

Impact of Institutional Agricultural Credit on Farm Income and Economic Well-being of Farmers: A Study of Selected Districts of Rajasthan

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Abstract

Agricultural credit is one of the important components of agricultural development. This is because the agricultural production involves huge expenditure before the realization of crop income. Farmers need finance for seeds, fertilizers, pesticides, irrigation, labor, machinery, livestock and post-harvest activities. In Rajasthan, the importance of agricultural credit is all the more because agricultural production is characterized by uncertainty in climate, inequality in irrigation facilities, variations in size of landholdings and differences in access to agricultural markets. This paper studies the effect of institutional agricultural credit on farm income and economic status of farmers with special reference to selected districts of Rajasthan, especially Bhilwara and Udaipur. The study is based on secondary information collected from NABARD, Government of Rajasthan, Reserve Bank of India (RBI) and recent academic studies published during 2021-2025. The analysis shows that institutional credit can increase farm income by easing liquidity constraints, allowing timely purchase of inputs and investment in productive assets. At the household level, access to formal credit can also reduce reliance on informal lenders and strengthen consumption capacity and economic resilience. But credit isn't just working. The ultimate contribution of credit to farmer welfare depends on availability, adequacy, timing, interest cost, repayment conditions and productive utilization of credit. The study argues that Rajasthan needs a district-specific and integrated agricultural-credit strategy that combines institutional finance with irrigation, insurance, extension service, technology and market access.

Keywords: Institutional agricultural credit, farm income, economic well-being, Kisan Credit Card, Rajasthan, financial inclusion, agricultural finance.

1. Introduction

Agriculture continues to be a major source of livelihood and economic activity in rural Rajasthan. But farmers need financial resources to produce agricultural products long before they make money selling them. At the start of a production cycle, farmers have to purchase inputs such as seeds, fertilizer, pesticides, fuel, etc. and incur expenses on labor and irrigation. Agricultural machinery, wells, livestock, storage and other productive infrastructure may also need more investments. Thus availability of timely and affordable credit for agriculture is very important for sustaining the agricultural activities and enhancing productivity.

Institutional agricultural credit here mainly refers to loans provided through formal financial institutions such as commercial banks, Regional Rural Banks, cooperative banks and specialized agricultural credit mechanisms such as the Kisan Credit Card (KCC). Importance of Institutional Finance Expansion of institutional finance is important as dependence on informal sources can make farmers vulnerable to high borrowing costs and unfavorable repayment conditions.

Rajasthan provides a particularly pertinent context to explore this topic. The state is characterized by a high level of agricultural diversity but rainfall variations, water scarcity and disparities in irrigation infrastructure have an influence on agricultural production. Such situations result in a wide range of financial needs of the farmers in the districts. Hence a uniform agricultural-credit policy may not give uniform results.

The disbursement of agricultural credit in the state was around ₹1,44,817.91 crore in 2023–24, out of which farm credit was around ₹1,28,133 crore, as per the NABARD's Rajasthan State Focus Paper for 2025–26. Agriculture investment credit was estimated at ₹42,710 crore. These figures indicate the extent of formal financial support available to

agriculture in Rajasthan. However, the presence of a large credit system does not imply that all farmers receive adequate and timely finance.

Thus, the major problem of this study is to examine the extent to which institutional credit contributes to higher farm income and improved economic well-being and what factors determine the strength of this relationship.

2. Objectives of the Study

The study has the following objectives:

1. To examine the role of institutional agricultural credit in improving farm income in Rajasthan.
2. To analyse recent empirical evidence concerning Kisan Credit Card and institutional agricultural finance.
3. To examine differences in agricultural-credit requirements across selected districts.
4. To assess the relationship between institutional credit and the economic well-being of farming households.
5. To suggest policy measures for improving the effectiveness and inclusiveness of agricultural finance in Rajasthan.

3. Review of Literature

Maurya & Vishwakarma, 2021 discussed the status of agricultural credit and indebtedness in India and identified variations in borrowing patterns among agricultural households and landholding categories. Their findings suggest that institutional finance has been adopted more and more in the rural credit structure but access to formal credit is uneven. The study is relevant for Rajasthan as farm size and socio-economic characteristics affect the potential to access formal loans by farmers. The authors thus highlight the need to increase access to institutional credit for vulnerable farm households.

Nayak, Barodawala (2021) studied the relationship between institutional credit and agricultural output using state panel data. Their analysis presents an important caveat to the assumption that increases in credit will necessarily produce proportional increases in agricultural output. The findings of this research indicate that impacts of irrigation and net cultivated area may be significant on agricultural performance. The result shows that institutional credit is more effective when combined with complementary productive infrastructure. This is especially so in the case of Rajasthan where availability of irrigation varies widely in different geographical areas.

