ISSN: 3065-7857
InSight Bulletin: A Multidisciplinary Interlink International Research Journal, Volume 1| Issue 2 | Pp-58-62, November 2024

Original Article

Transforming Cooperative Banking through Digital Innovation: A Study of Governance, Financial Performance and Sustainable Rural Development in Pune District

Dr. Bhor Bhimaji Kashiba[1] Dr. L.S.Waware[2]
[1]Associate Professor,Arts, Science & Commerce College, Indapur
[2]Acting Principal,Smt. Ratnaprabhadevi Patil College, Bawada

Submitted: *20- Oct.-2024* ***Revised:*** *30- Oct.-2024* ***Accepted:*** *15-Nov.-2024* ***Published:*** *30-Nov.-2024*

Quick Response Code:

Access this article online
Website: https://ibrj.us

DOI: 10.5281/zenodo.23359578

Manuscript ID:
IBMIIRJ -2024-010210

Volume 1

Issue 2

November 2024

E-ISSN: 3065-7857

How to cite this article:
Bhor, B. K., & Waware, L. S. (2024). Transforming Cooperative Banking through Digital Innovation: A Study of Governance, Financial Performance and Sustainable Rural Development in Pune District. InSight Bulletin: A Multidisciplinary Interlink International Research Journal, 1(2), 63–68. https://doi.org/10.5281/zenodo.23359578

Address for correspondence:
Dr. Bhor Bhimaji Kashiba
Associate Professor,Arts, Science & Commerce College, Indapur
Email:
bhimajibhormh42@gmail.com

Summary

Play a significant role in promoting and supporting agricultural and rural economic activities. In recent years, digital innovation has begun to transform the operational, financial and administrative structures of cooperative banking. This paper examines the role of digital innovation in the transformation of cooperative banking in Pune district, particularly in terms of governance, financial performance and sustainable rural development. Given its long-standing role in rural and agricultural finance and its extensive branch network spread across the Pune district, the Pune District Central Cooperative Bank (PDCC Bank) is used as the main institutional reference.

The study is primarily based on secondary data obtained from PDCC Bank, Reserve Bank of India (RBI), NABARD and Ministry of Cooperatives. The descriptive analysis includes selected financial indicators such as deposits, loans and advances, working capital, net assets, net profit and CASA deposits for the period 2023-24 to 2025-26. As per this analysis, there has been a significant increase in the deposits, advances, working capital and net assets of the bank during the study period. PDCC Bank has reported implementation of Core Banking System (CBS), Mobile Banking, IMPS, NEFT/RTGS, ATM and other technology-based services. (Pune District Central Cooperative Bank)

This paper argues that digital innovation can improve service delivery, operational efficiency, transparency, financial inclusion and rural credit provision. However, digital transformation also requires attention to cyber security, digital literacy, data governance, and employee training and customer protection. Therefore, sustainable cooperative banking requires a balanced mix of technology, good governance, financial discipline and inclusive rural development.

Keywords: *Cooperative Banking, Digital Innovation, PDCC Bank, Governance, Financial Performance, Financial Inclusion, Rural Development, Fintech , Digital Banking, Sustainable Development*

Introduction

Cooperative banking has historically been an important component of India's rural financial structure. Unlike purely commercial banking institutions, cooperative banks have evolved on the principles of member participation, local economic development and mutual assistance. District Central Cooperative Banks (DCCBs) occupy an important place in the three-tier rural cooperative credit structure, and link the State Cooperative Banks with the Primary Agricultural Credit Societies (PACS).

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The Ministry of Cooperatives has identified 34 State Cooperative Banks, 351 District Central Cooperative Banks and approximately one lakh Primary Agricultural Credit Societies as components of India's rural cooperative banking structure. (Ministry of Cooperatives)

The economy of Pune district is diversified, comprising agriculture, sugar cooperatives, dairying, horticulture, small businesses, self-help groups, rural industries and service sectors. In this environment, the Pune District Central Cooperative Bank has historically served as an important financial institution. PDCC Bank was established on 4 September 1917 to provide financing to the cooperative sector and rural areas. The current objectives of the bank are to support agricultural and rural finance, provide banking facilities and contribute to socio-economic development. (Pune District Central Cooperative Bank)

