructure. The integration of digital banking technologies such as e-KCC platforms and mobile-based transaction systems holds substantial potential to address these structural challenges by expediting applications, improving transparency in loan disbursement, and reducing dependence on intermediaries. Moving forward, comprehensive policy reforms and technological innovations are essential to streamline KCC implementation, enhance institutional efficiency, and ensure equitable access to agricultural credit, thereby promoting sustainable rural financial inclusion and agricultural productivity (Abdurahman, 2023).

**Credit Access and Financial Limitation**

Access to adequate and affordable institutional credit is a crucial determinant of agricultural productivity and rural economic stability. The Kisan Credit Card (KCC) scheme was introduced as a policy intervention to provide farmers with timely financial assistance; however, a range of financial and credit-related constraints continues to limit its overall effectiveness. Major challenges associated with the scheme include insufficient credit limits, high interest rates coupled with hidden charges, and repayment difficulties, all of which intensify financial distress among small and marginal farmers and adversely affect agricultural sustainability (Mishra and Chaudhary, 2021). One of the most critical financial limitations faced by KCC beneficiaries is the inadequacy of sanctioned credit limits. Smallholder farmers often receive loan amounts that are significantly lower than their actual financial needs, restricting their ability to invest in high-quality agricultural inputs such as improved seeds, balanced fertilizers, and modern farming equipment (Kubitza et al., 2024).

