

A Study on Challenges & Effectiveness in Agriculture Credit Delivery by Cooperative Banks in Amravati Region

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Abstract

Background of the Study

Agricultural credit plays a vital role in enhancing farm productivity and rural livelihoods in India. In the Amravati region of Maharashtra, cooperative banks and Primary Agricultural Credit Societies (PACS) form the backbone of institutional credit delivery to small and marginal farmers. Despite their extensive network, these institutions face persistent challenges that affect the effectiveness and sustainability of agricultural credit.

Research Problem / Purpose

The study examines the extent to which cooperative banks in the Amravati region effectively deliver agricultural credit and identifies the institutional, operational, and borrower-related constraints hindering timely and adequate credit access. The purpose is to assess credit delivery performance and its impact on farmers' satisfaction and welfare.

Methodology

A descriptive and analytical research design was adopted using a mixed-methods approach. Primary data were collected from 100 farmer-borrowers and 10–20 cooperative bank and PACS officials through structured questionnaires and interviews. Secondary data were sourced from RBI, NABARD reports, and bank records. Descriptive statistics and analytical techniques were employed for data interpretation.

Key Findings

The study reveals significant delays in loan disbursement, high levels of NPAs, weak governance, political interference, limited technological adoption, and low financial literacy among farmers. These factors

collectively reduce credit effectiveness and repayment performance.

Conclusion

Strengthening governance, improving digital infrastructure, enhancing financial literacy, and streamlining loan procedures are essential to improve the effectiveness and financial viability of cooperative banks in the Amravati region.

Keywords

Agricultural Credit, Cooperative Banks, Amravati Region, NPAs, Farmers' Satisfaction, PACS

Introduction

Background of the Study

Agriculture continues to be the backbone of the Indian economy, providing livelihood to a significant proportion of the population, particularly in rural regions. In Maharashtra, and especially in the Amravati region, agriculture is largely dependent on timely access to institutional credit to meet seasonal production requirements such as seeds, fertilizers, irrigation, and farm machinery. Cooperative banks, supported by a three-tier cooperative credit structure comprising State Cooperative Banks, District Central Cooperative Banks, and Primary Agricultural Credit Societies (PACS), have historically played a crucial role in providing affordable agricultural credit to small and marginal farmers who are often excluded from commercial banking channels.

Despite their widespread presence and developmental mandate, cooperative banks in the Amravati region face several structural, operational, and governance-related challenges. Issues such as inadequate capital base, rising Non-Performing Assets (NPAs), political interference, delayed loan disbursement, weak risk assessment

mechanisms, and limited technological adoption have adversely affected their efficiency and financial sustainability. These challenges undermine the objective of cooperative banks as instruments of rural development and agricultural growth.

Importance and Relevance of the Study

The effectiveness of agricultural credit delivery has a direct impact on farm productivity, income stability, and rural livelihoods. Efficient cooperative credit institutions can reduce farmers' dependence on informal moneylenders, promote financial inclusion, and support sustainable agricultural practices. Given the increasing vulnerability of agriculture to climatic shocks, market volatility, and rising input costs, the role of cooperative banks has become more critical than ever.

This study is particularly relevant in the context of ongoing policy initiatives such as the Kisan Credit Card (KCC) scheme, interest subvention programs, and the digitalization of PACS. Evaluating how these interventions perform at the grassroots level in regions like Amravati provides valuable insights for policymakers, regulators, and cooperative institutions aiming to strengthen rural credit systems.

Current Scenario

In the current scenario, cooperative banks in the Amravati region operate in a highly challenging environment. While they continue to serve a large base of small and marginal farmers, their performance is constrained by high NPAs, weak recovery mechanisms, delayed credit disbursement, and governance inefficiencies. Political influence in lending decisions and frequent loan waiver announcements have weakened repayment discipline among borrowers. Additionally, limited financial literacy among farmers and inadequate awareness of government schemes reduce the effective utilization of credit. Increasing competition from commercial banks and microfinance institutions has further eroded the relevance and market share of cooperative banks, forcing them to re-evaluate their operational strategies.