Digital transformation is changing the traditional model. Core banking systems, mobile banking, ATM services, electronic fund transfer, QR-based payments, internet banking and other digital technologies have reduced the dependency on branch-based transactions. PDCC Bank has introduced CBS implementation, mobile banking and services like IMPS, NEFT and RTGS. The bank also provides the facility of 'Anywhere-Branch Banking' through its extensive branch network. (Pune District Central Cooperative Bank)

This transformation is supported by a broader national policy. The RBI has focused on digital payments, financial inclusion, cyber security , responsible innovation and technology-enabled supervision . During 2024-25, the RBI reported that the Financial Inclusion Index increased to 64.2 in March 2024 and the Digital Payment Ecosystem Programme was expanded and deepened across districts. (Reserve Bank of India) The government has also promoted computerization of PACS to improve efficiency, transparency, accounting and linkages with DCCBs and State Cooperative Banks. (Ministry of Cooperatives)

Therefore, digital transformation should not be seen as just the introduction of banking software. It is a comprehensive organizational transformation, which includes governance, financial management, customer service, risk management, employee skills, and rural development. Consequently, this study examines digital innovation through three interrelated dimensions: **governance, financial performance, and sustainable rural development .**

Study Objectives

1. To examine the role of digital innovation in the transformation of cooperative banking in Pune district.
2. To study selected financial performance indicators of PDCC Bank for the period 2023-24 to 2025-26.
3. Examining the relationship between digital banking and rural financial inclusion.
4. To analyze the contribution of cooperative banking in sustainable rural economic development .
5. Identifying administrative and cybersecurity challenges related to digital transformation .
6. Suggest measures to strengthen digitally enabled cooperative banking in Pune district.

Research methods

This study **follows a descriptive and analytical research design, based primarily on secondary data.**

Sources of data

- PDCC Bank official website and annual report
- Reserve Bank of India Annual Report
- NABARD Publications
- Ministry of Co-operation, Government of India
- Regulatory literature of Maharashtra Cooperative Sector
- Related educational materials

Comparative figures are available in the official financial information of PDCC Bank for the years 31st March 2024, 31st March 2025 and 31st March 2026. (Pune District Central Cooperative Bank)

Study period

2023-24 to 2025-26

Analytical techniques

This study used:

- Percentage increase
- Year-wise comparison
- Financial ratio analysis
- Descriptive interpretation
- Trend analysis

does not claim that changes in economic performance are solely due to digitalization . Digital innovation is considered one component of a broader institutional and economic transformation.

Digital Transformation and Governance

Digitization can improve the governance of a cooperative bank by creating a more standardized, traceable and timely flow of information . CBS allows for the consolidation of transaction and customer information across branches, while digital records can support internal controls, audits and management reporting.

PDCC Bank has informed that it has implemented CBS and has a separate department for technology-related operations. It has also informed that there is

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ISSN: 3065-7857
InSight Bulletin: A Multidisciplinary Interlink International Research Journal, Volume 1| Issue 2 | Pp-58-62, November 2024

a separate disaster-management system to maintain the continuity of core banking operations. (Pune District Central Cooperative Bank)

The bank's 'Anywhere-Branch Banking' facility allows customers to avail services like cash withdrawal, fund transfer, balance enquiry, statement printing and cheque deposit from all branches of the bank. (Pune District Central Cooperative Bank)

However, digital governance creates new responsibilities. Cyber security , data privacy, authentication, fraud monitoring, business continuity and customer awareness become increasingly important. RBI's Regulatory Review 2024-25 has specifically emphasized these. Cyber security , fraud-risk management, KYC/AML supervision, operational flexibility and customer protection. (Reserve Bank of India)

Therefore, **there must be coordination of technology governance + financial governance + cooperative accountability in the administrative framework** .

Descriptive data analysis

Table 1: Selected Financial Indicators of PDCC Bank

₹ crore

Financial indicators	2023-24	2024-25	2025-26	Growth 2023-24 to 2025-26
Own funds	2,847.99	3,457.28	3,839.64	34.82%
Deposits	12,966.22	14,766.84	17,189.13	32.57%
Loans and advances	10,785.99	12,059.03	13,578.61	25.89%
Investment	7,867.22	9,054.72	10,228.08	30.04%
Working capital	20,614.52	23,926.33	27,097.34	31.45%
Net worth	2,658.10	2,989.98	3,408.84	28.24%
Net profit	72.73	75.75	78.78	8.32%
CASA deposits	6,172.31	7,019.03	7,442.33	20.58%