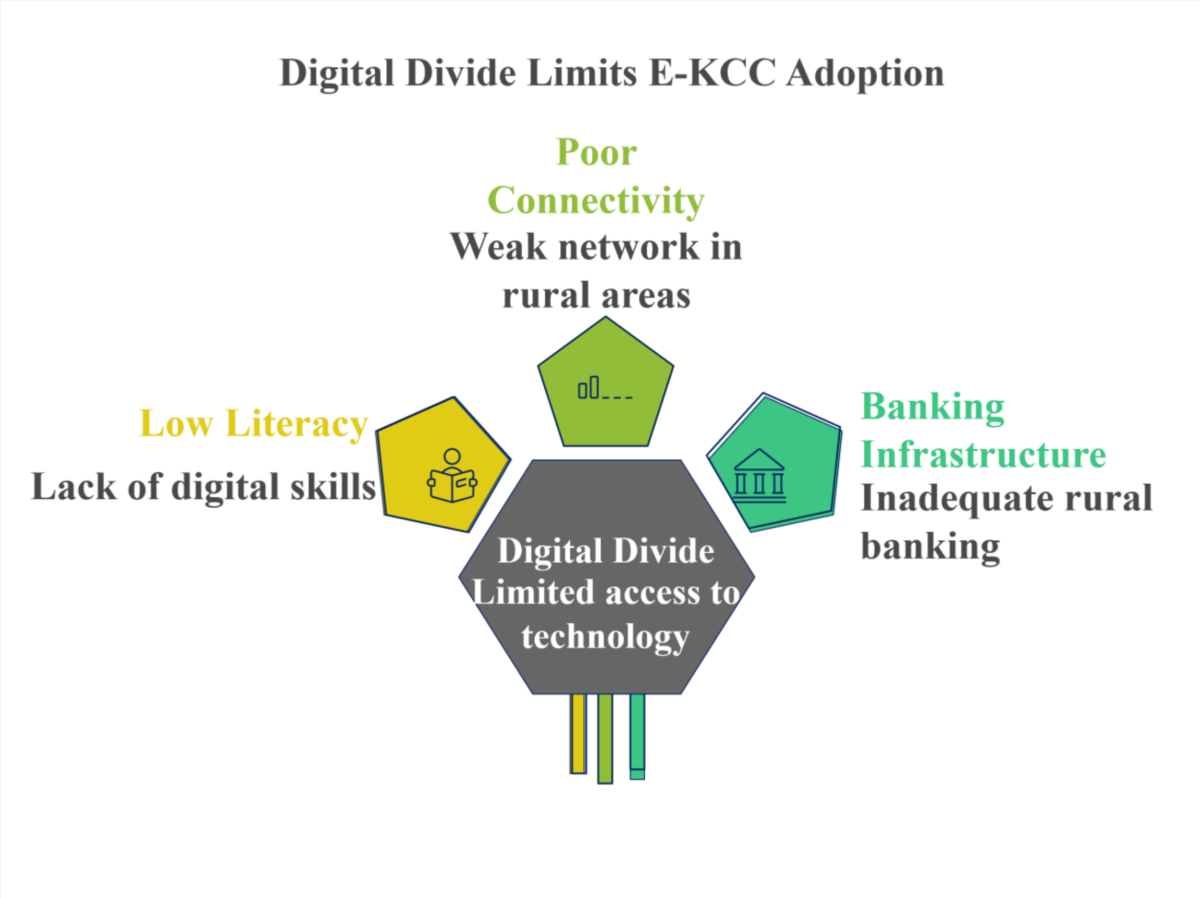
The framework used to determine credit limits primarily relies on historical land records, cropping patterns, and previous repayment histories, often overlooking fluctuations in input costs and volatile market conditions. Moreover, tenant cultivators, sharecroppers, and landless farmers frequently encounter barriers to accessing adequate credit due to the lack of formal land ownership documentation. Since KCC loans are directly linked to landholding size, small-scale farmers with fragmented holdings receive limited financial support, compelling them to depend on high-cost informal credit sources and exposing them to exploitative lending practices (Kumar et al., 2022). This financial constraint directly reduces agricultural productivity by forcing farmers to minimize input use, ultimately leading to lower yields and greater economic instability (Akram et al., 2019). Although the KCC scheme is intended to provide farmers with subsidized interest rates, several hidden financial costs significantly increase the effective borrowing expense. While the nominal interest rate for short-term KCC loans is publicized as approximately 4% per annum, conditional on timely repayment incentives, many farmers remain unaware of associated processing fees, documentation charges, and mandatory insurance premiums that collectively heighten their financial burden. Additionally, some commercial banks impose extra service charges and penalties for late repayments, further diminishing the financial viability of borrowing under the KCC framework (Bordoloi and Das, 2015). An emerging concern is the increasing tendency among banks to convert short-term crop loans into long-term loans as a means of managing non-performing asset (NPA) risks. However, such restructuring often leads to higher interest rates, prolonging farmers' indebtedness and restricting their ability to achieve sustainable credit repayment (Kambali and Panakaje, 2022). A lack of financial literacy among rural farmers further intensifies these challenges, as many borrowers struggle to comprehend loan terms, repayment schedules, and interest accumulation mechanisms, making them more vulnerable to rising debt burdens. Agricultural income is inherently seasonal and uncertain, posing substantial challenges for timely repayment of KCC loans. Factors such as erratic climatic conditions, pest infestations, and market price volatility frequently reduce agricultural output, hindering farmers' ability to meet repayment deadlines. Although the KCC scheme formally includes a flexible repayment structure, many farmers continue to face difficulties in debt clearance, often resorting to loan rollovers that increase their interest liabilities. Furthermore, a large proportion of small and marginal farmers lack diversified income sources, making them highly susceptible to recurring debt cycles. Defaulting on KCC repayments not only damages farmers' credit histories but also limits their access to future institutional financing, thereby pushing them toward informal moneylenders who charge exorbitant interest rates (Joshi, 2022). Dependence on such informal credit mechanisms deepens financial instability and perpetuates rural indebtedness, further entrenching economic vulnerability among smallholder farmers (Khan and Kumar, 2021). Addressing these financial challenges requires the implementation of targeted policy measures aimed at improving credit accessibility, strengthening financial literacy, and ensuring greater transparency in loan disbursement and repayment systems. Reinforcing institutional mechanisms to provide need-based, flexible, and farmer-centric financial services is essential for realizing the full benefits of the KCC scheme and fostering long-term agricultural sustainability.

