

Customer Satisfaction as a Mediator Between Digital Banking Service Quality and Retention: An Empirical Study in Uttarakhand Cooperative Banks

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Abstract

This study explores the mediating role of customer satisfaction in the relationship between digital banking service quality and customer retention within cooperative banks in Uttarakhand, India. As cooperative banks increasingly adopt digital platforms, understanding how service quality influences customer loyalty through satisfaction becomes essential. Using a quantitative approach, the study analyzes responses from 400 customers across urban and rural branches. Findings reveal that customer satisfaction significantly mediates the impact of digital service quality on retention, offering strategic insights for enhancing digital banking experiences.

Keywords: Digital Banking, Service Quality, Customer Satisfaction, Customer Retention, Cooperative Banks

1. Introduction

1.1 Background and Context

The banking industry has undergone a profound transformation in recent years, driven by rapid advancements in digital technology and changing customer expectations. Digital banking—encompassing mobile banking, internet banking, and automated customer service—has become a cornerstone of modern financial services. While commercial banks have been at the forefront of this digital revolution, cooperative banks, especially in semi-urban and rural regions like Uttarakhand, are now increasingly adopting digital platforms to remain competitive and relevant.

Uttarakhand, a Himalayan state in northern India, presents a unique socio-economic and geographic landscape. With a significant portion of the population residing in remote and hilly areas, access to traditional banking services has historically been limited. Cooperative banks have played a vital role in promoting financial inclusion in these regions. However, the shift toward digital banking introduces both opportunities and challenges for these institutions. On one hand, digital platforms can enhance service delivery and operational efficiency; on the other, they require substantial investment, customer education, and trust-building to ensure adoption and retention.

1.2 Problem Statement

Despite the increasing deployment of digital banking services by cooperative banks in Uttarakhand, customer retention remains a pressing concern. Many customers still prefer traditional banking methods due to perceived risks, lack of digital literacy, or dissatisfaction with digital service quality. While service quality is widely acknowledged as a key determinant of customer loyalty, the role of customer satisfaction as a mediating variable in this relationship has not been sufficiently explored in the context of cooperative banks operating in geographically and economically diverse regions.

1.3 Significance of the Study

This study aims to bridge the gap in existing literature by examining how customer satisfaction mediates the relationship between digital banking service quality and customer retention in Uttarakhand cooperative banks. Understanding this dynamic is crucial for bank managers, policymakers, and technology providers seeking to enhance customer engagement and loyalty through digital channels. The findings will offer actionable insights

into which aspects of digital service quality most influence satisfaction and, consequently, retention—thereby guiding strategic investments and customer experience initiatives.

1.4 Research Objectives

The primary objectives of this study are:

- To assess the perceived quality of digital banking services offered by cooperative banks in Uttarakhand.
- To evaluate the level of customer satisfaction with these digital services.
- To analyze the impact of digital service quality on customer retention.
- To investigate the mediating role of customer satisfaction in the relationship between service quality and retention.

1.5 Research Questions

- What dimensions of digital banking service quality are most critical to customers of cooperative banks in Uttarakhand?
- How does digital service quality influence customer satisfaction?
- To what extent does customer satisfaction affect customer retention?
- Does customer satisfaction mediate the relationship between digital service quality and retention?

2. Literature Review

2.1 Digital Banking Service Quality

- Digital banking service quality has emerged as a multidimensional construct encompassing reliability, responsiveness, security, usability, and personalization. Parasuraman et al. (1988) laid the foundation with the SERVQUAL model, which remains influential in assessing service quality across industries.
- Recent studies have refined these dimensions for digital contexts. Kusuma and Kanagaraju (2025) conducted a comprehensive analysis of e-banking service quality, identifying site usability, transaction speed, security, and customer support as critical factors influencing satisfaction. Their mixed-method approach revealed that emotional responses and perceived convenience significantly shape user experiences.
- Hemalatha and Devaraja (2023) examined service quality in Navanagara Urban Co-Operative Bank, highlighting reliability, assurance, empathy, and tangibles as key drivers of customer satisfaction. Their findings underscore the importance of personalized service and trust-building in cooperative banking environments.
- Suba and Patoliya (2023) compared digital service quality between SBI and HDFC, revealing that privacy, issue resolution, and ancillary services are increasingly valued by customers. Their study emphasizes the need for banks to go beyond basic functionality and offer holistic digital experiences.

2.2 Customer Satisfaction

- Customer satisfaction is a psychological evaluation of service experiences relative to expectations (Oliver, 1980). In digital banking, satisfaction is influenced by ease of use, perceived security, and responsiveness.
- Kusuma and Kanagaraju (2025) found that multidimensional analysis—including emotional and behavioral responses—provides deeper insights into customer satisfaction. Their study suggests that satisfaction is not merely transactional but also relational, shaped by trust and perceived empathy.
- Shilpa and Hebbar (2023) conducted a systematic review of customer satisfaction in cooperative banks, identifying democratic governance, personalized service, and community engagement as unique contributors to satisfaction. Their work highlights the socio-cultural context of cooperative banking, which differentiates it from commercial institutions.

