

Impact of Digital Transformation on Customer Experience in Indian Banks

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Abstract

This paper focuses on the aspect of digital era contributing to better customer experience in Indian banking system. The existing literature have mainly focused on what banks have to offer digitally and how the Indian banking system is taking a technological fold, but gaps can be identified in the areas of integrating digital revolution and customer experience for a sustainable development of the financial landscape. The prime objectives of the paper is to study the growth and spread of digital transformation and its impact on customer experiences, along with the challenges faced by customers in adopting the digital culture. Secondary data have been collected from various press release and annual reports of leading organizations to gain a reliable picture of the current state. The findings of the study reveal there is a positive and significant impact of digital transformation on customer experience in Indian banks however, drawbacks associated with the area cannot be overseen. Suggestions have been made to integrate digitalization and human empathy for better customer experience.

Indexed terms—digitalization, digital banking platforms, payment innovation, cyber security, customer experience.

I.INTRODUCTION

The banking sector is one of the major pillars of Indian economy leading to dependency of people for their all sort of financial dealings. From large corporate houses, industries, small and medium businesses to normal households of the nation heavily rely on banks when it comes to money and finances. Indian banking system has undergone a progressive transformation in the past few decades. As an effect of expeditious proliferation of internet access, mobile phones, digitally equipped government initiatives, banks in India are embracing digital channels to efficiently provide financial services. Digital transformation is revolutionizing the Indian banking system, triggering changes in the areas of their day-to-day operations, security, work planning, HR management, customer experiences and knowledge through online banking, mobile applications, artificial intelligence, robotic process automation and ensuring smooth delivery of banking services. The infusion of technology into banking services has led to efficient banking operations and meeting customer needs, resulting to better customer experiences. The paper explores the multifaceted impact of digital transformation on customer experience in Indian banks, heavily revolving around convenience, service quality, personalization, safety and security.

Literature review

Gupta, Avasthi & Jadhav 2023: studied on the title “Artificial Intelligence: A Revolution in the Banking Industry in India”. In this article authors used case studies to demonstrate the impact of AI on transforming financial system of India. This study reveal that AI as competence to anticipate the market outcome, when data has been provided in proper manner. [1]

Tiwari 2023: In this article, the author reviewed several literature on “The Application of AI and Machine Learning in the Financial Industry and its Effects on Risk Management and Fraud Detection”. The existing literatures review suggests that the integration of artificial intelligence and machine learning in the financial sector may produce significant benefits in terms of risk management and the identification of fraudulent activities. [2]

Das (2024): the author study in this article on “Transforming Regulatory Reporting with AI/ML: Strategies for Compliance and Efficiency”. The findings of this study reveal that Artificial Intelligence (AI) and Machine Learning (ML) are facilitating substantial advancements in financial inclusion within India. It is crucial to have regulatory frameworks and public-private partnerships to guarantee the responsible implementation of these technologies. [3]

Malasriganga, C. (2024) this research article the author focus on “Assessing the Impact on Digital Transformation with Special Reference to Banking Sector”. The author used primary data in this study and observed that customers are satisfied

with digital services providing by banks. Digital transformation within Indian banks improves the customer journey by facilitating smooth, automated transactions, increasing accessibility, and customizing services using data-driven approaches. This transition aligns with changing customer demands and builds trust, ultimately reinforcing the competitive edge of banks in a digital environment. [4]

Agarwal, S. Malik & Gautam. (2023). this study emphasise on “Analysis of customer satisfaction and the customer experience in digital payments: a meta-analysis review”. The finding of this study reveals that the literature emphasizes the intricate elements that affect customer satisfaction in digital payments. Crucial aspects involve service quality, trust, security, user behavior, and sentiment analysis. However, despite these revelations, there are still gaps in comprehending cultural impacts, new technologies, and behaviors following the pandemic. Such gaps constrain a comprehensive understanding of customer experiences in digital banking. [5]

