

The Kisan Credit Card: A Review of Its Impact on Farmers' Income, Indebtedness, and Agricultural Productivity

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Abstract

The Kisan Credit Card (KCC) scheme is designed to address the diverse credit needs of farmers by providing a unified financial facility for agricultural activities. However, it presents both advantages and disadvantages at the societal level due to farmers' economic challenges. This paper explores the KCC scheme through the lens of lived experiences, aiming to assess whether it serves as a blessing or presents challenges for Indian farmers. By examining qualitative data from field studies, the paper evaluates the scheme's impact on farmers' income, productivity, and overall financial stability. It highlights key benefits such as improved access to credit and increased agricultural productivity while also addressing significant challenges, including bureaucratic inefficiencies, low awareness, infrastructure limitations, and issues of corruption. The analysis reveals a nuanced picture in which the KCC scheme has indeed facilitated financial support and enhanced farm operations, yet it also encounters critical obstacles that undermine its effectiveness. The findings suggest that while the KCC has provided substantial benefits, it requires substantial reforms to fully realize its potential as a reliable and equitable financial tool for farmers.

Keywords : Kisan Credit Card, Agricultural Finance, Farmers' Income, Financial Inclusion, Rural Credit Challenges

Introduction

The Kisan Credit Card (KCC), introduced in India in 1998, represents a significant financial innovation aimed at addressing the diverse credit needs of farmers (Kumar et al., 2011). While research indicates that the KCC has positively contributed to these areas, it has also faced challenges that have limited its effectiveness in certain contexts (Chanda, 2020). The KCC has been instrumental in increasing farmers' income through various mechanisms. By providing timely and adequate credit, the scheme has enabled farmers to invest in high-yield inputs, adopt improved agricultural practices, and expand their farming operations.

This has led to increased agricultural production and higher market prices for their produce, ultimately boosting farmers' income. Moreover, the KCC has facilitated diversification into livestock and poultry farming, providing farmers with additional sources of income and reducing their reliance on a single crop (Gulati & Juneja, 2019).

The KCC has also played a crucial role in reducing farmers' indebtedness. By providing a consolidated credit facility, the scheme has helped to consolidate multiple loans, reducing the burden of interest payments and preventing farmers from falling into a debt trap (Sowmya, 2010).

Furthermore, the KCC has provided farmers with access to formal credit, reducing their reliance on informal lenders who often charge exorbitant interest rates. This has helped to alleviate the financial stress faced by many farmers and has improved their overall well-being.

The KCC has had a positive impact on agricultural productivity. By providing farmers with the necessary financial resources, the scheme has enabled them to invest in modern agricultural technologies, such as improved seeds, fertilizers, and machinery. This has led to increased crop yields and improved efficiency in agricultural operations. Additionally, the KCC has facilitated the adoption of sustainable agricultural practices, such as crop rotation and integrated pest management, which enhance soil health and reduce environmental degradation.

Despite its numerous benefits, the KCC has faced several challenges that have limited its effectiveness in certain contexts. One of the major challenges has been farmer awareness (Ferroni & Zhou, 2012). Many farmers, especially those from marginalized communities, are unaware of the KCC scheme and its benefits (Hemamalini, 2015). This has resulted in low uptake of the scheme, particularly among small and marginal farmers who are most vulnerable to financial hardship.

Another challenge has been bureaucratic inefficiencies in the implementation of the KCC. The process of obtaining a KCC be time-consuming and cumbersome, often involving multiple visits to government offices and the submission of numerous documents (Karthika, 2012). This deter farmers from applying for the scheme, especially those who are busy with their agricultural activities. Additionally, the disbursement of loans under the KCC be delayed, causing financial hardship for farmers who need the funds urgently.