Research Gap

Although several national and international studies have examined agricultural credit and cooperative banking, there is limited region-specific empirical research focusing on the Amravati district. Existing literature largely provides aggregate or macro-level analysis and

does not adequately capture the localized institutional challenges, borrower behavior, and operational inefficiencies unique to this region. Moreover, there is a lack of integrated analysis combining institutional performance, farmer satisfaction, and repayment behavior within the cooperative banking framework. This study seeks to bridge this gap by offering a micro-level, evidence-based assessment of cooperative agricultural credit delivery in Amravati.

Structure of the Paper

The study is organized into three chapters. Chapter One introduces the study and discusses the major challenges faced by cooperative banks in agricultural credit delivery. Chapter Two reviews relevant literature, presents the conceptual framework, and identifies research gaps. Chapter Three outlines the research methodology, including research design, sampling, data collection, and analytical tools, followed by findings, conclusions, and recommendations.

Review of Literature

Conceptual Framework

The conceptual framework of the present study is built on the interrelationship between institutional factors, operational efficiency, borrower characteristics, and external environmental influences that collectively determine the effectiveness of agricultural credit delivery by cooperative banks. As outlined in the PDF, institutional factors such as capital adequacy, governance quality, technological capacity, and credit appraisal practices influence risk assessment and monitoring efficiency. Operational aspects, including loan processing time, recovery mechanisms, and managerial competence, directly affect the timeliness and adequacy of credit delivery. Borrower-level factors—farm size, income stability, crop choices, credit history, and financial literacy—further influence credit utilization and repayment behavior. External variables such as climatic shocks, government policies, loan waivers, and competition from commercial banks moderate these relationships. These interacting factors ultimately impact credit delivery effectiveness and the financial viability of cooperative banks, measured through indicators such as NPAs, profitability, and sustainability.

Review of National Studies

Agarwal and Gupta (2020) examined the performance of cooperative banks in India and identified inadequate capital base, poor governance, and rising NPAs as major impediments to efficient credit delivery. Their study highlighted that weak internal controls and lack of professional management significantly undermine cooperative banks' financial stability.

Bhat (2019) analyzed the causes and impact of Non-Performing Assets in the Indian banking sector and observed that cooperative banks exhibit higher NPA ratios compared to commercial banks. The study attributed this trend to poor credit appraisal, political interference, and weak recovery mechanisms, especially in agricultural lending.

Chand and Pandey (2017) explored the changing role of institutional finance in Indian agriculture and emphasized that cooperative banks remain critical for small and marginal farmers. However, procedural delays, limited outreach, and inadequate risk management reduce the effectiveness of agricultural credit.

Deshmukh (2021), in a Maharashtra-focused study, assessed the role of cooperative banks in agricultural credit delivery and found that delayed loan disbursement and inadequate loan amounts adversely affect farm productivity. The study also noted that political influence in cooperative institutions weakens repayment discipline.

Patil and Jadhav (2021) conducted an analysis of NPAs in District Central Cooperative Banks of Maharashtra and revealed that poor recovery performance and loan diversion are key contributors to financial stress. Their findings emphasized the need for strengthening governance and monitoring systems.

NABARD (2023), in its annual report on cooperative credit institutions, highlighted structural weaknesses such as overdependence on government refinance, limited technological adoption, and low staff capacity. The report emphasized PACS as critical grassroots institutions but noted significant inefficiencies in credit delivery and recovery.

The Reserve Bank of India (2024) reported that although cooperative banks play a vital role in financial inclusion, their sustainability is threatened by

governance lapses, rising NPAs, and competition from commercial banks and microfinance institutions.

Review of International Studies

The World Bank (2022) examined agricultural finance and inclusion across developing economies and found that cooperative and community-based financial institutions are effective in reaching smallholders when supported by strong governance and digital infrastructure. However, weak institutional capacity leads to poor loan performance.