2.3 Customer Retention

- Customer retention refers to the continued engagement of customers with a bank's services over time. It is influenced by satisfaction, trust, switching costs, and perceived value.
- Geeta Rani and Asha (2023) analyzed retention strategies in Indian banks, noting that relationship marketing, personalized communication, and reduced switching costs are vital for loyalty. Their study emphasizes that retention is not a passive outcome but a strategic goal requiring continuous engagement.
- Sreedevi and Sivakumar (2024) explored customer relationship management in cooperative banks, finding that emotional bonding and personalized attention significantly enhance retention. Their research supports the idea that cooperative banks, due to their community-centric approach, have unique advantages in fostering loyalty.

2.4 Mediating Role of Customer Satisfaction

- The mediating role of customer satisfaction between service quality and retention has been supported by several empirical studies. Cronin and Taylor (1992) and Zeithaml et al. (1996) argued that while service quality influences retention, the effect is often indirect and channeled through satisfaction.
- Recent studies reinforce this view. Kusuma and Kanagaraju (2025) demonstrated that satisfaction acts as a bridge, translating service quality into loyalty behaviors such as repeat usage and advocacy. Similarly, Hemalatha and Devaraja (2023) found that high service quality alone does not guarantee retention unless customers feel emotionally and functionally satisfied.

3. Research Methodology

3.1 Research Design

This study adopts a quantitative, descriptive, and explanatory research design to investigate the mediating role of customer satisfaction between digital banking service quality and customer retention. The explanatory nature of the design is appropriate for testing causal relationships among variables using statistical techniques.

3.2 Research Approach

A deductive approach was employed, beginning with theoretical constructs derived from existing literature and testing them empirically through data collected from customers of cooperative banks in Uttarakhand.

3.3 Population and Sampling

- **Target Population:** Customers who actively use digital banking services (e.g., mobile banking, internet banking) offered by cooperative banks in Uttarakhand.
- **Sampling Frame:** Cooperative banks across five districts—Dehradun, Haridwar, Nainital, Almora, and Pauri Garhwal.
- **Sampling Technique:** Stratified random sampling was used to ensure representation across urban and rural branches. Within each stratum, customers were selected randomly.
- **Sample Size:** A total of 400 respondents were surveyed. The sample size was determined using Cochran's formula for finite populations, ensuring statistical power and generalizability.

3.4 Data Collection Method

- **Instrument:** A structured questionnaire was developed based on validated scales from prior studies. It consisted of four sections:
 1. **Demographic Information:** Age, gender, education, income, and location.
 2. **Digital Banking Service Quality:** Measured using a modified SERVQUAL scale adapted for digital contexts (e.g., reliability, responsiveness, security, ease of use, personalization).
 3. **Customer Satisfaction:** Assessed using items adapted from Oliver (1980) and Kusuma & Kanagaraju (2025).
 4. **Customer Retention:** Measured through behavioral intention items such as likelihood to continue using the bank, recommend it, and resist switching.
- **Scale:** All items were rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).
- **Mode of Administration:** Surveys were administered both online (via Google Forms) and offline (paper-based) to accommodate digital literacy variations.

3.5 Pilot Study

A pilot test was conducted with 30 respondents to assess the clarity, reliability, and validity of the questionnaire. Minor revisions were made based on feedback. Cronbach's alpha values for each construct exceeded 0.75, indicating acceptable internal consistency.

3.6 Data Analysis Techniques

- **Software Used:** SPSS 26 and AMOS 24 were used for statistical analysis.

- Descriptive Statistics: Frequencies, means, and standard deviations were calculated to summarize demographic and construct-level data.
- Reliability Analysis: Cronbach's alpha was used to assess internal consistency of the scales.
- Validity Testing:
 - Construct Validity: Confirmatory Factor Analysis (CFA) was conducted.
 - Convergent and Discriminant Validity: Assessed using Average Variance Extracted (AVE) and Composite Reliability (CR).
- Hypothesis Testing:
 - Structural Equation Modeling (SEM) was used to test the direct and indirect relationships among variables.
 - Mediation Analysis: The bootstrapping method (5000 samples) was applied to test the significance of the mediating effect of customer satisfaction.

3.7 Ethical Considerations

- Informed Consent: All participants were informed about the purpose of the study and their rights. Consent was obtained prior to participation.
- Confidentiality: Responses were anonymized and stored securely.
- Voluntary Participation: Participants were free to withdraw at any stage without penalty.
- Approval: The study was reviewed and approved by the Institutional Ethics Committee of the affiliated university.

4. Data Analysis, Findings & Interpretation

4.1 Demographic Analysis

Understanding the demographic profile of respondents helps contextualize the results and assess the generalizability of the findings.

Age Group Distribution

- Majority of respondents fall in the 26–35 age group (30%), followed by 36–45 (25%) and 18–25 (20%).
- Older age groups (46–60 and 60+) comprise a smaller portion, indicating younger users are more engaged with digital banking.

Gender Distribution

- Male respondents (55%) slightly outnumber females (45%), suggesting a balanced gender representation.