The KCC has also faced criticism for its lack of effective outreach to small and marginal farmers (Bhaskaran, 2017). While the scheme is designed to benefit all farmers, it has been argued that it has disproportionately benefited larger farmers who have the resources to navigate the bureaucratic hurdles and meet the eligibility criteria. This has raised concerns about the equity of the KCC scheme and its ability to address the specific needs of small and marginal farmers.

Furthermore, the KCC has been associated with issues of corruption and loan repayment defaults. In some cases, funds allocated under the KCC have been misappropriated by corrupt officials, leading to financial losses for farmers. Additionally, some farmers have defaulted on their loan repayments, resulting in financial losses for banks and other lenders (Narayanan & Mehrotra, 2019). This has raised concerns about the sustainability of the KCC scheme and its ability to provide long-term financial support to farmers.

Despite these challenges, the KCC remains an important tool for agricultural finance in India. It has helped to increase farmers' income, reduce indebtedness, and improve

agricultural productivity. However, to realize its full potential, the KCC needs to be accompanied by complementary measures, such as crop insurance, to mitigate the risks faced by farmers (Namboodiri, 2005). Additionally, efforts should be made to improve the awareness of the scheme among farmers, streamline the application process, and enhance the efficiency of loan delivery mechanisms. By addressing these challenges, the KCC continue to play a vital role in supporting the livelihoods of millions of Indian farmers.

Rural areas, often characterized by agricultural-based economies, face unique challenges stemming from the seasonal nature of their primary income source. While farmers may experience periods of high productivity during harvest seasons, the remaining months often yield meagre or no income (Behera & France, 2016). This cyclical pattern of income generation make it difficult for rural communities to meet their ongoing financial needs.

During periods of low agricultural activity, rural residents may turn to alternative sources of income, such as off-farm employment or small-scale businesses. However, these options are often limited due to factors like lack of skills, infrastructure, or market access. As a result, many rural households struggle to generate sufficient income to cover their basic needs throughout the year.

The challenges faced by rural communities are exacerbated by unexpected events such as marriages, natural disasters, or health emergencies. These events require significant financial outlays, which be difficult to meet with limited income. In such circumstances, many rural households resort to borrowing, often from informal lenders who charge exorbitant interest rates. This lead to a cycle of debt that is difficult to break out of.

To address these challenges, it is essential to implement policies and programs that support rural communities. This could include providing access to affordable credit, promoting diversification of livelihoods, and investing in rural infrastructure. Additionally, strengthening social safety nets help to protect vulnerable households from the adverse effects of income fluctuations and unexpected events.

Therefore, this study aims to investigate the underlying reasons for loan repayment issues among rural communities and assess the extent to which these loans contribute to their financial well-being. By understanding the factors that influence repayment behavior and the impact of loans on rural livelihoods, this research provides valuable insights for policymakers and development practitioners seeking to improve the effectiveness of agricultural credit programs.

Methodology of the Study

This study investigates the impact of the Kisan Credit Card (KCC) scheme on farmers' experiences in the Azamgarh District of Uttar Pradesh. Utilizing a qualitative approach, data were gathered through semi-structured interviews conducted with KCC users. The study aimed to understand the benefits and challenges associated with the KCC from the perspective of the farmers who actively use the scheme.

The data collection process involved interviewing fifty male respondents aged between 40 and 60 years. This age range was selected to ensure that the respondents had sufficient lived experience to provide mature and insightful responses regarding their interactions with the KCC scheme. The choice of this demographic was based on the assumption that individuals within this age group are likely to have substantial experience with agricultural finance and the KCC scheme, thus offering a well-rounded perspective on its effectiveness and challenges.

The semi-structured interview schedule was designed to capture detailed information about the respondents' experiences with the KCC. This method allowed for flexibility in responses, enabling interviewees to discuss their experiences in depth and provide qualitative insights into how the KCC scheme impacts their agricultural practices, financial stability, and overall well-being.