Nigade, Deshmukh & Kamble (2022) Nigade, Deshmukh and Kamble studied Kisan Credit Card beneficiaries and studied the relationship between socio-economic characteristics of farmers and impact of KCC scheme. Their study confirms the importance of KCC as a formal channel for catering to the short-term financial requirements of farmers. The study also shows that the characteristics of beneficiary farmers impact on the effectiveness of institutional credit programs. This implies credit policies should be tailored to the socio-economic situation of farmers and not be based on aggregate lending targets.

Sonia, Malik & Sanjay (2022) Factors Influencing Adoption of Kisan Credit Card Scheme: A Study Sonia, Malik and Sanjay (2015) Their findings show that education and land area owned have a positive impact on KCC adoption, but practical barriers such as documentation requirements, difficulties in repaying and land fragmentation can limit participation. The study found that financial inclusion is driven by institutional and household level factors. Therefore, an increase in either the number of bank branches or loan targets may not be enough to eliminate barriers to access.

Pavithra & Singh (2025) Singh and Pavithra studied the effectiveness of financial inclusion programs for agricultural households with special focus on Kisan Credit Card. They econometrically analyzed NSS 77th-round data and found considerable regional variation in KCC coverage and explored correlates of access. Their results underline the importance of financial-inclusion policies tailored to specific regions. The study is particularly relevant to Rajasthan for

the large variation of agricultural households across districts in landholding, cropping patterns, infrastructure and access to finance.

4. Data and Methodology

The study is descriptive and analytical based on secondary data. Information has been taken from NABARD State Focus Papers, Government of Rajasthan Publications, RBI Material and Recent Academic Literature.

To demonstrate the variations in the requirements of agricultural credit, selected districts of Bhilwara and Udaipur are taken. The district comparison is illustrative, not a causal impact assessment. Similar household-level data on both credit use and farm income are not available from the secondary sources cited. The present study does not assert that differences in district-level credit potential are directly responsible for differences in household income.

Table 1. Agricultural Credit Indicators in Rajasthan

Indicator	Value
Agricultural credit disbursement, 2023–24	₹1,44,817.91 crore
Farm credit, 2023–24	₹1,28,133 crore
Agricultural investment credit	₹42,710 crore
Eligible farmers for KCC	70.36 lakh
Active KCCs as of 31 March 2024	67.10 lakh
Approximate KCC coverage gap	3.26 lakh

Source: NABARD, *Rajasthan State Focus Paper 2025–26*.

The table shows a significant increase in formal agricultural finance in Rajasthan. However, the disparity between those eligible to take advantage of the KCC and those who are actually using the KCC indicates that some of the farmers eligible for the KCC are not part of the active institutional-credit system.

Table 2. Selected District-Level Crop-Loan Potential, 2021–22

District	Crop-loan potential (₹ lakh)	Approximate value (₹ crore)
Bhilwara	313,345.42	3,133.45
Udaipur	84,702.80	847.03

Source: NABARD, *Rajasthan State Focus Paper 2021–22*.

The wide variation between the two districts emphasizes the importance of district specific credit planning. The credit requirement is determined by the area under cultivation, cropping pattern, irrigation conditions, input requirements and scale of agricultural activity.

5. Institutional Credit and Farm Income

There are a number of inter-related mechanisms through which institutional credit and farm income are related. The first is the liquidity effect. Farmers have to spend money on agricultural production before they earn revenue from crops. Farmers can get the required inputs at the right time when they have access to institutional finance, as they don't have cash to wait for agricultural operations.

The second channel is the productivity effect. Access to finance can enable farmers to use improved seeds, fertilizers, irrigation, machinery and other productivity-enhancing inputs. Increased productivity may lead to increased gross output and, where additional costs are controlled, farm profitability.

The third mechanism is the investment affect. Long-term institutional loans can be used to finance irrigation systems, tractors, agricultural machinery, livestock, storage and other productive assets. These investments can reduce production costs and generate income for many growing seasons.

The fourth mechanism is the debt substitution effect. Formal loans can reduce reliance on informal sources of finance. Informal borrowing may come with higher interest rates or less flexible repayment terms. Thus, increased availability of institutional finance may improve the financial situation of farming households through the reduction in the cost of borrowing.

NABARD's All India Rural Financial Inclusion Survey provides evidence of the increasing role of institutional finance. The share of agricultural households taking loans from institutional sources alone went up from 60.5% to 75.5% between 2016-17 and 2021-22. During the same period the share of households with only non-institutional borrowing fell from 30.3 percent to 23.4 percent.