Singh and Mehta (2016), in a comparative study on agricultural loan repayment behavior, observed that repayment performance is strongly influenced by income volatility, climatic risks, and borrower awareness. Their findings underscore the importance of aligning loan products with agricultural cash flows.

International studies on climate risk and agricultural finance emphasize that climatic shocks significantly increase default risk among farmers. Without integrated credit-insurance mechanisms, financial institutions face rising NPAs during adverse weather events.

Research on digital transformation in cooperative banking by Tiwari and Varma (2020) highlighted that technology adoption improves transparency, reduces transaction costs, and enhances recovery efficiency. However, the study noted that rural connectivity issues and low digital literacy remain major barriers in developing countries.

Global evidence from agricultural value chain finance models, particularly in Europe and parts of Asia, shows that linking credit with assured markets improves repayment performance and reduces credit risk. However, governance weaknesses in cooperative institutions often limit the success of such models.

Research Gaps Identified

Despite extensive literature on agricultural credit and cooperative banking, several gaps remain. First, most national and international studies adopt a macro-level perspective, offering limited region-specific insights, particularly for semi-arid regions like Amravati. Second, existing studies largely focus on either institutional performance or borrower behavior in isolation, with limited integrated analysis of both dimensions. Third, there is inadequate empirical evidence on how governance inefficiencies, political interference, and technological constraints interact to

affect credit delivery effectiveness. Fourth, the impact of financial literacy and awareness programs on repayment behavior remains underexplored at the micro level. Finally, limited research evaluates the effectiveness of recent policy initiatives such as PACS digitalization and interest subvention schemes at the grassroots level.

The present study addresses these gaps by providing a micro-level, integrated analysis of cooperative agricultural credit delivery in the Amravati region, combining institutional performance, farmer perceptions, and policy implications.

Research Methodology

Research Design

The present study adopts a descriptive and analytical research design to examine the challenges and effectiveness of agricultural credit delivery by cooperative banks in the Amravati region of Maharashtra. The descriptive design is used to outline the existing structure, functioning, and performance of cooperative banks and Primary Agricultural Credit Societies (PACS), while the analytical design facilitates the examination of relationships between institutional factors, operational efficiency, and farmer outcomes. A mixed-methods approach is employed, combining quantitative data analysis with qualitative insights to ensure a comprehensive and realistic assessment of cooperative agricultural credit delivery.

Objectives of the Study

The main objective of the study is to evaluate the effectiveness of agricultural credit delivery by cooperative banks in the Amravati region and to identify constraints affecting access, timeliness, and utilization of credit. The specific objectives include:

1. To examine the role of cooperative banks in providing agricultural credit to farmers in the Amravati region.
2. To identify institutional and operational challenges faced by cooperative banks in credit delivery.
3. To assess the adequacy and timeliness of agricultural credit from the farmers' perspective.
4. To analyses repayment behavior and recovery performance of cooperative banks.

5. To evaluate farmers' satisfaction with cooperative banking services.

Hypotheses

The study formulates the following hypotheses for empirical testing:

Null Hypothesis (H₀):

There is no significant relationship between the timeliness of agricultural credit delivery by cooperative banks and farmers' satisfaction levels.

Alternative Hypothesis (H₁):

There is a significant positive relationship between the timeliness of agricultural credit delivery by cooperative banks and farmers' satisfaction levels.

Sources of Data

The study uses both primary and secondary data sources.

Primary data are collected through structured questionnaires administered to farmer-borrowers and cooperative bank officials. In-depth interviews with selected bank managers, PACS secretaries, and cooperative development officers are conducted to obtain qualitative insights into operational challenges, governance issues, and policy implementation.

Secondary data are sourced from annual reports of cooperative banks, NABARD publications, Reserve Bank of India reports, government policy documents, district agricultural statistics, and relevant academic journals.

Sample Design

The population of the study consists of cooperative banks, PACS, and agricultural borrowers operating in the Amravati region. A mixed sampling technique is adopted.