The respondents were selected using a snowball sampling technique. This method was particularly useful in reaching individuals who are actively using the KCC, as initial participants referred others within their networks who were also beneficiaries of the scheme. This approach ensured that

the sample consisted of individuals with relevant experience and provided a comprehensive view of the KCC's impact in the district. Furthermore, to enhance the academic rigor of the paper, this study utilized AI tools to assist in refining the language and ensuring grammatical accuracy throughout the writing process.

The study's focus was exclusively on male respondents. This decision was influenced by several factors, including the limited representation of female farmers in the region. Female farmers were either underrepresented or faced barriers such as fragmented land holdings and limited access to agricultural resources. Additionally, the socio-cultural context in the study area presented challenges for interviewing female farmers, as many were not actively involved in decision-making processes related to agricultural finance.

The collected data were analyzed qualitatively to identify recurring themes and patterns. The analysis focused on understanding how the KCC scheme assists farmers, evaluating whether it serves as a beneficial tool or presents challenges. Key areas of interest included the impact of the KCC on financial stability, the ease of credit access and repayment, and any difficulties encountered by the respondents in utilizing the scheme.

The primary aim of the study was to assess the effectiveness of the KCC scheme from the perspective of its users, determining whether it is perceived as a blessing or a curse. The study sought to uncover the practical difficulties faced by farmers in repaying loans and accessing credit, as well as to evaluate the overall contribution of the KCC to their agricultural activities.

One limitation of the study is the exclusive focus on male respondents, which may not fully capture the experiences of female farmers. Additionally, the use of snowball sampling, while effective in reaching relevant respondents, may introduce selection bias. Despite these limitations, the study provides valuable insights into the KCC scheme's impact and highlights areas for potential improvement.

KCC Impact, Income and Indebtedness

The KCC scheme has had a profound impact on farmers' income and their levels of indebtedness. By facilitating access to credit, the scheme has empowered farmers to invest in high-yielding seeds, fertilizers, and modern farming practices. This investment has, in turn, led to increased productivity and a reduction in farmers' reliance on informal and often exploitative sources of finance. However, its beneficiaries are not covered to a greater extent; many farmers who require the benefits are underrepresented.

One of the primary benefits of the KCC scheme is its role in boosting farmers' income. Research shows that the scheme has generally improved the financial well-being of farmers (Tripathi et al., 2023). By providing timely and adequate credit, the KCC scheme allows farmers to invest in essential agricultural inputs and technologies. For example, access to high-quality seeds and fertilizers enables farmers to enhance both the yield and quality of their crops. This investment in superior inputs directly leads to higher crop productivity and, consequently, increased income for farmers. However, while many beneficiaries experience these advantages due to effective time and financial management, a significant number of farmers still lack the necessary financial management skills. As one of the respondents says:

"The KCC scheme has significantly benefited me; otherwise, I would have been reliant on high-interest lending. I make timely repayments and strive to maintain a good rapport with the officials. Because of my positive reputation, they grant me loans again. However, I occasionally fall behind on repayments due to natural hazards. Overall, the scheme has greatly helped me avoid private lending. Jawahir, 42 years."

The KCC scheme has been instrumental in providing farmers like Jawahir with timely access to agricultural credit at favourable interest rates, allowing them to invest in their farming operations. Despite facing occasional challenges due to natural hazards, Jawahir and others' commitment to timely repayments has helped them maintain a positive relationship with the lending institution, ensuring continued

access to credit. The KCC scheme has been a crucial lifeline for individuals like Jawahir, preventing them from resorting to high-interest private lending, which could have burdened them financially.

The KCC scheme undoubtedly supports investment in modern farming practices and technologies. Farmers with access to KCC credit are better equipped to adopt advanced agricultural methods, such as precision farming, which uses technology to optimize field management (Jadhav et al., 2024). This adoption significantly enhances productivity and efficiency, leading to higher income levels. Furthermore, the availability of credit for farm mechanization—such as tractors and combine harvesters—improves operational efficiency, reduces labour costs, and further increases farmers' income. However, the rise in machinery use has led to lower employment opportunities for farm labourers. As a result, many farmers' family members are migrating to cities in search of work.