This transition is important because the formalization of agricultural borrowing can improve the quality of financial access even if total indebtedness does not necessarily disappear.

6. Kisan Credit Card and Financial Inclusion

The Kisan Credit Card has become one of the most important instruments for providing short term agricultural finance in India. The scheme helps eligible farmers to get working capital for crop production and other agricultural needs.

In Rajasthan, cooperative institutions have been extensively used for implementing agricultural-credit programs. In 2023-24, cooperative banks distributed crop loans to 31.40 lakh farmers of ₹22,344.82 crore, according to the state's Economic Review. The state's interest-free crop-loan schemes for eligible farmers are meant to promote timely repayments and ease the financial burden of agricultural loans.

However, the existence of a banking institution alone does not determine access to KCC. Farmers may face problems of documentation, land records, scattered holdings, limited awareness, repayment capacity and administrative procedures. For instance, Sonia et al. (2022) found documentation and repayment issues as important constraints.

Thus, financial inclusion needs to be understood as more than the opening of an account or the issuing of a KCC. Credit must be usable, sufficient, timely and affordable for inclusion to work.

7. Credit and Economic Well-being

Agricultural credit has effects beyond farm income. Economic well being can be measured by household consumption, saving, ownership of assets, debt, investment ability and susceptibility to economic shocks.

A farmer who secures productive institutional credit may increase crop output and thus earn more disposable income. Households with higher incomes can spend more on food, education, healthcare and housing. Productive investment can also improve the household's asset base and future earning capacity.

NABARD's evidence on financial inclusion shows rural household expenditure improving over time. Average monthly household expenditure went up from about Rs 6,646 in 2016-17 to Rs 11,262 in 2021-22. Not all of this increase is due to institutional credit, but it is a sign of an overall change in the economy that is associated with a greater involvement in formal finance.

Credit can make you more resilient, too. Farmers are frequently subject to rainfall variability, crop disease, or price changes, which can lead to temporary income shocks. Such times can be eased through access to formal finance for liquidity. However, excessive borrowing without commensurate capacity to repay can have the reverse effect of

increasing indebtedness. Thus the welfare effect of credit depends crucially on whether borrowing raises enough additional income to service the debt.

8. Major Challenges

The institutional agricultural credit of Rajasthan is influenced by four major challenges.

First, unequal access. Small and marginal farmers, tenant farmers and cultivators with incomplete land documentation are likely to find it more difficult to get formal credit.

Second, the loan amount is not enough. Nominal access to credit does not guaranty that the amount borrowed is sufficient to cover the actual cultivation cost.

Third, timing of credit Agricultural production varies widely by season. The productive value of credit extended after sowing or after the critical input-purchasing period may be considerably less.

Fourth, inadequate supporting infrastructure. Recent literature has shown that irrigation, market access, extension and cultivated area can have a significant impact on agricultural productivity. Credit without these complementaries tends to produce weaker income effects.

9. Policy Recommendations

The analysis yields five policy priorities.

1. Universalize effective coverage of KCC. "Eligible farmers outside the active institutional-credit system should be identified through district-level databases and targeted outreach.
2. Streamline procedures for vulnerable farmers. Documentation and application requirements for smallholders and other farmers with institutional barriers should be simplified.
3. Raise investment credit. Besides short-term crop loans, emphasis should also be laid on irrigation, farm machinery, livestock, storage and post-harvest infrastructure.
4. Credit and agricultural services integration. Credit schemes need to be linked with crop insurance, extension services, digital agricultural information, market linkages and technology adoption.
5. Improve financial literacy. Farmers should be given clear information on interest rates, repayment schedules, credit limits, insurance and responsible borrowing.

10. Conclusion

Institutional agricultural credit is an important instrument for improving farm income and economic well-being in Rajasthan but its impact should not be interpreted in isolation. Formal credit can help alleviate liquidity constraints, allow for the timely purchase of inputs, support investment, and reduce dependence on informal lenders. Such mechanisms can lead to productivity gains and higher household income.

At the same time, recent research shows that the effect of credit is dependent on complementary factors, such as irrigation, land availability, farmer characteristics, infrastructure and market conditions. The large differences in estimated crop-loan requirements between Bhilwara and Udaipur further show that Rajasthan's agricultural-credit strategy needs to recognize heterogeneity across districts.

The future goal should not be the mere increase of the total volume of agricultural credit disbursed. Policy should be focused instead on ensuring that the right farmers get the right amount of credit at the right time at an affordable cost. Institutional finance, when combined with irrigation, insurance, technology, extension and market access, is more likely to achieve sustainable improvements in farm profitability and household economic well-being.

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