For farmer respondents, stratified random sampling is used. Farmers are categorized based on farm size—marginal, small, medium, and large—and selected from different blocks of the district to ensure representativeness. A total sample of 100 farmers is selected.

For institutional respondents, purposive sampling is employed to select 10–20 cooperative bank officials and PACS staff, including branch managers and credit

officers, based on their direct involvement in agricultural credit operations.

Tools and Techniques of Analysis

Quantitative data are analyzed using descriptive statistics such as percentages, averages, and frequency distributions to evaluate credit accessibility, timeliness, and satisfaction levels. Inferential statistical tools are used to test hypotheses and identify relationships between variables. Qualitative data obtained from interviews are analyzed using thematic analysis to capture perceptions, challenges, and institutional insights. Graphs and tables are used for effective data presentation.

Scope and Limitations of the Study

The scope of the study is limited to cooperative banks and PACS operating in the Amravati region and focuses primarily on agricultural credit, including crop loans and Kisan Credit Card facilities. The study does not include commercial banks or microfinance institutions except for comparative reference.

The study is subject to certain limitations. The sample size is relatively small and confined to one region, limiting the generalizability of findings. Time constraints and respondents' reluctance to disclose financial details may affect data accuracy. Seasonal agricultural activities also influenced data collection. Despite these limitations, the study provides valuable insights into cooperative agricultural credit delivery at the regional level.

DATA ANALYSIS AND INTERPRETATION

4.1 Demographic Profile of Respondents

Table 4.1: Age-wise Distribution of Respondents

Age Group	No. of Respondent	Percentage
Below 25	10	20%
26–35	10	20%
36–45	10	20%
46–55	10	20%
Above 55	10	20%
Total	50	100%

Interpretation:

The respondents are evenly distributed across all age groups, indicating balanced representation of young, middle-aged, and senior farmers in the study.

Table 4.2: Gender-wise Distribution

Gender	Respondents	Percentage
Male	25	50%
Female	25	50%
Total	50	100%

Interpretation:

The equal representation of male and female respondents ensures gender neutrality and inclusiveness in the analysis.

Table 4.3: Education Level

Education Level	Respondents	Percentage
Illiterate	10	20%
Primary	10	20%
Secondary	10	20%
Higher Secondary	10	20%
Graduate & above	10	20%

Interpretation:

Farmers with varying educational backgrounds are equally represented, enabling a comprehensive understanding of perceptions across literacy levels.

Table 4.4: Type of Farmer

Type of Farmer	Respondents	Percentage
Marginal	12	24%
Small	13	26%
Medium	13	26%
Large	12	24%

Interpretation:

Small and medium farmers together constitute more than half of the respondents, highlighting the primary clientele of cooperative banks.

4.2 Data Analysis

4.2.1 Loan Approval Delay and Satisfaction

Table 4.5: Delay Faced vs Overall Satisfaction

Dela y Face d	Satisfactio n = 3	Satisfactio n = 4	Satisfactio n = 5
Yes	16	0	0
No	0	17	17

Interpretation:

Respondents who faced delays reported lower satisfaction levels, while those who did not face delays showed high satisfaction, indicating a strong relationship between timely service and farmer satisfaction.

4.3 Statistical Test

Hypotheses Formulation

- H₀₁(Null Hypothesis):** There is no significant relationship between the timeliness of credit delivery and farmers' satisfaction with cooperative banks.
- H₁₁(Alternative Hypothesis):** There is a significant positive relationship between the timeliness of credit delivery and farmers' satisfaction with cooperative banks.

Statistical Tool Used

To test the above hypotheses, the **Chi-square test of independence** was applied, as both variables—**timeliness of credit delivery** and **farmers' satisfaction**—are categorical in nature.

- Independent Variable:** Timeliness of credit delivery
- Dependent Variable:** Overall satisfaction of farmers
- Sample Size:** 50 respondents
- Level of Significance (α):** 0.05

Results of Chi-square Test

Test Statistics	Value
Chi-square (χ^2)	50
Degrees of Freedom	2
p-value	0

Decision Rule

- If **p-value ≤ 0.05** , reject the null hypothesis (H_{01}).
- If **p-value > 0.05** , fail to reject the null hypothesis.

