

Impact of UPI Payment on Retail Banking Profitability in India

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Peer Review Information	Abstract
<p>Type: Article Received: 20 March 2026 Revised: 03 April 2026 Accepted: 21 May 2026 Published: 03 June 2026</p>	<p>The Unified Payments Interface (UPI) has revolutionized India's digital payment ecosystem by enabling fast, secure, and real-time transactions. This study examines the impact of UPI on the profitability of retail banking in India. While UPI has significantly increased transaction volumes and reduced operational costs such as cash handling and branch visits, it has also reduced banks' fee-based income due to its low-cost structure. The research analyzes how banks are adapting to this shift by leveraging customer data, cross-selling financial products, and investing in digital infrastructure. The study concludes that UPI's impact on profitability is not purely negative or positive but depends on banks' strategic responses and ability to innovate. This study examines the impact of UPI payments on retail banking profitability in India by analyzing both the positive and negative dimensions. On one hand, UPI has contributed to cost efficiency in banking operations by reducing dependence on physical infrastructure such as branches, ATMs, and manual processing systems. Digital transactions lower operational costs, improve transaction speed, and enhance customer convenience, thereby increasing customer engagement and retention. Additionally, UPI has facilitated financial inclusion by bringing unbanked and underbanked populations into the formal financial system, expanding the customer base for banks. Furthermore, UPI indirectly enhances bank profitability by enabling cross-selling opportunities for financial products such as loans, insurance, and investment services. The vast amount of transaction data generated through UPI platforms helps banks better understand customer behaviour, enabling personalized offerings and improved credit assessment. Studies also suggest that digital financial services like UPI contribute positively to overall banking performance by increasing market reach and operational efficiency. However, the rapid growth of UPI also poses challenges to traditional revenue models of retail banks. The zero or minimal transaction fees associated with UPI payments have reduced income from conventional sources such as debit card transactions, merchant discount rates (MDR), and service charges. As UPI replaces cash and card payments, banks face declining fee income and increasing competition from fintech and third-party providers.</p> <p>Keywords: Unified Payments Interface; Digital Payments; Retail Banking; Banking Profitability.</p>

How to Cite This Article

Bhate, M., Pawar, S., Pawar, P., Pawar, S., Pawar, S., & Lokewar, A. (2026). Impact of UPI payment on retail banking profitability in India. *Multidisciplinary Journal of Research in Engineering and Technology*, 13(2), 297-303.

Introduction

In India, the retail banking sector is undergoing a transformation thanks to digital payments. The UPI system was introduced to enable instant, work together bank-to-bank mobile payments, and over the years its adoption has exploded. Banks that previously focused heavily on cash handling, branch transactions, deposits and card payments are now seeing customer behaviour shift towards real time digital transfers. Retail banking profitability depends on two broad dimensions revenue (interest income from loans, fee income from payment, cross sell of services) and costs. UPI affects both sides of this equation for example, transaction volumes may skyrocket, but per transaction margins may shrink, similarly, cost may decline in some areas but new costs may rise.

The Unified Payments Interface (UPI) is one of India's biggest digital payment innovations, launch by the National Payments Corporation of India (NPCI) in 2016. It allows people to transfer money instantly between bank accounts using mobile apps, without needing cash, cards, or complicated banking details. Since its launch, UPI has grown rapidly, becoming the most used payment system in India. Millions of people now use apps like Google Pay, PhonePe, Paytm, and BharatPe to pay bills, shop online, or send money to friends and family. This digital revolution has made transactions faster, safer, and more transparent.

For banks, UPI has been both an opportunity and a challenge. On one hand, it has reduced operating costs, increased digital adoption, and brought more customers into the formal banking system. On the other hand, banks earn less from transaction fees because UPI transfers are mostly free, which affects their profit margins.

This research aims to study the overall impact of UPI on the profitability of retail banks in India understanding how it has changed their income structure, customer behaviour, and long-term business strategies. For retail banks, UPI has brought both opportunities and challenges. On one hand, it has helped banks gain more customers, deposits, and digital engagement. On the other hand, it has reduced income from older payment systems such as card and fund transfer fees. While UPI itself does not bring much direct profit to banks, it creates value by improving customer reach, data insights, and cross-selling potential. Overall, UPI has played a major role in driving digital banking growth and shaping the future profitability model of Indian retail banks.

Impact of UPI Payments on Retail Banking Profitability in India

- UPI was launched by NPCI in 2016 to enable quick and easy digital money transfers.
- It has made payments faster, simpler, and more convenient for users.
- UPI reduced the use of cash and traditional banking methods.
- Banks gained more digital customers and deposits through UPI.
- However, banks earn less from old payment fees due to UPI's free or low-cost system.
- UPI gives banks valuable customer data that helps in offering loans and services.
- Overall, UPI supports digital growth but brings limited direct profit for banks.