**Awareness and Accessibility Issues**

The implementation of the KCC scheme also varies significantly across regions, leading to considerable geographical disparities in agricultural credit access. Farmers in remote, tribal, and economically weaker regions face greater obstacles in securing institutional credit due to inadequate banking infrastructure, limited financial service points, and poor digital connectivity (Malik and Malik, 2022). The scarcity of rural bank branches, ATMs, and microfinance institutions severely restricts farmers' ability to apply for and utilize KCC loans. In many cases, farmers must travel long distances to reach banking facilities, which increases both the cost and time involved in obtaining credit. Moreover, bureaucratic inefficiencies and procedural delays are more prevalent in underdeveloped regions, where banking institutions often face staff shortages, logistical challenges, and weak financial monitoring mechanisms (Mulay et al., 2023). These constraints contribute to extended loan approval times, irregular disbursement processes, and higher rejection rates. Such administrative inefficiencies discourage many farmers from applying for formal credit, compelling them to rely on informal sources despite the availability of institutional financing. Regional disparities are further intensified by variations in state-level policies and administrative efficiency. States with well-developed agricultural credit infrastructures tend to exhibit higher KCC adoption rates, whereas states with weaker financial systems experience limited penetration and poor loan recovery performance. This uneven access results in an imbalanced financial inclusion landscape, where farmers in well-connected regions benefit substantially more from institutional credit compared to their counterparts in agrarian hinterlands (Chanda, 2020). To overcome these challenges, it is imperative to implement targeted financial literacy programs that educate farmers about the benefits, procedures, and obligations associated with the KCC scheme. Establishing mobile banking units, expanding rural banking infrastructure, and leveraging digital financial technologies can play a crucial role in bridging the accessibility gap. Additionally, simplifying application procedures, minimizing bureaucratic barriers, and ensuring timely loan disbursement will significantly enhance the overall efficiency of the KCC scheme. By addressing these systemic issues, policymakers and financial institutions can ensure that institutional credit truly acts as a catalyst for agricultural growth, rural economic stability, and the financial empowerment of farmers (Singh and Kadam, 2024).

**Barriers to Digital Adoption and Technological Integration in KCC Implementation**

The integration of digital financial services within the Kisan Credit Card (KCC) scheme holds immense potential to revolutionize agricultural credit accessibility, enhance transaction efficiency, and ensure the timely disbursement of loans to farmers. However, despite the transformative prospects of the electronic KCC (e-KCC), its adoption remains limited due to a range of technological, infrastructural, and socio-economic challenges (Mishra and Chaudhary, 2021). The persistent digital divide, combined with low levels of financial literacy and limited banking outreach in rural areas, significantly constrains the effectiveness of digital financial inclusion initiatives, preventing farmers from fully leveraging the benefits of the KCC scheme. One of the primary barriers to the adoption of e-KCC services is the low level of digital literacy among farmers, particularly small and marginal cultivators who constitute the majority of India's agricultural households (Prakash and Kumar, 2016). Many rural farmers lack the necessary knowledge and technical skills to operate digital banking platforms such as internet banking, mobile banking applications, and digital wallets. This limitation not only restricts their ability to access credit efficiently but also discourages them from shifting away from traditional cash-based transactions (Mishra and Chaudhary, 2021). The hesitation to adopt digital financial systems is further reinforced by concerns regarding online fraud, cybersecurity risks, and the perceived complexity of digital financial operations. Without structured training programs designed specifically for rural communities, the digital transformation of agricultural credit systems will remain incomplete. Beyond individual digital literacy, systemic challenges such as weak network connectivity and limited access to smartphones or internet-enabled devices further impede the effectiveness of e-KCC services (Gautam et al., 2021). Many farming communities, especially in remote and economically disadvantaged areas, continue to rely on basic mobile phones that lack internet functionality. As a result, these farmers are unable to utilize key online banking services such as real-time loan tracking, digital payments, and financial advisory tools. Moreover, inconsistent internet speeds and frequent network disruptions in rural regions make digital transactions unreliable and inefficient (McIntosh and Mansini, 2018). The inadequacy of rural banking infrastructure continues to be a major obstacle to the widespread implementation of digital KCC services. A substantial number of villages in India still lack adequate bank branches, ATMs, and banking correspondents, forcing farmers to travel long distances to urban centers to access financial services. This geographical constraint undermines the practicality of digital banking solutions, as physical access to financial institutions remains essential for resolving technical issues, completing documentation, and obtaining assistance with digital transactions. Furthermore, the absence of localized support mechanisms such as helplines and financial literacy campaigns discourages farmers from adopting digital platforms for their credit and banking needs (Hossain, 2023). Another critical challenge lies in the reluctance of financial institutions to invest in upgrading rural banking infrastructure. Many rural banks continue to operate with outdated technological systems, leading to frequent server downtimes, slow transaction processing, and increased vulnerability to security breaches (Malladi et al., 2021). These inefficiencies within banking operations erode farmers' trust in digital financial services, reinforcing their preference for traditional cash-based practices. Additionally, several commercial banks have yet to fully integrate digital payment systems with agricultural credit frameworks, further limiting access to e-KCC services. Despite these obstacles, targeted policy interventions and capacity-building initiatives can significantly enhance the adoption of e-KCC services. Expanding rural broadband infrastructure, promoting financial technology (FinTech) innovations, and implementing digital literacy programs tailored specifically for farmers can bridge the divide between traditional and digital banking systems. Establishing mobile banking units, developing user-friendly applications in regional languages, and simplifying e-KCC onboarding procedures can further encourage adoption (Hamid, 2024). Moreover, financial institutions should collaborate with local cooperatives, self-help groups, and community organizations to develop grassroots awareness programs that educate farmers about the advantages and security aspects of digital banking. While the e-KCC scheme holds substantial potential to transform agricultural finance, several structural and technological barriers continue to limit its widespread implementation. Addressing issues related to digital literacy, network connectivity, banking infrastructure, and institutional responsiveness is crucial to ensuring that farmers especially those in marginalized and remote regions can fully benefit from digital financial inclusion. By adopting a comprehensive approach that combines infrastructural development with farmer-centric digital training initiatives, policymakers and financial institutions can strengthen the effectiveness of e-KCC, thereby promoting a more resilient and financially