Mohapatra, S., Kumar, A., Shirmila, T., Rroy, A. D., & Hota, S. L. (2024): In this article the author focused on the “The mediating role of customer satisfaction for a sustainable e-banking performance”. The observations of the study underscores that the quality of e-banking services, especially in terms of efficiency and reliability, plays a crucial role in shaping customer satisfaction and fostering long-term loyalty. Customer satisfaction serves as a vital intermediary between service quality and customer allegiance. [6]

Famoti, O. (2024): study of this article emphasize on “Enhancing Customer Satisfaction in Financial Services through Advanced BI Techniques”. The highlights of this study reveal that for improving customer satisfaction in the financial services sector, advanced business intelligence techniques such as predictive analytics (e.g., sentiment analysis), and real-time analytics are necessary. They facilitate tailored experiences, forward- thinking service, and enhanced customer interaction. [7]

Objectives of the Study

The primary objectives of this study are:

1. To examine the extent of digital transformation in Indian banks.
2. To analyze the impact of digital transformation on customer experience.
3. To explore challenges faced by customers in a digitally transformed banking environment.
4. To suggest strategies for enhancing customer experience through digital banking.

Research methodology

This research is exploratory in nature. It follows a descriptive methodology. The secondary data have been collected through research papers, published articles, government and press report.

Discussion and analysis

Digital Banking Platforms

Digital banking platforms are transforming how we manage money by offering convenient, 24/7 access to a wide array of banking services through online and mobile channels. These platforms go beyond basic transactions, providing tools for budgeting, personalized financial insights, and seamless integration with other financial technologies. Driven by advanced security measures and a focus on user experience, digital banking is rapidly expanding, with innovations like AI-powered assistants, embedded finance, and biometric authentication set to further enhance the financial landscape. In India, the rapid growth of the Unified Payments Interface (UPI) exemplifies this digital shift, enabling instant, low-cost transactions and significantly driving financial inclusion across the nation.

Internet Banking: According to **UNCTAD, (2002)** stated that E-banking is the use of the internet to provide retail or wholesale banking services to both individuals and businesses. It includes bank transfers, payments, settlements, documentary collections and credits, as well as loans to businesses and individuals.

Mobile Banking: Mobile banking has revolutionized financial access, enabling users to perform diverse banking operations like checking balances, making instant UPI transfers, and managing investments 24/7 directly from their smartphones. This accessibility has significantly boosted financial inclusion in India, especially in rural areas, by overcoming geographical barriers and reducing transaction costs.

Digital wallets: Digital wallets securely store payment information, enabling quick and convenient electronic transactions via smart phones and other devices. They eliminate the need for physical cards or cash, offering features like contactless payments, bill payments, and loyalty program integration, all while prioritizing user data security.

Payment Innovation

Unified Payments Interface (UPI): The Unified Payments Interface (UPI) is a real-time payment system created by NPCI, facilitating seamless inter-bank transactions directly from a mobile device through a unique UPI ID. It has transformed India's digital payments environment by streamlining peer-to-peer and merchant transactions, rendering them swift, secure, and readily available to millions.

India's UPI Revolution

The magnitude of UPI is extraordinary. In June 2025, it processed more than ₹24.03 lakh crore in payments. This amount was distributed over 18.39 billion transactions. In comparison to the same month in the previous year, which recorded 13.88 billion transactions, the growth is evident. There has been an increase of approximately 32 percent within just one year. [10]



Figure: 1

Source: PIB [10]

UPI has experienced remarkable growth, especially between 2021 and 2022, with a transaction volume increase exceeding 100%. While the growth rate has gradually decelerated in the following years, the total volume has continued to rise significantly. This pattern indicates the extensive adoption of digital payments in India, bolstered by the rising use of smartphones, improved internet connectivity, and rapid advancements in fintech. In total, UPI transaction volume surged more than 6.5 times in just four years—from 2.80 billion in 2021 to 18.39 billion in 2025—showcasing India's rapid digital transformation within the financial sector.