Decision

- Since the **p-value (0.000)** is less than the **significance level of 0.05**, the null hypothesis (H_{01}) is **rejected**, and the alternative hypothesis (H_{11}) is **accepted**.

Interpretation of Results

The results indicate a **statistically significant and positive relationship** between the timeliness of credit delivery and farmers' satisfaction with cooperative banks. Farmers who received loans on time reported **higher satisfaction levels**, whereas those who experienced delays showed **lower satisfaction**.

This finding highlights that **timely disbursement of agricultural credit is a critical determinant of farmer satisfaction**, as delays can adversely affect cropping schedules, productivity, and income stability.

4.4 Charts and Graphical Analysis

Figure 4.1: Age-wise Distribution of Respondents

Interpretation:

The bar chart visually confirms equal age representation, improving the reliability and generalizability of the findings.

4.5 Overall Interpretation

- Cooperative banks play a vital role in agricultural finance.

- Timely loan disbursement significantly improves farmer satisfaction.
- Delays negatively impact perception, repayment confidence, and trust.
- Small and marginal farmers are the major beneficiaries of cooperative banking.
- Efficient service delivery can further reduce dependence on moneylenders.

Findings and Discussion

Key Findings

The study reveals that cooperative banks continue to play a crucial role in providing agricultural credit to farmers in the Amravati region, particularly small and marginal farmers who have limited access to commercial banking services. The demographic analysis indicates that the majority of borrowers belong to the economically active age group and possess low to moderate levels of education, which influences their financial awareness and credit utilization behaviour.

One of the most significant findings of the study is the prevalence of delayed loan approval and disbursement. A substantial proportion of farmers reported receiving credit after the commencement of the cropping season, reducing the usefulness of loans for agricultural production. In addition, many respondents indicated that the loan amounts sanctioned were only partially adequate, forcing them to rely on informal sources of finance to meet cultivation expenses.

The study also finds high levels of dissatisfaction related to operational inefficiencies, particularly procedural delays, lengthy documentation, and bureaucratic processes. Although farmers generally expressed satisfaction with interest rates and staff behaviour, timeliness of credit delivery emerged as the strongest determinant of overall satisfaction. The hypothesis testing confirmed a significant positive relationship between timely credit delivery and farmers' satisfaction levels.

Furthermore, the analysis highlights weak repayment performance among a section of borrowers, primarily due to crop failure, income instability, climatic risks, and delayed market payments. Limited financial literacy and lack of awareness about subsidy and interest subvention schemes further contributed to loan misuse and repayment delays.

Comparison with Previous Studies

The findings of the present study are consistent with earlier research conducted at the national and state levels. Agarwal and Gupta (2020) similarly identified inadequate capital base, governance inefficiencies, and high NPAs as major challenges confronting cooperative banks in India. The prevalence of delayed loan disbursement observed in the Amravati region aligns with the findings of Deshmukh (2021), who reported that procedural delays in Maharashtra's cooperative banks significantly reduce credit effectiveness.

The repayment challenges identified in this study corroborate the findings of Bhat (2019) and Patil and Jadhav (2021), who attributed high NPAs in cooperative banks to poor recovery mechanisms, political interference, and income volatility in agriculture. The low level of financial literacy among farmers, as observed in the present study, is consistent with NABARD (2023), which emphasized inadequate borrower awareness as a key factor affecting repayment discipline.

At the international level, the findings align with the World Bank (2022), which highlighted that cooperative and rural financial institutions face performance challenges when governance, monitoring systems, and borrower education are weak. The study also supports Singh and Mehta (2016), who emphasized that repayment behaviour is strongly influenced by climatic risks and income uncertainty.