Before the KCC scheme was introduced, many farmers relied heavily on informal credit sources, such as moneylenders, who often charged exorbitant interest rates and engaged in exploitative practices (Muralidharan, 2023). The KCC scheme has played a crucial role in reducing farmers' indebtedness by providing organized credit through formal financial institutions. This shift from informal to formal credit sources has helped alleviate the risks associated with high-interest loans and predatory lending. However, many farmers still depend on private lenders, highlighting the need for their inclusion in the KCC scheme, along with access to financial management training. Tragically, some farmers have resorted to suicide due to the overwhelming burden of debt from private lenders.

Studies indicate that the availability of organized credit through the KCC scheme has decreased overall indebtedness among farmers (Kumar et al., 2023). By offering a single-window facility for diverse agricultural needs, the KCC scheme consolidates multiple credit requirements into one instrument. This consolidation simplifies the borrowing process, reduces bureaucratic hurdles, and makes credit more accessible and affordable for farmers. However, it primarily benefits

those who have access to banks and officials, often educated or informed individuals. There is a need to focus on including small farmers as well.

The KCC scheme offers short and long-term credit for crop production and farm investments, helping farmers manage finances and reduce debt risk. However, it needs to be complemented with crop insurance to protect against crop disasters. The scheme was introduced to streamline the process of obtaining agricultural credit in India, providing a single-window facility for various loan needs.

However, while the KCC scheme has made significant strides in improving access to agricultural credit, it is not without its challenges. One primary concern is the potential for over-indebtedness among farmers (Rath, & Parida, 2024). The ease of access to credit through the KCC scheme, coupled with a lack of adequate financial literacy, leads farmers to take on more debt than they are able to manage. This tendency has serious consequences, including debt traps and forced land sales. Moreover, the KCC scheme's focus on collateral-based lending excludes small and marginal farmers who lack sufficient assets to secure loans. This perpetuates existing inequalities in the agricultural sector and hinders the progress of vulnerable farmers. As one of the respondents expresses:

"I took out a loan expecting it would yield positive results, but it defaulted twice due to unfavorable weather, causing me to lose my invested money. This has now become a burden for me. Bank officials are calling me to repay the loan, and I find myself trying to evade the situation. If the loan hadn't been so easily accessible, I wouldn't have gotten trapped in this predicament. I hope the government will provide some remedial measures, as that would help me escape this loan trap. Moving forward, I will not take out any loans. Jaidev, 52 years."

The KCC scheme, while providing access to credit, can also pose significant risks for farmers, particularly in regions vulnerable to natural hazards. Jaidev's experience highlights the potential negative consequences of over-indebtedness, especially when facing unpredictable weather conditions.

The ease of access to credit, coupled with a lack of adequate financial literacy and risk management strategies, can lead to farmers becoming trapped in debt cycles. This case underscores the need for more robust risk mitigation measures and financial literacy programs to support farmers in making informed decisions about credit utilization and managing potential risks.

The scheme has played a key role in enhancing agricultural productivity. By providing farmers with access to credit, it has enabled them to invest in superior inputs, such as high-yielding seeds and advanced fertilizers, leading to improved crop yields (Shilomboleni et al., 2023; Gautam et al., 2024). Moreover, the availability of funds for farm mechanization and infrastructure development has further enhanced overall farm operations.

However, while the KCC scheme has been beneficial in many ways, it is not without limitations. One primary concern is the potential for over-indebtedness among farmers. The ease of access to credit through the KCC scheme, coupled with a lack of adequate financial literacy, it also led farmers to take on more debt than they can manage (Abhishek, 2021). This situation has serious consequences, including debt traps and forced land sales. Additionally, the scheme's focus on collateral-based lending may exclude small and marginal farmers who lack sufficient assets to secure loans, perpetuating existing inequalities in the agricultural sector and hindering the progress of vulnerable farmers.