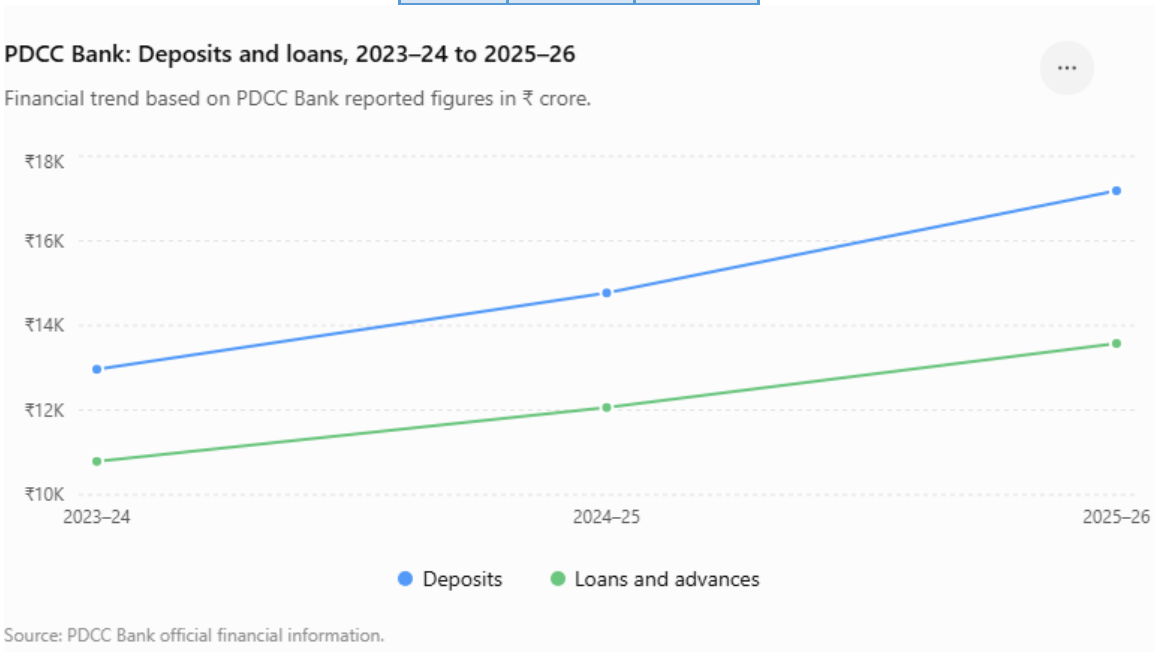
Source: Compiled from financial information of PDCC Bank. (Pune District Central Cooperative Bank)

Figure 1: Growth in deposits and loans

Digital transformation of banking— CBS, mobile banking, ATM, IMPS, NEFT/RTGS and digital payments that support financial inclusion and rural development.

Economic trends based on figures given in crores .

Year	Deposits	Loan
2023-24	12,966.22	10,785.99
2024-25	14,766.84	12,059.03
2025-26	17,189.13	13,578.61



1 Deposits

increased from **₹12,966.22 crore in 2023-24 to ₹17,189.13 crore in 2025-26 , i.e. an increase** of approximately 32.57% over a period of two years. This indicates a continuous expansion of the bank's deposit base. CASA deposits increased from ₹6,172.31 crore to ₹7,442.33 crore , i.e. an increase of

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approximately 20.58%. (Pune District Central Cooperative Bank)

may help in the collection of deposits by making it more convenient to access accounts, check balances, transfer funds and other services . However, the statistics do not prove that digitization alone has led to the increase in deposits.

2 Loans and advances

Loans and advances **increased from ₹10,785.99 crore to ₹13,578.61 crore** , representing a growth of approximately **25.89%** . PDCC Bank's lending portfolio includes agriculture, sugar mills, individuals and other categories. In 2025-26, the share of agriculture loans was ₹3,965.37 crore , while the share of loans to sugar mills was ₹6,196.11 crore . (Pune District Central Cooperative Bank)

This demonstrates the continued importance of cooperative banking in financing rural production systems.