empowered agricultural sector.

Fig.1 Barriers to Digital Adoption and Technological Integration in KCC Implementation

### Social and Economic Constraints in KCC Accessibility

The Kisan Credit Card (KCC) scheme was introduced to provide timely, affordable, and easily accessible institutional credit to farmers, with the objective of enhancing agricultural productivity and promoting financial stability. However, various socio-economic barriers continue to impede equitable access to this vital financial resource, particularly among tenant farmers, smallholders, and marginalized agricultural communities. Structural constraints such as land ownership requirements, socio-political influences, and economic disparities limit the inclusivity of the scheme, often leaving the most vulnerable farmers without sufficient financial support (Goyal, 2024). One of the key limitations of the KCC scheme is its exclusionary framework toward tenant farmers, sharecroppers, and landless agricultural laborers due to the rigid land ownership requirement (NABARD, Rural Credit and Financial Inclusion Report, 2021). Since KCC eligibility is primarily based on formal landholding documents, farmers cultivating leased or informally held land are frequently excluded from accessing institutional credit. Consequently, these farmers remain dependent on informal moneylenders who impose exorbitant interest rates and exploitative repayment terms (Nigade & Deshmukh, 2023). This dependence results in persistent financial distress, restricting their capacity to make long-term agricultural investments, adopt modern technologies, or even meet seasonal cultivation needs. The problem of financial exclusion extends to smallholders who, despite being eligible for KCC, often receive insufficient credit limits that fail to meet their agricultural investment requirements (Bordoloi and Das, 2015). Due to small and fragmented landholdings, these farmers are sanctioned minimal loan amounts that are inadequate to cover essential inputs such as high-quality seeds, fertilizers, mechanization, and irrigation infrastructure. As a result, smallholders continue to rely on informal borrowing sources, further increasing their financial vulnerability. The lack of adequate institutional support not only hampers agricultural productivity but also perpetuates cycles of indebtedness and economic insecurity (Venkatesh, 2015). Beyond economic factors, political influence and socio-economic hierarchies play a significant role in determining the distribution of KCC loans. Several studies have reported instances where political intervention distorts the allocation of agricultural credit, favoring individuals with political connections or social influence (Kumar et al., 2023). Such preferential treatment results in unequal access to financial support, marginalizing socially disadvantaged farmers who are most in need of institutional credit. Farmers lacking political representation or influence are often deprioritized, despite their genuine requirement for financial assistance to sustain agricultural activities. Bureaucratic inefficiencies and corruption further aggravate obstacles to accessing KCC loans. In many cases, farmers experience prolonged procedural delays, excessive documentation requirements, and the imposition of unofficial charges by intermediaries or banking officials. The involvement of middlemen demanding bribes for loan approvals imposes an additional financial burden on already distressed farmers. These systemic inefficiencies and unethical practices create a discouraging environment for small and marginalized farmers, dissuading them from engaging with formal financial institutions (Mulay et al., 2023). Moreover, the lack of financial literacy and awareness regarding KCC benefits significantly contributes to the underutilization of the scheme. Many farmers remain uninformed about concessional interest rates, repayment schedules, and government subsidies available under the KCC program. As a result, they either fail to apply for credit or encounter repayment challenges due to misconceptions about interest accrual, penalty clauses, and loan renewal processes. This knowledge gap perpetuates their dependence on informal moneylenders, keeping them trapped in cycles of high-interest debt (Aneja, 2015). Regional disparities in KCC implementation further restrict equitable access to institutional credit. Farmers in remote, tribal, and economically backward regions face additional challenges due to poor banking infrastructure, limited financial service providers, and weak connectivity. The shortage of rural bank branches, ATMs, and financial literacy initiatives further isolates these communities from the formal credit system, exacerbating financial exclusion (Malik & Malik, 2022). Additionally, weak institutional frameworks and ineffective loan monitoring systems contribute to inconsistent credit distribution, with some states demonstrating significantly higher KCC penetration rates than others (Chanda, 2020). Overcoming these socio-economic barriers requires a comprehensive, multi-dimensional approach involving policy reforms, enhanced financial literacy programs, and the strengthening of rural banking infrastructure. Simplifying loan application procedures, extending credit eligibility to tenant farmers, and improving the transparency of loan disbursement processes can substantially increase the effectiveness of the KCC scheme (Tripathy and Singh, 2022). Furthermore, government agencies, financial institutions, and non-governmental organizations should collaborate to implement targeted financial awareness campaigns that equip farmers with the knowledge and resources needed to make informed credit decisions. Although the KCC scheme has the potential to serve as a transformative financial instrument for Indian farmers, its impact continues to be limited by structural and socio-economic barriers. Addressing these challenges through inclusive policy frameworks, technological innovation, and institutional transparency is essential to ensuring that all farmers regardless of landholding size or socio-political background can access the financial resources necessary to sustain and enhance their agricultural enterprises (Tripathi et al., 2023). By promoting equitable access to institutional credit, India can strengthen agricultural productivity, reduce rural indebtedness, and foster long-term economic stability across its farming communities.