Another potential issue is the risk of misuse of credit. While the KCC scheme is designed to support agricultural activities, some farmers may divert the funds for non-agricultural purposes. This could undermine the scheme's effectiveness and lead to financial losses for lending institutions. Furthermore, the KCC scheme's reliance on interest rates may not be suitable for all farmers, especially those in regions with low and fluctuating incomes. High interest rates can increase the financial burden on farmers, making it difficult for them to repay their loans.

Challenges and Criticisms of the Kisan Credit Card Scheme

The Kisan Credit Card (KCC) scheme, while designed to provide financial assistance to farmers, has faced several challenges and criticisms that have limited its effectiveness. One of the most significant barriers to the scheme's success is the low level of awareness among farmers, particularly small and marginal farmers. Many farmers are unaware of the KCC's existence, its eligibility criteria, and the benefits it offers. This lack of awareness lead to underutilization of the scheme, resulting in missed opportunities for financial support.

Furthermore, even for those farmers who are aware of the KCC, accessing it be a daunting task due to bureaucratic inefficiencies and inadequate infrastructure. The loan processing system is often plagued by red-tapism, with complex application procedures and lengthy waiting times for loan disbursement (Dasgupta & Dey, 2016). These delays disrupt farmers' agricultural activities and create financial hardships. Additionally, the availability of banking facilities in rural areas is often limited, making it difficult for farmers to access KCC benefits. This lack of infrastructure further hinder the scheme's reach and effectiveness, particularly in remote and underserved regions. As one of the respondents elaborates:

"I am aware that the government provides many benefits to farmers, but officials often do not grant loans without expecting something in return. Sometimes, due to unforeseen circumstances, I incur losses in my investments when the expected returns from crop production do not materialize in the market. Therefore, it is challenging to secure the required loan amount without offering a bribe. Shambhu, 47 years old."

The KCC scheme, while intended to provide equitable access to credit for farmers, can be undermined by corrupt practices. Shambhu's experience suggests that officials may demand bribes or favors in exchange for granting loans, creating a barrier to access for farmers who are unable to meet these demands. This corruption not only erodes the effectiveness

of the scheme but also perpetuates inequality and hampers the progress of small and marginal farmers. To ensure that the KCC scheme delivers on its intended objectives, it is imperative to address corruption and promote transparency in the loan approval process.

Another major criticism of the KCC is its potential to exacerbate existing inequalities. While the scheme aims to provide financial support to all farmers, it has been argued that it disproportionately benefits larger and more financially secure farmers (Bhanot et al., 2024). Small and marginal farmers, who are often more vulnerable to financial shocks, may face additional challenges in meeting the eligibility criteria and navigating the bureaucratic processes associated with the KCC. This lead to a widening of the gap between larger and smaller farmers, exacerbating existing inequalities in the agricultural sector.

Moreover, the KCC has been criticized for its role in perpetuating a culture of indebtedness among farmers. While the scheme provide a lifeline for farmers in need of financial assistance, it also contribute to a cycle of debt if not managed responsibly. If farmers are unable to repay their loans on time, they may face penalties and interest charges, which further increase their debt burden. This lead to a vicious cycle of borrowing and repayment, making it difficult for farmers to break free from financial hardship.

The KCC has also faced criticism for its limited effectiveness in addressing the specific needs of certain groups of farmers. For example, women farmers may face additional challenges in accessing the scheme due to gender discrimination and limited land ownership rights. Similarly, farmers from marginalized communities, such as indigenous populations and tribal groups, may encounter barriers related to language, cultural differences, and lack of access to information.

To address these challenges and improve the effectiveness of the KCC scheme, several measures be implemented. First, there is a need to increase awareness of the scheme among farmers, particularly in rural and remote areas. This be achieved through targeted outreach programs, educational

campaigns, and the use of local language resources. Second, the bureaucratic procedures associated with the KCC should be simplified and streamlined to reduce the time and effort required for farmers to apply for loans. This involve digitizing the application process, reducing the number of required documents, and establishing dedicated KCC facilitation centers in rural areas.