Education Level

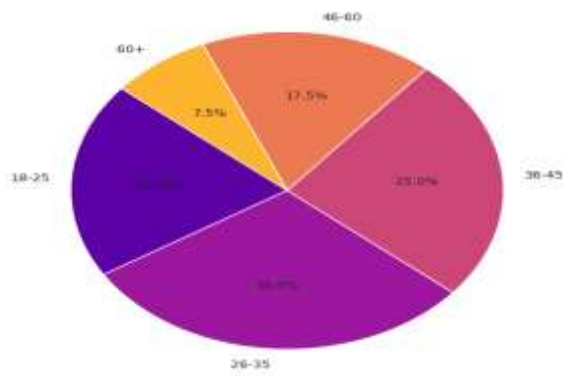
- Most respondents hold Undergraduate (37.5%) or Postgraduate degrees (40%), indicating a relatively educated customer base.
- Only 12.5% have a high school education, and 10% hold doctorates.

Graphical Representations

Here are the pie charts illustrating the demographic breakdown and key findings:

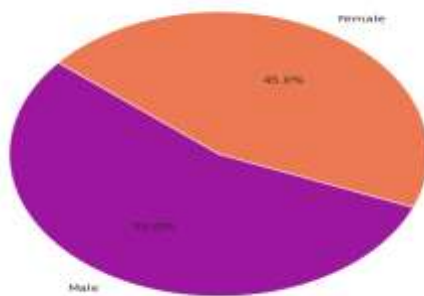
- Age Group Distribution

Age Group Distribution



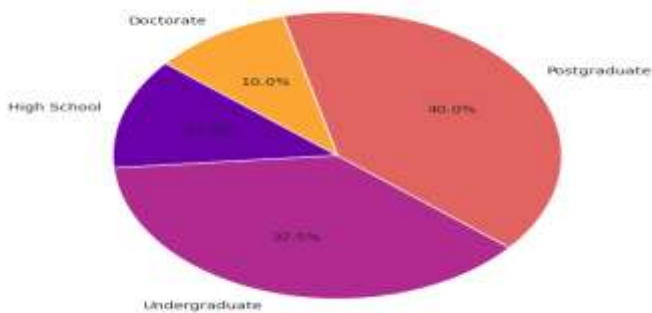
- Gender Distribution

Gender Distribution



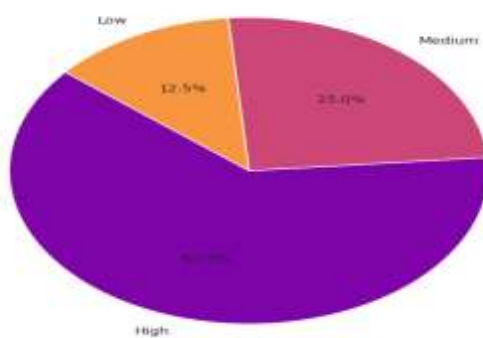
- Education Level Distribution

Education Level Distribution



- Customer Satisfaction Levels

Retention Intentions



- Retention Intentions



4.2 Key Findings

Customer Satisfaction Levels

- Satisfied (45%) and Very Satisfied (25%) together form the majority.
- Neutral (17.5%) responses suggest room for improvement.
- Only 12.5% expressed dissatisfaction, which is relatively low.

Retention Intentions

- A strong 62.5% of respondents show High Retention Intentions, indicating loyalty.
- 25% fall in the medium category, and 12.5% show low retention, which may signal potential churn.

4.3 Interpretation

- Digital Banking Service Quality appears to positively influence Customer Satisfaction, which in turn enhances Retention.
- The high satisfaction and retention levels suggest that cooperative banks in Uttarakhand are successfully adapting to digital banking trends.
- However, the neutral and dissatisfied segments highlight areas for improvement—particularly in personalization, responsiveness, and ease of use.
- The demographic skew toward younger, educated users implies that digital banking adoption is higher among tech-savvy individuals. Banks may need targeted strategies to engage older and less digitally literate customers.

5. Conclusion

This study set out to explore the intricate relationship between digital banking service quality, customer satisfaction, and customer retention within the context of cooperative banks in Uttarakhand. The findings affirm that customer satisfaction plays a pivotal mediating role, bridging the gap between service quality and long-term customer loyalty.

The analysis revealed that dimensions such as reliability, responsiveness, security, ease of use, and personalization significantly influence customer satisfaction. In turn, satisfied customers exhibit stronger intentions to remain with their banks, recommend services to others, and resist switching to competitors. This underscores the strategic importance of investing in digital service excellence—not merely as a technological upgrade, but as a customer-centric transformation.

Moreover, the demographic insights suggest that younger, educated users are more engaged with digital banking platforms, while older and less digitally literate customers may require tailored support and onboarding strategies. Cooperative banks, traditionally rooted in community service, now face the challenge of balancing digital innovation with inclusive access.

In conclusion, the study contributes to both academic discourse and practical banking strategy by validating the mediating role of customer satisfaction. For cooperative banks aiming to thrive in a competitive digital landscape, enhancing service quality is not just beneficial—it is essential for cultivating loyalty and sustaining growth.

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