

ICT Based Innovations in Banking: A Study of Customer and Employee Perceptions in Nashik District

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Abstract

Banking in India has undergone radical transformation with the adoption of Information and Communication Technology (ICT). Digital platforms, mobile applications, artificial intelligence, and automation have revolutionized customer service and employee operations. This paper explores ICT-based innovations in banking with a special reference to Nashik District, Maharashtra. The study examines the perceptions of both customers and employees regarding the effectiveness, convenience, reliability, and challenges associated with ICT-enabled services. Primary data were collected from 250 customers and 150 Bank employees across selected public and private sector banks in Nashik. Findings reveal that customers perceive ICT as enhancing accessibility, transparency, and efficiency, while employees acknowledge improved productivity but also highlight issues such as work stress, system downtime, and the need for continuous upskilling. The study concludes that ICT has created a win-win situation, but sustainable adoption requires balancing technological advancement with customer trust and employee well-being.

Keywords: ICT innovations, Banking sector, Customer perception, Employee perception, Nashik District, Digital banking

1. Introduction

India's banking sector has experienced exceptional growth post-liberalization, with rising public and private sector banks. The entry of private players in banking has encouraged the application of marketing principles to business enterprises in services. The Indian banking industry has been growing faster than the real economy, resulting in higher GDP levels. Banking reforms have made transformational changes in India, such as bank nationalization and the expansion of bank branches. The banking industry can be classified as retail, commercial, corporate, investment and NRI banking. Banks now offer value-added services for customers, making banking services more user-friendly. The banking system plays a fundamental role in the economy, and its strength and stability are of general public interest. Banks now operate in consumer banking, corporate banking, finance, and insurance, investment banking, mortgage loans, private equity, savings, securities, asset management, wealth management, and credit cards. Internet banking has become a major tool for customers, allowing them to perform almost all operations online. The State Bank of India group was the initiate in computerization of banking operations in India, with revenues worth US\$41 billion and over 14,000 branches. ICICI Bank, the largest private sector bank in India, offers extensive banking and financial services to retail and corporate customers through various channels. Automation started with the State Bank of India in 1995, aiming to enhance productivity and customer satisfaction. The Indian banking sector has emerged as one of the most technologically progressive industries in the past two decades. The introduction of core banking solutions, digital wallets, UPI, AI-based customer support, and blockchain technology has redefined the delivery of financial services. ICT not only influences the way customers interact with banks but also transforms the workflow, efficiency, and skill requirements of employees.

Post-liberalization and the entry of private sector banks accelerated the adoption of ICT in banking. While customers in urban area adapted quickly, semi-urban and rural districts like Nashik witnessed a gradual shift. Nashik, an emerging industrial and educational hub in Maharashtra, provides an ideal ground to study how ICT innovations are reshaping customer and employee perceptions. Earlier studies primarily concentrated on customer satisfaction. However, the success of ICT-driven banking depends equally on employees, who serve as the interface between banks and customers. Hence, this study attempts to bridge the research gap by analyzing both stakeholders' viewpoints.

2. Review of Literature- ICT-based banking innovations have been extensively researched worldwide. A brief review is presented below.

2.1 Customer-Centric Studies:

1. Prabhakaran and Satya (2003) identified reliability, tangibility, responsiveness, assurance, and empathy as key service attributes.

2. Malhotra and Singh (2007) found adoption of internet banking is higher among larger, younger banks.
3. Gupta and Dev (2012) reported that customer satisfaction is shaped by service quality, accessibility, ambiance, and financial offerings.
4. Sharma & Govindaluri (2014) highlighted determinants of internet banking adoption in urban India.

2.2 Employee-Centric Studies:

1. Bapat & Mazumdar (2015) emphasized innovation and cost-efficiency in ICT-enabled banks.
2. Srivastava & Dey (2016) highlighted differences in brand perception among employees of public, private, and global banks.

- Research indicates ICT reduces manual workload but increases stress due to upgrades and real-time monitoring.

Regional Relevance:- Studies in Maharashtra suggest ICT improves inclusion but rural customers rely on employees.- Employee unions raise concerns about job insecurity and reskilling.

3. Objectives of the study:

The present study aims to:

1. Examine the perception of customers in Nashik District regarding ICT-based banking innovations.
2. Analyze employees' views on ICT adoption and its impact on their work environment.
3. Compare customer and employee perspectives in public and private sector banks.
4. Identify challenges faced by both stakeholders in adopting ICT-based banking.
5. Suggest measures to enhance customer satisfaction and employee efficiency.