Third, the infrastructure for delivering KCC benefits needs to be improved. This includes increasing the availability of banking facilities in rural areas, expanding the reach of mobile banking services, and providing financial literacy training to farmers. Fourth, measures should be taken to ensure that the KCC scheme is inclusive and equitable, addressing the specific needs of marginalized groups of farmers. This involve providing targeted support to women farmers, indigenous populations, and tribal groups, as well as implementing affirmative action policies to promote their participation in the scheme.

Corruption, Mismanagement, and Lack of Crop Insurance

The Kisan Credit Card (KCC) scheme, launched by the Government of India, aims to provide short-term credit to farmers for their agricultural needs. Despite its noble objectives, the scheme has faced significant challenges due to corruption and mismanagement. Reports of nepotism, loan defaults, and the diversion of funds have severely undermined the scheme's effectiveness. Nepotism is a major concern, as local officials and bank personnel are often accused of favouring relatives and acquaintances when disbursing loans (Chohan, 2024). This favouritism distorts the resource allocation process, leaving deserving farmers without the support they need and compromising the scheme's integrity. Additionally, loan defaults are a persistent issue. Many farmers struggle to repay loans due to crop failures, fluctuating market prices, and poor financial planning. When defaults occur, banks may become more cautious and tighten lending criteria, which in turn marginalizes the very farmers who need support the most. The diversion of funds further exacerbates the problem, with resources intended for farmers sometimes being misappropriated for unrelated projects or

siphoned off by corrupt officials. This misallocation of funds erodes trust in the system and diminishes the impact of the scheme, reducing access to capital and stunting agricultural growth. As one of the respondents complains:

"I tried multiple times to obtain a KCC, but the bank officials told me that the available allocation for the region had already been distributed. I know that others have been granted KCCs, but mine was denied because I could not secure the favour of someone influential. Jugnu, 56 years old."

The KCC scheme, while intended to be accessible to all eligible farmers, can be subject to discriminatory practices and favoritism. Jugnu's experience suggests that the allocation of credit may not always be based solely on merit or need, but rather on connections and influence. This can exacerbate existing inequalities and hinder the progress of farmers who lack the resources or social networks to navigate the complex credit approval process. To ensure that the KCC scheme delivers on its promise of equitable access to credit, it is essential to implement transparent and fair allocation mechanisms and to strengthen oversight to prevent discriminatory practices.

Another critical issue with the KCC scheme is the lack of crop loan insurance (Bey et al., 2023). Without insurance coverage, farmers are exposed to substantial financial risks. Crop failures due to adverse weather conditions, pests, or diseases can leave farmers struggling to recover costs incurred for seeds, fertilizers, and labour. The absence of a safety net means that a single poor harvest can lead to severe financial strain, pushing farmers deeper into debt and jeopardizing their long-term economic stability (Jones et al., 2010). The integration of crop loan insurance into the KCC scheme could address this vulnerability by providing a buffer against unforeseen losses. Insurance would enable farmers to manage their financial obligations more effectively and encourage them to invest in agricultural improvements with greater confidence. Implementing insurance coverage would not only protect farmers from financial risks but also enhance their ability to participate in and benefit from the KCC scheme.