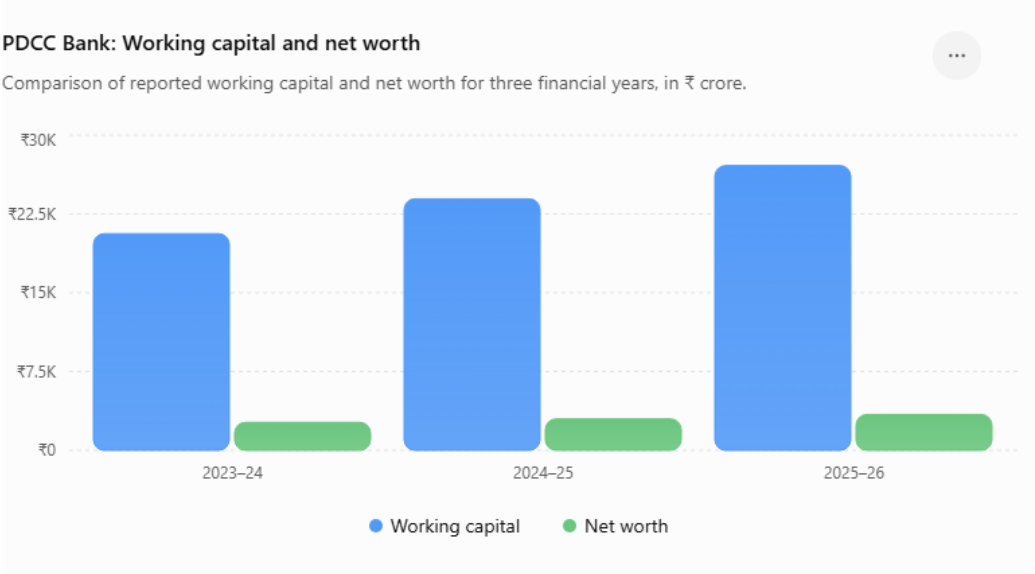
Figure 2: Working Capital and Net Assets

Trends in selected financial indicators of PDCC Bank, 2023-24 to 2025-26.

Working capital and net assets

Comparison of working capital and net assets reported for three financial years, in ₹ crore .

Year	Working capital	Net worth
2023-24	20,614.52	2,658.1
2024-25	23,926.33	2,989.98
2025-26	27,097.34	3,408.84



3 Working capital and net assets

Working capital **increased from ₹20,614.52 crore to ₹27,097.34 crore** , which **is an increase of approximately 31.45% . Net assets** increased from ₹2,658.10 crore to ₹3,408.84 crore , which is an increase of approximately 28.24%. (Pune District Central Cooperative Bank)

These indicators show the financial performance of the organization. From a management perspective, digital information systems can assist in liquidity monitoring, credit management, and financial reporting.

4 Net profit

Net profit **increased from ₹72.73 crore in 2023-24 to ₹78.78 crore in 2025-26 , an increase** of approximately 8.32% . Although profit increased in absolute terms, its growth was slower than that of deposits and loans. The reported loan-deposit ratio also declined from 83.19% in 2023-24 to 79.00% in 2025-26. (Pune District Central Cooperative Bank)

This suggests that financial performance should not be assessed solely on the basis of profit. Factors such as efficiency, asset quality, liquidity, capital strength, customer service and sustainable credit supply are also important.

Digital Innovation and Sustainable Rural Development

Digital cooperative banking can contribute to rural development through various means.

Firstly, financial inclusion: Mobile banking, ATM services, electronic transfer and digital payment facilities can reduce the geographical barriers faced by rural customers. Government policy is increasingly encouraging rural cooperative banks to adopt digital services, including Aadhaar -enabled payment systems. (Ministry of Cooperatives)

Secondly, agricultural finance: Faster information processing is likely to reduce the time taken for loan application, verification and disbursal. RBI has also supported technology-enabled agricultural and

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MSME lending through initiatives like Unified Lending Interface. (Reserve Bank of India)

Third, women's financial participation: According to a report by PDCC Bank, as of March 2024, there are 40,780 women's self-help groups affiliated to SHGs, and the participation of SHGs is significant. It is also reported that training and mentoring activities are being implemented for women SHG members. (Pune District Central Cooperative Bank)

Fourth, rural entrepreneurship: Digital banking facilitates payments, savings, credit and business transactions for micro and small enterprises in rural areas .