IMPS and NEFT on Mobile: IMPS (Immediate Payment Service) facilitates immediate, round-the-clock fund transfers between bank accounts directly from a mobile device, making it perfect for urgent payments. NEFT (National Electronic Funds Transfer), which is also available through mobile banking, processes transactions in batches at thirty-minute intervals, making it appropriate for non-urgent transfers without any upper limit.

Bharat QR and BHIM App: Bharat QR and the BHIM App are digital payment platforms introduced to encourage cashless transactions in India. Bharat QR facilitates swift payments by scanning QR codes with mobile banking

applications. The BHIM App permits users to send or receive money instantly via UPI using only a mobile number or UPI ID.

Growth in Digital Payment Transactions

Digital payments in India have experienced remarkable growth, with the total volume of digital payment transactions rising from 2,071 crore in FY 2017-18 to 18,737 crore in FY 2023-24, reflecting a Compounded Annual Growth Rate (CAGR) of 44%. Additionally, in the last five months (April-August) of the current financial year 2024-25, the transaction volume has reached 8,659 crore. [9]

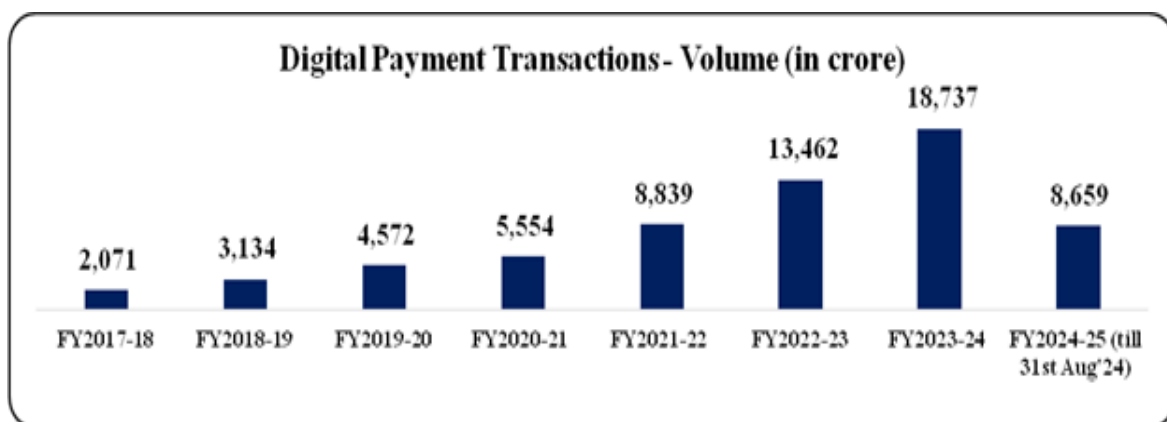


Figure: 2

Source: RBI, NPCI & Banks [9]

The transaction value has increased from ₹1,962 lakh crore to ₹3,659 lakh crore, reflecting a compound annual growth rate (CAGR) of 11%. Furthermore, during the last five months (April-August) of the ongoing financial year 2024-25, the total transaction value has risen significantly to an impressive ₹1,669 lakh crore. [9]