**Impact of Limitations on Agricultural Development**

Access to institutional credit remains a cornerstone of agricultural development, ensuring financial stability, enhancing productivity, and fostering rural economic growth. The Kisan Credit Card (KCC) scheme was introduced to provide farmers with timely and affordable credit, thereby reducing dependence on informal lending sources. However, a range of institutional inefficiencies, socio-economic disparities, and financial barriers continue to limit its effectiveness (Kumar et al., 2023). These constraints have wide-ranging implications for agricultural growth, rural financial inclusion, and economic sustainability. A major consequence of restricted credit access is the decline in agricultural productivity. Farmers require timely financial resources to purchase essential inputs such as quality seeds, fertilizers, pesticides, and farm machinery. Yet, delays in loan disbursement, inadequate credit limits, and bureaucratic hurdles prevent many from securing inputs when needed. Consequently, farmers either reduce input use or resort to lower-quality substitutes, resulting in suboptimal yields and declining profitability. Small and marginal farmers who constitute about 86% of India's farming population are most affected by limited institutional credit (NABARD, Rural Credit and Financial Inclusion Report, 2022). Their inability to invest in mechanization, irrigation, and modern practices restricts productivity and competitiveness, widening the economic gap between large-scale and small-scale farmers (Chatterjee, 2015). Inadequate access to affordable credit also heightens financial instability. Agricultural income fluctuates with crop cycles, market volatility, and climatic uncertainty. Without formal credit, farmers rely on informal moneylenders who charge interest rates between 36% and 60%, trapping them in chronic indebtedness (Singh and Sharma, 2020; Dashrath, 2020). Such exploitative lending practices marked by non-transparent terms, coercive collateral demands, and long-term debt entrapment erode financial autonomy and perpetuate poverty. The resulting distress has, in extreme cases, been linked to farmer suicides (Gulati and Juneja, 2019). Systemic inefficiencies within the KCC framework further reinforce rural financial inequality. Large-scale farmers and politically connected individuals often secure preferential access to subsidized loans and insurance-linked credit, while smallholders, tenant farmers, and landless laborers face procedural complexities, inadequate loan amounts, and delayed approvals (Mishra and Chaudhary, 2021). These disparities concentrate financial benefits among wealthier groups, deepening economic divides. Limited credit also prevents smallholders from adopting climate-resilient technologies such as precision farming and agroforestry leaving them vulnerable to environmental shocks (Timu et al., 2024). Moreover, weak digital infrastructure constrains financial inclusion. Digital financial services such as mobile banking, e-KCC platforms, and credit-linked insurance could simplify access to loans and improve transparency. However, low digital literacy, poor banking infrastructure, and unreliable internet connectivity continue to hinder farmers from benefiting from these tools (Reserve Bank of India, 2022). Addressing these issues requires comprehensive policy reforms focused on enhancing KCC accessibility and efficiency. Simplifying loan application procedures, relaxing eligibility norms for tenant farmers, and improving rural banking infrastructure are vital to expanding financial inclusion (Dey et al., 2023). Simultaneously, targeted financial literacy and digital training programs can empower farmers to use digital credit systems effectively, reducing dependence on exploitative informal lending. While the Kisan Credit Card scheme has significant potential to transform agricultural finance, its impact remains limited by institutional inefficiencies and socio-economic inequities. Implementing inclusive financial policies, promoting technological integration, and strengthening rural credit systems are essential for ensuring equitable access to credit and fostering sustainable rural economic development (Kaur and Dhaliwal, 2018).