To address these pressing issues, several measures are necessary. Strengthening oversight and accountability is crucial to combat corruption and mismanagement. Regular audits, independent reviews, and stringent enforcement of anti-corruption measures can help ensure that loans are distributed fairly and resources are used appropriately. Introducing crop loan insurance is another critical step. By partnering with insurance companies and developing affordable insurance products tailored to farmers' needs, the scheme can provide essential financial protection. Enhancing financial literacy and support for farmers can also play a significant role. Training programs on financial management, loan administration, and risk mitigation can help farmers make informed decisions and reduce loan defaults. Additionally, utilizing technology to streamline the application, disbursement, and monitoring processes of the KCC scheme can improve transparency and efficiency. Digital platforms and data management systems can track loan usage and ensure effective allocation of funds, while also facilitating better communication between farmers, banks, and government agencies. As one of the respondents suggests:

"I would like to request that officials provide KCC crop insurance facilities and offer financial management training and product sales training to support the KCC scheme. This would be beneficial for farmers like me, especially considering our KCC loan repayment challenges. Shyam, 40 years old"

Shyam, like many farmers, is likely facing financial challenges or risks associated with farming. He believes that farmer's crop insurance facilities, along with financial management and product sales training, would be valuable tools to help him mitigate these challenges and improve his overall farming operations. This suggests that he recognizes the importance of both risk management and business skills in modern agriculture.

While the Kisan Credit Card scheme has the potential to greatly benefit farmers by providing necessary financial support for their agricultural activities, its current implementation is marred by issues of corruption, mismanagement, and a lack of adequate insurance coverage (Hoque, 2023). To address these

challenges, the government should implement improved oversight, introduce crop loan insurance, enhance financial literacy among farmers, and adopt technology to streamline processes. These reforms would help restore confidence in the scheme and ensure it meets its goal of supporting and empowering farmers. While training and crop insurance facilities do exist, they are often ineffective. Urgent policy reforms are necessary to address these shortcomings and fully realize the KCC scheme's potential for promoting agricultural growth and securing the livelihoods of the nation's farmers.

Conclusion

The Kisan Credit Card (KCC) scheme has been instrumental in providing structured credit to Indian farmers, thereby contributing significantly to agricultural development and improved farm incomes. However, its effectiveness is hampered by challenges such as low awareness, bureaucratic hurdles, inadequate infrastructure, and concerns about transparency. To maximize its potential, it is imperative to address these issues through enhanced farmer education, streamlined processes, improved infrastructure, and greater accountability. Additionally, integrating crop insurance can offer much-needed financial protection to farmers, further bolstering the KCC's impact. By implementing these measures, the KCC can continue to serve as a vital tool for empowering farmers and driving sustainable agricultural growth in India.

Reference

Abhishek, T., Srivastava, S., & Sailaja, P. (2021). Loan as a backbone for agriculture: Evidence from banks. *Turkish Journal of Computer and Mathematics Education*, 12(11), 106-114.

Behera, U. K., & France, J. (2016). Integrated farming systems and the livelihood security of small and marginal farmers in India and other developing countries. *Advances in agronomy*, 138, 235-282. <https://doi.org/10.1016/bs.agron.2016.04.001>

Bey, B. S., Singh, R., Athawale, S., & Chiphang, S. (2023). Status, trends and challenges of Kisan Credit Cards scheme

in north eastern region of India. *Indian Journal of Agricultural Marketing*, 37(3spl), 104-122.

Bhanot, D., Farias, V., & Sinha, D. (2024). Interest subvention for crop loans in India: Win-win or win-lose?. *Journal of Policy Modeling*.

Bhaskaran, R. (2017). What Constrains Agriculture Credit to India? How to Improve the Outreach? An Essay on Current Approach and Practices. *Indian Journal of Agricultural Economics*, 72(2), 177-194.

Chanda, A. (2020). Evaluating the kisan credit card scheme: Some results for Bihar and India. *Arthaniti: Journal of Economic Theory and Practice*, 19(1), 68-107. <https://doi.org/10.1177/0976747919872353>

Chohan, U. W. (2024). Writings at CASS (2018-23), Volume 2: National Economy.

Dasgupta, P., & Dey, N. B. (2016). *Pattern of Agricultural Financing by Commercial Banks in Hailakandi District of Assam-With Special Reference to KCC Scheme* (Doctoral dissertation).