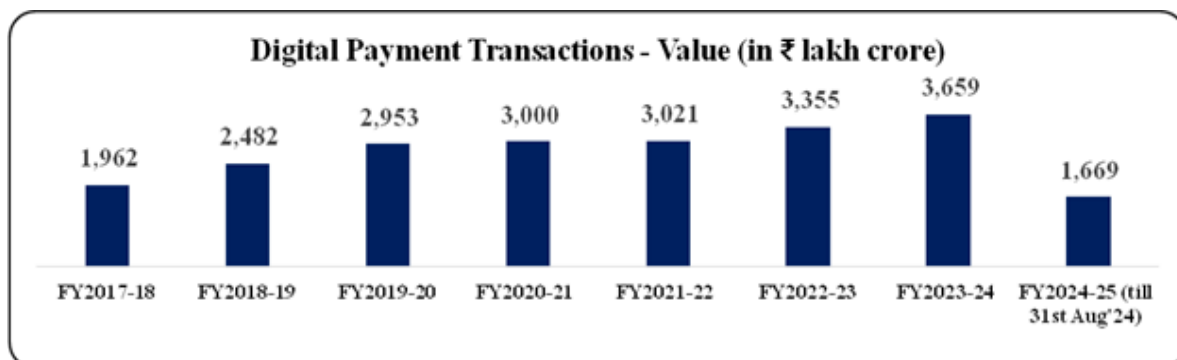


Figure: 3

Source: RBI, NPCI & Banks [9]

Analysing the Impact of Digital Transformation on Customer Experience

1. Improved Convenience and Accessibility

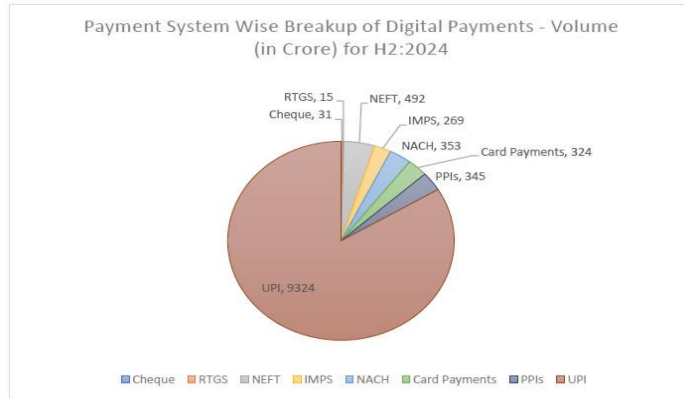


Chart 1 – Payment System Wise Breakup of Digital Payments Volume for H2:2024

Figure: 4

Source: RBI [11]

RBI reports for the year 2024 show the volume of UPI being 9324 crores recording a significant portion of more than 80% of overall financial transactions the customers have made across India, marking the improved convenience and acceptance of digital payment services. [11] Customers have gained 24/7 access to financial services through mobile apps, net banking, and UPI.

2.Enhanced Personalization

Digital tools such as AI-driven Chatbot and machine learning algorithms have made personalised financial advices easier to avail.

3. Faster Transactions and Reduced Turnaround Time (TAT)

As discussed earlier, UPI has covered a majority portion of the overall transactions made in the nation depicting the reliance of customers on speed and efficiency of digital payments.

4.Increased Transparency and Trust

The digital banking platforms provide complete transparency through instant notification and updates, real time account status, detailed bank statements at any hour of the day making it easier for the customers to have clean check over their bank accounts.

5. Inclusion of Previously Unbanked Customers

Digital transformation, coupled with government initiatives such as Jan Dhan Yojana and Aadhaar-enabled payment systems, has accelerated the growth in banking sector enabling more and more customers to come under the digital banking fold.

6. Customer Empowerment and Control

Customers have become self-reliant in fulfilling their banking needs through the mobile banking applications and internet banking services provided by the banks.

7. Rising Customer Expectations

Digitalization has not just stepped up customer experience but also has raised their expectations, customer tend to switch between different applications and even changing banks to get better experience of digital services.

8. Trust and Security Concerns

According to the data tabled by Ministry of Finance in Rajya Sabha, 2.4 million incidents of digital fraud have been reported in the FY 25, marking an increase of 67% in the past 2 years. Customers have become aware and are demanding stronger security frameworks and proper fraud detection systems. [12]

Challenges and limitations

Despite notable advancements, several challenges persist:

1. Digital Literacy and Awareness

- **Lack of Awareness:** awareness is still lacking behind among customers. Not all the banking customers are tech educated and thus a large part of rural, elderly and less educated or illiterate people may find it difficult to avail the benefits of digitalization.
- **Technological Complexity:** different apps and portals offered by banks and highly complex to be operated and thus people with low or no digital literacy may find it strenuous to use it.