Fifth, low transaction costs: Computerized accounting and digital transactions can reduce paperwork and improve process efficiency. National PACS Computerization The clear objective of this program is to increase efficiency, reduce transaction costs, strengthen transparency and improve the relationship with District Cooperative Banks and State Cooperative Banks. (Ministry of Cooperatives)

Major challenges

Despite the opportunities available, many challenges remain:

1. **Cybersecurity Threats:** Increasing digital transactions have increased the importance of cyber-threat management.
2. **Digital Literacy:** Some rural consumers may need help using mobile banking, UPI and other digital services.
3. **Digital divide:** Rural communities may have disparities in internet connectivity, smartphone ownership, and digital skills.
4. **Data Privacy:** Growing digital records require strong data-governance mechanisms.
5. **Employee training:** Employees must understand both traditional cooperative banking and new digital technologies.
6. **Administrative capacity:** The board of directors and senior management must have an adequate understanding of the risks associated with technology.
7. **Consumer Protection:** Awareness and complaint redressal of digital fraud is essential.
8. **Technology costs:** Small cooperatives may face difficulties in maintaining a modern IT infrastructure.

   The Maharashtra Cooperative Societies Act, 1960 and the Banking Rules provide an important legal and institutional framework for the administration of cooperative banking. (India Code)

Instructions

1. Develop a comprehensive digital governance framework

Cooperative banks should establish clear policies covering aspects such as cybersecurity , data protection, IT audits, disaster recovery and digital risk management.

2. Strengthening digital literacy in rural areas

Regular training programs should be organized.

3. Integrate digital and physical banking

Especially for customers who need help, digital services should complement branch-based assistance rather than immediately replace it.

4. Improve data-driven credit management

Analytics can be used for credit assessment, portfolio monitoring, fraud detection, and early warning systems, while maintaining regulatory safeguards.

5. Strengthen the skills of employees

Cyber security , digital payments, consumer protection, data management and fintech applications should be included.

6. Promote women- centric digital finance

Targeted digital-finance training and easy banking interfaces can be provided to self-help groups and women entrepreneurs.

7. Improve the digital grievance redressal system

There should be simple mechanisms available to report unauthorized transactions, fraud, and technical issues.

8. Measure sustainability

Future performance evaluations should include not only profitability, but also economic, social, digital-inclusion, and environmental indicators.

Conclusion

The transformation of cooperative banking in Pune district is a reflection of the broader transformation of India's rural financial system. PDCC Bank stands as a prime example due to its historic rural-finance role, extensive branch network and adoption of CBS, mobile banking and electronic payment services. (Pune District Central Cooperative Bank)

According to the descriptive financial analysis, during the period 2023-24 to 2025-26 , deposits grew by approximately 32.57%, loans and advances by 25.89%, working capital by 31.45% and net assets by 28.24%. Net profit also grew, but the growth rate was low at approximately 8.32%. (Pune District Central Cooperative Bank)

This should not be interpreted as evidence that digitalization alone has driven economic growth . Economic performance is influenced by interest rates, agricultural conditions, credit demand, collections, deposits, investment decisions, regulatory conditions, and macroeconomic factors.

However, digital innovation provides a critical foundation for the future of cooperative banking. It can improve convenience, transaction efficiency, information management, credit provision and financial inclusion. At the same time, cybersecurity ,

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digital literacy, governance and consumer protection must remain at the heart of this transformation.

Therefore, sustainable cooperative banking for Pune district **should adopt an approach of 'innovation with inclusion'. Technology should not weaken, but rather strengthen the cooperative principle of serving members and supporting rural economic development. The future effectiveness of cooperative banking will depend on** how successfully financial institutions combine digital innovation, accountable governance, sound financial management and inclusive rural development.

Acknowledgement

The authors sincerely express their gratitude to all those who provided valuable guidance, encouragement, and support in completing this research paper on "Transforming Cooperative Banking through Digital Innovation: A Study of Governance, Financial Performance and Sustainable Rural Development in Pune District." The study is primarily based on secondary data obtained from PDCC Bank, the Reserve Bank of India, NABARD, the Ministry of Cooperatives, and related institutional sources.

The authors gratefully acknowledge the valuable financial and institutional information provided by the Pune District Central Cooperative Bank (PDCC Bank), particularly its financial indicators and information regarding digital banking services, governance, and rural financial development.

The authors are also thankful to their respective institutions, colleagues, teachers, researchers, and well-wishers for their valuable suggestions, academic guidance, encouragement, and cooperation throughout the preparation of this research work.

Finally, the authors sincerely express their appreciation to everyone who contributed directly or indirectly to the successful completion of this research paper.

Financial support and sponsorship

Nil.

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of thesis paper.

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