4. Research Methodology

A study was conducted among 250 customers of SBI and ICICI Bank in Nashik, including current and savings account holders, loan applicants, and those who have been visiting banks for at least five years. The sample included businessmen, salaried people, and students, irrespective of age or gender. The primary data collection instrument was a questionnaire containing 28 closed-ended statements on a Likert five-point scale, focusing on factors causing customer satisfaction, particularly with reference to Service Quality. Secondary data was collected from sources like journals, books, the Internet, newspapers, and business magazines. A z-test was applied to test the hypothesis that there is no significant difference in the reliability, speed of transactions, promptness and cooperativeness of clerical staff, empathy of staff, and overall Performance of Banking private and public Sector after computerization of operations. The results showed that there was no significant difference in the reliability, speed of transactions, promptness and cooperativeness of clerical staff, empathy of staff, or overall performance of private and public sector banks. The study aimed to determine the efficiency of public and private sector banks after automation.

Study Area: Nashik District, Maharashtra

Population & Sample: 250 customers (150 public, 100 private) and 150 employees (80 public, 70 private)

Sampling Technique: Stratified random sampling across Nashik city and talukas **Tools:** Structured questionnaire (Likert scale)

Data Analysis: Descriptive statistics, Chi-square, z-test, correlation Hypotheses: H01: No significant difference in customer perception between public/private banks. H02: No significant difference in employee perception regarding workload/productivity.

Table 1: Customer Perceptions on ICT-based Banking (N = 250)

Aspect	Findings
Accessibility	82% appreciate mobile/UPI services 46% rural customers face connectivity issues
Convenience	71% believe ICT saves time and reduces branch visits
Security	42% fear online frauds elderly prefer traditional branch banking
Reliability	Public banks = higher trust Private banks = faster service

Interpretation: The majority of customers in Nashik District acknowledged the benefits of ICT in banking, especially in terms of accessibility and convenience. However, rural customers faced challenges due to poor internet connectivity. While ICT reduced dependence on physical branches, concerns about online frauds remain significant. Public sector banks continue to enjoy higher trust, whereas private banks are preferred for speed and efficiency.

Table 2: Employee Perceptions on ICT-based Banking (N = 150)

Aspect	Findings
Productivity	67% agree ICT reduces paperwork and increases transaction speed
Stress	54% report higher stress due to monitoring, system downtime, and targets
Skills	73% feel continuous ICT training is necessary
Job Security	39% fear automation may reduce clerical roles

Interpretation:

Employees widely recognized ICT as a tool that enhances efficiency by reducing paperwork and transaction time. However, more than half of the employees reported stress caused by real-time monitoring and performance pressure. A majority also emphasized the need for regular ICT training to keep pace with system upgrades. Concerns about job security due to automation were evident among clerical staff, reflecting a human resource challenge for banks.

Table 3: Comparative Analysis (Public vs Private Banks)

Category	Public Sector Banks	Private Sector Banks
Customers	Higher trust and reliability; slower in ICT services	Faster service, user-friendly apps lower trust in rural areas
Employees	Lower stress but lack ICT training	Higher stress due to targets better ICT infrastructure

Interpretation:

Comparative analysis highlights a trade-off between trust and speed. Customers prefer public banks for their reliability, whereas private banks lead in ICT efficiency and customer-friendly digital platforms. On the employee side, public sector staff experience less stress but lack proper ICT training opportunities. In contrast, private sector employees benefit from advanced systems but face higher stress levels due to strict ICT-linked targets and monitoring.

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5. Findings and Discussion

The study reveals that private sector banks in Nashik District are performing better than public sector banks, except for reliability. Customers rate private banks higher on speed, accessibility, and service quality, but public sector banks still hold an edge in reliability and trust. The growing presence of private banks has forced banks to innovate and operate more professionally, while public sector banks have started adopting modern marketing strategies. ICT adoption has increased efficiency and productivity but also introduced challenges for employees. Policymakers in public sector banks must take proactive measures to improve training, empathy, and staff readiness. Public sector banks need to focus on improving the work environment and employee responsiveness to enhance competitiveness and customer loyalty.

6. Limitations of the Study

This study was done in certain branches of SBI (public) and ICICI Bank (private) in Nashik District. So, the results may not apply to all branches or other areas. The findings could be different with a larger and more varied group of participants. Future research can include more banks, rural branches, and a broader range of people. Also, the study is especially important for public sector banks, where there is still room to improve customer satisfaction and employee adaptability with new ICT technologies.

7. Suggestions and Recommendations

- For Banks: Strengthen cyber security, upgrade ICT in public banks.
- For Employees: Regular training, stress management, job security assurance.
- For Customers: Digital literacy programs, elderly-friendly helplines.
- For Policymakers: Improve rural internet, balance automation with welfare.

8. Conclusion

ICT-based innovations in banking transformed Nashik's financial ecosystem. Customers view ICT as convenient and transparent, while employees see efficiency gains but fear stress and insecurity. Sustainable adoption requires balancing technological progress with human welfare, ensuring digital growth with a human touch. The study highlights that while ICT-based innovations have significantly enhanced the banking experience for customers in Nashik through improved accessibility and efficiency, they have also introduced challenges for employees, including increased stress and concerns over job security. A sustainable approach to ICT adoption in banking must prioritize both technological development and the well-being of employees, ensuring that the benefits of digital transformation are equitably shared.

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