2. Cyber security Threats

- **Phishing Attacks and Online Fraud:** cases of theft and fraud over the internet have become very common and the customers have become vulnerable to fraudulent activities and unauthorized transactions
- **Lack of Cyber Hygiene:** cyber hygiene refers to the set of practices that must be followed by internet users to protect and secure their digital assets. As far as observed, common people fail to follow the best practices to ensure their cyber safety such as changing passwords time to time, use of secured network configuration and securing accounts with complex passkeys etc.

3. Connectivity and Infrastructure Issues

- **Poor Internet Access:** many remote areas still face the issues of lack of internet connectivity and poor network depriving a significant part of the nation from internet services.

- **Power Outages:** Frequent power cuts can interrupt digital transactions.

4. Limited Access to Devices

- **Smartphone Dependency:** almost all the digital banking services require smartphones to be operated upon, but not every banking customer can afford or use a smartphone.

5. Technical Glitches and System Downtime

- **App Crashes and Bugs:** internet banking platforms are highly prone to bug attacks making it difficult to operate them without hindrances.
- **Failed Transactions:** failure in transaction is a very common issue that the customers face almost every day making it difficult for them to completely rely on online payments with no cash in hand.

6. Lack of Personal Touch

- **No Human Interaction:** digitalization has left behind the essence of personal touch, with no face-to-face interaction. Customers face struggle with fully digital interface.
- **Automated Responses:** Chatbots and IVRs often provide generic answers, leading to dissatisfaction in finding an appropriate solution to customer queries.

7. Data Privacy Concerns

- **Fear of Data Misuse:** anything online is hard to be believed as secured. Customers need to share all their crucial information digitally. Although being secured by personalized passwords and pin, it becomes difficult to blindly trust digital methods.
- **Consent Issues:** ambiguous privacy policies and repetitive notifications to agree upon them makes the users unknowingly consenting upon sharing data.

8. Trust Deficit

- **Skepticism towards Technology:** it is still a con for digitalization that it has failed in gaining trust of elderly generations.
- **Bad Experiences:** a number of frauds and crimes have been recorded up to date that are committed through misleading people with their OTPs and passwords which has steered up the skepticism I people.

9. Inadequate Customer Support

- **Slow Redressal Mechanisms:** the redressal mechanism is slow and it becomes complicated to get the issues related to application and transactions get resolved in real time.

10. Digital Divide and Exclusion

- **Urban-Rural Divide:** recent innovations and digitalization have been made focusing majorly to cater the needs of urban population, leaving the rural population behind. Digitalization has widened the gap between the fast moving urban areas and the rural population.

Suggestions

To enhance customer experience in the digital era, Indian banks should consider the following:

- **User-Centric Design:** banks must develop and promote intuitive and inclusive digital interfaces which are user friendly and can be easily understood and operated by people from all demographics.
- **Digital Literacy Campaigns:** another suggestion that can be noted is to establish strong pillars of digital literacy by collaborating with government initiatives and NGOs to educate customers to irreproachably operate digital banking tools.
- **Enhanced Cyber security Measures:** cyber security is crucial and thus investment must be made in AI driven fraud detection system. Regular audits and customer awareness programs must be conducted to track and protect customers against all frauds.
- **Hybrid Service Models:** instead of functioning completely digitally or manually, banks must opt for hybrid service models for better customer engagement.
- **Feedback Mechanisms:** customer feedback loops must be incorporated to regularly monitor and refine their own services and bridge the gap between customer expectations and their experiences.

II.CONCLUSION

Digital transformation has significantly enhanced customer experiences in India by providing a wide spectrum of digitally equipped services for better efficiency, greater convenience and appropriate level of personalization. However, a number of challenges have also been discussed in the paper which are a barrier to better customer experience counting lack of security and digital literacy as the primary ones. User satisfaction must be addressed proactively while keeping up the pace with cashless economy. A balanced approach integrating technology with personal touch will help in regards of the sustainable digital transformation in the financial landscape.

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