Literature Review

Table 1. Review of Literature on the Impact of UPI on Banking Profitability and Financial Systems

Title of the Paper	Authors	Journal Year	Objectives	Concluding
Lessons from the Unified Payments Interface (UPI)	GCorneliet al.	Bank for International Settlements (BIS), 2024	To explain how UPI changed payments in India and its effects on banks and financial stability.	UPI has made digital payments easier and helped more people use banking services. But because of this, banks now earn less money from old payment methods like cards and transfers. So, they are looking for new ways to make money.
The Impact of UPI on the Indian Banking System	Various Authors	Research Gate, 2025	To measure UPI's effect on banking operations and income patterns.	UPI reduced cash handling costs and boosted deposits, but banks lost some transaction fee income.

The Impact of Unified Payments Interface (UPI) on the Indian Economy	Various Authors	IJR T I, 2025	To study how UPI affected transaction costs, trade formalization and banks income.	UPI helped banks get more deposits and attract more digital users.
The Impact of UPI on Traditional Banking System	Various Authors	IJPREMS / IJPR, 2025	To examine how UPI changed branch and ATM usage.	Fewer people visit branches or ATMs now, saving costs for banks but reducing income from traditional services.
The Impact of UPI on MSMEs and Retailers	Industry Reports & Researchers	Industry / 2025	To check how small merchants benefited and how it affects banks.	UPI helped small businesses grow and deposit more money in banks, but banks earn less per transaction.
UPI Adoption, Economic Formalization and Tax Effects	Various Researchers	SSRN / Working Papers, 2025	To see how UPI helped formalize small business and tax reporting.	UPI made people use official banking channels more, which helps banks get better information.

Research Methodology

1. Data Sources & Time Period:

- UPI growth statistics (volume, value) from sources such as RBI payment system reports, PwC reports.
- Retail banking profitability indicators for Indian banks (for example cost-to-income ratio, noninterest income from payments, retail loan deposit growth) from annual reports of banks (public & private) over recent years (for example FY2018-24).

2. Sample & Variables:

- Independent variable: UPI adoption (measured via transaction volumes, growth rate) for India overall and possibly bank-specific if available.
- Dependent variables: retail banking profitability metrics such as (i) cost-to-income ratio in retail operations, (ii) non-interest income contribution from retail payments/transactions, (iii) growth in retail deposits/loans (as a proxy for customer-momentum).

3. Method of Analysis:

- Trend analysis: observe how UPI volumes have grown alongside banking profitability metrics over the same period.
- Correlation/regression (where data permits) to examine associations between UPI growth and profitability metrics.
- Interpretation of findings with qualitative insight (why some banks may perform better).

4. Limitations:

- Segment level data (retail only) may not be fully available for all banks.
- Causality cannot be definitively established (other factors like regulation, fintech competition, macro conditions matter).
- UPI is one of many digital payment methods, isolating its unique effect is complex.

5. Nature of Data

- The research is based on quantitative data (numerical data like transaction volume, ratios, growth rates).
- Supported by qualitative insights from reports and industry analysis.

6. Data Analysis & Interpretation

- The analysis shows a significant increase in UPI transaction volume and value over the period FY2018-FY2024.
- Banks have experienced improved operational efficiency, reflected in better cost-to-income ratios due to reduced dependency on physical banking channels.
- Non-interest income from traditional payment methods has shown pressure/decline, as UPI transactions are mostly free or low-cost.

7. Scope of the Study:

- The study focuses on the impact of UPI payments on retail banking profitability in India.
- It covers major public and private sector banks and their performance in the digital payment ecosystem.
- The analysis is limited to the period FY2018-FY2024, capturing the rapid growth phase of UPI.

8. Objectives of the Study:

- To analyze the growth and adoption of UPI in India.
- To study the impact of UPI on retail banking profitability.
- To evaluate changes in cost-to-income ratio and non-interest income due to UPI.
- To understand the relationship between digital payments and customer engagement.

9. Future Scope of the Study:

- Further research can include bank-specific analysis with primary data.
- Comparative studies can be conducted between India and other countries’ payment systems.
- The impact of UPI on small banks, rural banking, and financial inclusion can be explored in detail.
- Future studies may examine the role of emerging technologies like AI and fintech integration in digital payments.