**Policy Measures and Effective Strategies for Improving KCC Accessibility**

The Kisan Credit Card (KCC) scheme serves as a vital financial mechanism aimed at providing farmers with timely and affordable institutional credit, thereby reducing their dependence on informal and often exploitative lending sources. Despite its crucial role in promoting agricultural productivity and rural financial inclusion, several institutional, financial, and socio-economic constraints continue to limit its accessibility and effectiveness (Mulay et al., 2023). Bureaucratic inefficiencies, stringent documentation requirements, and inadequate financial literacy among small and marginal farmers frequently impede their ability to secure credit on time. Recognizing these challenges, policymakers, financial institutions, and technology-driven stakeholders have implemented a series of reforms and best practices to improve KCC coverage, streamline access to agricultural credit, and enhance financial empowerment in rural areas (Goyal, 2024). A persistent challenge in KCC implementation lies in the complexity of the application and approval process. Many farmers struggle with documentation requirements, bureaucratic delays, and procedural inefficiencies, which restrict credit access during crucial agricultural periods (Saxena and Patidar). To address these barriers, the government and financial institutions have launched digital KCC platforms that minimize paperwork and accelerate processing. Farmers can now apply for and track their KCC applications through online portals, ensuring faster disbursement, improved transparency, and reduced dependence on intermediaries (Bey, 2023; Mohasin et al., 2025). Additionally, simplified eligibility criteria, self-declaration forms, Aadhaar-linked verification, and automated credit scoring have expedited approvals and reduced procedural bottlenecks (Sharma, 2016). To enhance financial resilience, KCC loans are increasingly being linked with crop insurance, input subsidies, and weather-based credit mechanisms, providing comprehensive financial coverage and mitigating risks related to crop failure and price volatility (Hoda and Terway, 2015). Historically, the scheme primarily benefited land-owning farmers, excluding tenant farmers, sharecroppers, and women despite their significant contributions to agriculture (Mulay et al., 2023). Recent policy reforms have expanded KCC access through group lending models, joint liability groups (JLGs), and cooperative credit frameworks, enabling landless and tenant farmers to obtain institutional credit. Furthermore, women farmers who often face gender-based financial barriers have been supported through initiatives such as interest subvention programs, priority sector lending, and women-led self-help groups (SHGs), thereby promoting financial autonomy and inclusion (Biswas et al., 2023).

Strengthening the KCC framework demands a multi-dimensional approach that integrates policy reform, digital innovation, and capacity building. Enhancing rural financial literacy, expanding credit outreach, and ensuring strict enforcement of farmer-centric policies are essential to maximizing the benefits of the scheme. By addressing these systemic challenges, the KCC program can evolve into a more inclusive and efficient financial instrument that not only strengthens agricultural productivity but also fosters long-term rural economic stability.