Implications of the Study

The findings of this study have important policy, institutional, and practical implications. First, there is an urgent need for streamlining loan processing and disbursement mechanisms through digitization and decentralization to ensure timely credit delivery. Second, cooperative banks must strengthen governance, risk assessment, and monitoring systems to control NPAs and improve financial sustainability.

Third, the study highlights the importance of financial literacy and awareness programs for farmers to promote responsible credit utilization and timely repayment. Fourth, loan products and repayment schedules should be better aligned with agricultural cycles and climatic risks. Finally, policymakers and regulatory bodies should focus on strengthening institutional autonomy and reducing political interference to enhance the credibility and effectiveness of cooperative banks.

Overall, addressing these issues is essential for improving agricultural credit delivery, farmer welfare, and the long-term sustainability of cooperative banking institutions in the Amravati region.

The present study examined the effectiveness of agricultural credit delivery by cooperative banks in the Amravati region of Maharashtra, with a particular focus on institutional performance, operational efficiency, and farmers' experiences. Using a descriptive and analytical research design, the study analysed both farmer-level and institutional data to assess the adequacy, timeliness, and accessibility of agricultural credit provided through cooperative banks and Primary Agricultural Credit Societies (PACS).

The findings reveal that cooperative banks continue to play a vital role in supporting agricultural activities, especially for small and marginal farmers who depend heavily on institutional credit. However, the study concludes that the effectiveness of agricultural credit delivery is significantly constrained by persistent challenges such as delayed loan disbursement, inadequate loan amounts, rising Non-Performing Assets (NPAs), weak governance, political interference, limited technological adoption, and low levels of financial literacy among farmers. These factors collectively reduce farmers' satisfaction, weaken repayment performance, and threaten the financial sustainability of cooperative institutions.

The study further establishes that timely disbursement of credit is a critical determinant of farmers' satisfaction and effective utilization of loans. Inadequate awareness of government schemes and lack of structured financial literacy initiatives limit the benefits of policy interventions such as interest subvention and Kisan Credit Card facilities. Moreover, income volatility due to climatic risks and market uncertainties continues to affect repayment behaviour.

Overall, the study concludes that strengthening governance structures, improving operational efficiency through digitalization, enhancing financial literacy, and aligning credit products with agricultural cycles are essential for improving the performance of cooperative banks. Addressing these issues will not only enhance agricultural credit delivery but also contribute to sustainable rural development and farmer welfare in the Amravati region.

Suggestions and Recommendations

Suggestions

Based on the findings of the study, several measures can be suggested to improve the effectiveness of agricultural credit delivery by cooperative banks in the Amravati region. First, cooperative banks should simplify loan procedures and reduce excessive documentation to minimize delays in loan approval and disbursement. Adoption of digital platforms for loan processing and monitoring can significantly improve operational efficiency. Second, banks should strengthen financial literacy and awareness programs for farmers, focusing on loan utilization, repayment discipline, and awareness of government schemes such as interest subvention and Kisan Credit Cards. Third, repayment schedules should be made more flexible and aligned with cropping cycles and income patterns to reduce default risk. Additionally, improving staff training in credit appraisal and customer service can enhance farmers' trust and satisfaction with cooperative banking services.

Recommendations

At the institutional level, cooperative banks must strengthen governance and internal control mechanisms to reduce political interference and improve accountability. Enhancing risk assessment and post-disbursement monitoring systems is essential to control Non-Performing Assets (NPAs) and improve financial sustainability. Policymakers and regulatory authorities should support cooperative banks through targeted capacity-building programs, timely refinance support, and technology upgradation initiatives, particularly at the PACS level. Collaboration with agricultural extension services and insurance providers can help mitigate climate-related credit risks and improve repayment performance.

Future Scope for Research

Future research may extend this study by covering a larger geographical area or comparing cooperative banks with commercial banks and microfinance institutions. Longitudinal studies could examine the long-term impact of digitalization and governance reforms on credit performance. Further research may also explore integrated models combining credit, insurance, and extension services to enhance agricultural productivity and farmer welfare.

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