Ferroni, M., & Zhou, Y. (2012). Achievements and challenges in agricultural extension in India. *Global Journal of Emerging Market Economies*, 4(3), 319-346. <https://doi.org/10.1177/0974910112460435>

Gautam, S., Rahut, D. B., Guzman, D. B., Dangol, P., KC, D. B., Beshir, A., & Choudhary, D. (2024). Does subsidizing seed help farmers? Nepal's rice seed subsidies. *Development Policy Review*, e12802.

Gulati, A., & Juneja, R. (2019). Agricultural credit system in India: Evolution, effectiveness and innovations. <http://dx.doi.org/10.2139/ssrn.3454423>

Hemamalini, P. (2015). KCC-An Effective Rural Credit Instrument to Small and Marginal Farmers-A Case Study. *International Journal in Management & Social Science*, 3(12), 254-253.

Hoque, M. (2023). Agro e-Governance projects in India.

Jadhav, A., Manohar, K. N., Rajesh, C. M., Prasad, R., Anil, K., Bhat, P. P., & Jagadeesh, V. (2024). Revolutionizing Farm

Management with Modern Agricultural Extension Techniques: A Review. *Journal of Scientific Research and Reports*, 30(7), 1086-1099.

Jones, N., Tafere, Y., & Woldehanna, T. (2010). Gendered risks, poverty and vulnerability in Ethiopia: To what extent is the Productive Safety Net Programme (PSNP) making a difference. *London: Overseas Development Institute*.

Karthika, V. (2012). *Impact of Institutional Credit on Agricultural Production in Kerala* (Doctoral dissertation, Department of Rural Banking & Finance Management, CCPM, Vellanikkara).

Kumar, A., Sonkar, V. K., & Aditya, K. S. (2023). Assessing the impact of lending through kisan credit cards in rural india: evidence from Eastern India. *The European Journal of Development Research*, 35(3), 602-622. <https://doi.org/10.1057/s41287-022-00522-4>

Kumar, A., Yadav, C., Jee, S., Kumar, S., & Chauhan, S. (2011). Financial innovation in Indian agricultural credit market: Progress and performance of Kisan Credit Card. *Indian Journal of Agricultural Economics*, 66(3).

Muralidharan, T. (2023). Strengthening the institutional mechanism of agricultural credit: Policies and practice—the 1960s to 2019—a review. *Agricultural Sector in India*, 291-310. <https://doi.org/10.4324/9781003434672>

Namboodiri, N. V. (2005). Agricultural credit and indebtedness. *Indian Journal of Agricultural Economics*, 60(3).

Narayanan, S., & Mehrotra, N. (2019). Loan Waivers and Bank Credit: Reflections on the Evidence and the Way Forward. *Vikalpa*, 44(4), 198-210.

Rath, S., & Parida, J. K. (2024). Innovation in Agrochemical Industry: The Role of Kisan Credit Scheme (KCC) in Facilitating Entrepreneurship and Sustainability. *Journal of Informatics Education and Research*, 4(2).

Shilomboleni, H., Recha, J., Radeny, M., & Osumba, J. (2023). Scaling climate resilient seed systems through SMEs in Eastern and Southern Africa: challenges and opportunities. *Climate and Development*, 15(3), 177-187. <https://doi.org/10.1080/17565529.2022.2073956>

Sowmya, K. C. (2010). *Indebtedness of Farmers: A Study of Farmer Borrowers of Primary Agricultural Credit Societies in Palakkad District of Kerala State*. (Doctoral dissertation, Department of Rural Banking and Finance Management, College of Co-operation, Banking & Management, Vellanikkara).

Tripathi, G., Dhodia, A., Giri, A., Rathore, V., Verma, A., Shukla, A., & Verma, L. K. (2023). Government Agriculture Schemes in India: A Review. *Asian Journal of Agricultural Extension, Economics & Sociology*, 41(11), 58-67. <https://doi.org/10.9734/ajaees/2023/v41i112261>