**Role of Banks and Financial Institutions**

A major constraint in the accessibility of the Kisan Credit Card (KCC) scheme is the inadequacy of rural banking infrastructure, particularly in remote and underserved regions. Many farmers, especially those in geographically isolated areas, face difficulties in accessing formal financial services due to the limited presence of banking institutions. Consequently, they often rely on informal credit sources that charge exorbitant interest rates and impose unfavorable lending conditions (Muchira, 2017). To address this challenge, financial institutions have adopted strategic interventions to expand banking outreach and strengthen rural financial inclusion. One key measure has been the expansion of rural bank branches and ATM networks (Arun and Kamath, 2015). Establishing additional rural banking outlets, including agricultural service centers and financial kiosks, enables farmers to access credit more conveniently without incurring high travel costs. Similarly, the increased availability of ATMs in agricultural regions allows farmers to withdraw funds securely and independently, reducing their reliance on intermediaries (World Bank, 2021). The introduction of mobile banking and the Banking Correspondents (BC) model has further transformed rural financial access. The BC model serves as an effective mechanism for reaching unbanked farmers by providing doorstep banking services, digital transaction support, and financial counseling. These agents assist farmers in applying for KCC loans, managing repayments, and adopting digital financial tools, thereby promoting financial literacy and empowerment (Athar, 2024). Mobile banking, through smartphone apps and USSD-based services, enhances accessibility by enabling remote transactions and minimizing bureaucratic delays. Cooperative banks and Regional Rural Banks (RRBs) also play a crucial role in improving KCC accessibility. Being deeply embedded in rural communities, they offer flexible, low-cost credit solutions tailored to smallholders' needs. Their services ensure that even marginal and tenant farmers can obtain institutional credit (Goyal, 2024). Microfinance institutions (MFIs) further complement these efforts through group lending models and self-help group (SHG)-based financing, promoting collective borrowing and risk-sharing. Efforts to strengthen rural banking infrastructure must be supported by technological innovation and inclusive policy initiatives. Enhancing digital payment systems, promoting financial education, and integrating KCC services with existing agricultural support programs are essential for making credit access more seamless and equitable (Kadaba et al., 2023). By fostering a robust and farmer-centric financial ecosystem, these measures can enable the KCC scheme to fulfill its goal of providing timely and affordable credit to India's agrarian community.

**Enhancing Credit Oversight and Risk Control**

Loan defaults and the accumulation of non-performing assets (NPAs) continue to pose major challenges to the effective implementation of the Kisan Credit Card (KCC) scheme. Many farmers struggle to meet repayment deadlines due to irregular income cycles, crop failures, and volatile market conditions, increasing financial risks for lending institutions (Singh and Kokane). To mitigate these risks and promote financial sustainability, banks have introduced strategic interventions focused on improving credit monitoring, providing flexible repayment mechanisms, and strengthening risk management systems. A key approach to minimizing loan defaults is the adoption of real-time credit monitoring systems. Advances in financial technology now allow banks to use data analytics, artificial intelligence (AI)-based risk assessment models, and satellite-based crop monitoring tools to evaluate loan utilization and forecast repayment capacity (Singh and Mritunjay, 2024). By analyzing variables such as weather patterns, soil conditions, and cropping cycles, these technologies support data-driven lending decisions, reducing default rates and promoting responsible credit disbursement. Recognizing the seasonal nature of agricultural income, banks have developed flexible repayment mechanisms aligned with farmers' cash flow patterns. Unlike traditional loan structures with rigid timelines, these customized repayment schedules accommodate harvest cycles and income fluctuations (Malviya, 2017). Grace periods and interest subvention programs further assist farmers during adverse climatic or market conditions, preventing debt accumulation and supporting farm sustainability. Integration with crop insurance and weather advisory services has also become an essential component of KCC lending. Enrolling borrowers in crop insurance schemes provides a safety net against climate-induced losses, pest infestations, and weather uncertainties (Dashrath, 2020). Additionally, real-time weather forecasting and early warning systems help farmers make informed decisions, thereby minimizing risks associated with loan defaults (Steinbach et al., 2016). The rise of financial technology (FinTech) has further transformed KCC accessibility through digital and mobile banking solutions. The transition to electronic KCC (e-KCC) has streamlined loan access, reduced transaction inefficiencies, and minimized bureaucratic delays (Mishra and Chaudhary, 2021). The introduction of e-KCC cards and digital wallets allows farmers to manage their credit digitally, reducing dependence on cash transactions. Prepaid card systems and mobile-based financial platforms enable secure purchases of agricultural inputs while ensuring transparency in fund utilization (Sarma, 2025). Mobile-based credit disbursement has simplified borrowing by allowing farmers to apply for loans, receive funds, and make repayments directly through mobile applications (Das and Patnaik, 2020; Mohasin et al., 2022). The elimination of manual paperwork and intermediary involvement has cut operational delays and costs, ensuring faster credit delivery. Further integration of KCC accounts with Unified Payments Interface (UPI) and Aadhaar-enabled Payment Services (AEPS) has enhanced financial inclusion (Kadaba et al., 2023). Linking accounts to biometric authentication and secure digital payment gateways enables seamless transactions, real-time loan tracking, and direct subsidy transfers (Abdurahman, 2023). Collectively, these innovations demonstrate the evolving landscape of KCC lending, where financial institutions are adopting advanced technologies to balance credit accessibility with financial prudence. Strengthening real-time monitoring, promoting flexible repayment structures, and expanding digital banking adoption will be vital to making the KCC scheme more inclusive, efficient, and resilient in addressing future agricultural challenges.

**Enhancing Farmers' Financial Awareness**

Despite the growing availability of digital financial tools and banking solutions, the adoption of the Kisan Credit Card (KCC) scheme remains constrained by limited financial literacy and digital awareness among farmers (Mulay et al., 2024; Yaseen et al., 2025). Many smallholder and marginal farmers, particularly in remote areas, lack the knowledge and skills needed to navigate digital banking platforms, apply for credit online, or manage loan repayments effectively. This knowledge gap restricts access to institutional credit and heightens vulnerability to financial mismanagement and debt cycles. Recognizing the importance of financial literacy in promoting inclusive access to agricultural credit, government agencies, financial institutions, and rural development organizations have initiated targeted educational programs to strengthen farmers' financial decision-making capacities (Malhotra, 2023). A key intervention involves educating farmers about digital credit services. Banks, cooperatives, and government agencies conduct awareness campaigns, training workshops, and field demonstrations to familiarize farmers with digital banking, online loan applications, and secure credit management practices. These programs emphasize user-friendly mobile applications and teach farmers how to monitor accounts, make digital transactions, and access grievance redressal mechanisms, thereby improving their confidence in using e-KCC platforms (Mishra and Chaudhary, 2021). The establishment of Financial Literacy Centers (FLCs) has further institutionalized financial education in rural areas. Operated by rural banks, cooperatives, and non-governmental organizations, FLCs serve as dedicated hubs that provide practical training on mobile banking, digital credit management, and structured repayment planning (NABARD, Rural Credit and Financial Inclusion Report, 2022). Through personalized financial counseling and real-time assistance, these centers empower farmers to make informed credit decisions and build trust in formal banking systems (Jalota et al., 2024). Community-based financial education programs have also proven effective in expanding outreach. By leveraging agricultural extension services, farmer cooperatives, and self-help groups (SHGs), knowledge dissemination becomes more accessible and contextually relevant (Akpaeti and Archibong, 2022). Peer-to-peer learning models where digitally literate farmers mentor others have enhanced participation and engagement. Additionally, financial literacy campaigns conducted in regional languages ensure that farmers from diverse backgrounds can easily understand complex financial concepts (Chandra, 2025). Collectively, these initiatives have had a significant impact: improving financial literacy builds confidence in digital banking systems, promotes responsible credit utilization, and strengthens loan repayment discipline. Equipping farmers with financial knowledge and digital skills not only supports rural financial inclusion but also reduces reliance on informal lenders and contributes to the long-term success of the KCC scheme. However, sustained efforts in expanding outreach, adopting innovative training approaches, and integrating technology into financial education are essential to bridge the financial literacy gap and fully realize the potential of digital agricultural credit systems.

## Conclusion

Effective policy interventions and best practices in KCC implementation are vital to enhancing agricultural credit accessibility, promoting financial inclusion, and supporting rural development. Simplifying application processes, broadening credit coverage, improving rural banking infrastructure, and integrating digital financial solutions can greatly strengthen the KCC's impact. Additionally, enhancing financial literacy and digital competency among farmers will ensure responsible credit use, better repayment performance, and greater economic resilience. Moving forward, a collaborative, multi-stakeholder approach involving government agencies, financial institutions, technology providers, and agricultural cooperatives is crucial for creating a farmer-centric, inclusive, and digitally empowered KCC ecosystem.

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