Data Interpretation and Analysis

Growth of UPI:

- As UPI volumes increase, banks costs associated with cash handling, branch based manual transactions and card infrastructure may fall, improving cost efficiency (i.e., cost-to-income ratio improves).
- However, fee income per transaction in UPI may be lower compared to older channels (cards, branch transactions). If banks rely solely on fee income, revenue may stagnate or decline, putting pressure on profitability.

Null Hypothesis (H₀): The choice of one or more UPI payment options is independent of user preference and occurs randomly.

Alternative Hypothesis (H₁): There is a significant difference in the responses - one or more UPI options are chosen for payment.

Result Interpretation

From the Chi-square test result ($\chi^2= 103.33$, p-value = 2.98×10^{-22})

- The p-value is far smaller than 0.05, so we reject the null hypothesis (H₀).
- This means the responses are not evenly distributed —a large majority of participants correctly selected “Unified Payment Interface”as the full form of UPI.

Null Hypothesis (H₀): There is no significant difference in the responses - all options (RBI, NPCI, SBI, Government of India) are equally likely to be chosen by respondents.

Alternative Hypothesis (H₁): There is a significant difference in the responses - one or more options are chosen more often than others.

Result Interpretation

Based on the Chi-square test result ($\chi^2= 61.05$, p-value = 3.51×10^{-13})

- The p-value is much smaller than 0.05, so we reject the null hypothesis (H₀).
- This means the responses are not evenly distributed —most people correctly recognized that NPCI started the UPI system in India.

Chi-Square Test Summary Table

Test Topic	Chi-Square Value (χ^2)	p-value	Significance Level (α)	Interpretation
UPI Full Form	103.33	2.98×10^{-22}	0.05	Responses are not random; majority correctly identified “Unified Payment Interface”.

UPI Started By (NPCI)	61.05	3.51×10^{-13}	0.05	Responses are not evenly distributed; most respondents correctly chose NPCI.
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Hypothesis Summary Table

Test Topic	Null Hypothesis (H ₀)	Alternative Hypothesis (H ₁)
UPI Full Form	Choices are independent and occur randomly	Significant difference; correct option is chosen more frequently
UPI Started By	All options (RBI, NPCI, SBI, Govt.) are equally likely	Significant difference; one option (NPCI) is chosen more often

Conclusion Table

Test Topic	Final Conclusion
UPI Full Form	Strong awareness among respondents about UPI full form
UPI Started By	Majority of respondents have correct knowledge about NPCI as the initiator

What does UPI stand for?
42 responses

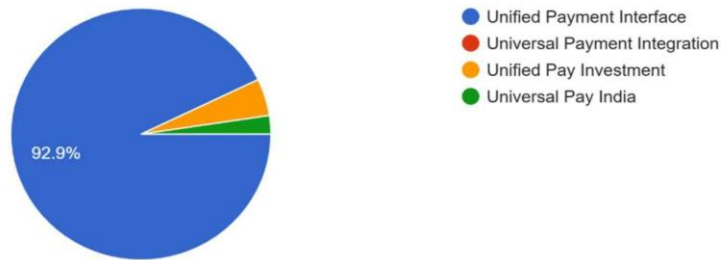


Fig. 1. Awareness of the Full Form of UPI Among Respondents

Observations

- Digital retail and e-commerce benefit the most.
- Banks face lower profit margins but higher usage.
- UPI is used mainly for instant money transfers.

Who started the UPI system in India?
42 responses

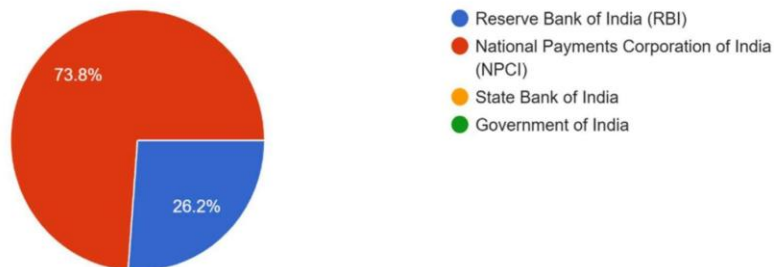


Fig. 2. Awareness of the Organization that Launched the UPI System in India

Observations

- Well aware of the official organization behind UPI
- People have good knowledge about the origin of UPI
- Develop and manage India's digital payment systems.

Findings

- UPI has become the dominant retail-payment mode in India, with massive volume and value growth in recent years.
- The shift from branch transactions to instant digital payments reduces certain costs for retail banks (cash handling, branch load).
- At the same time, transaction fee revenue per UPI payment is lower in many cases, so banks cannot rely on transaction volumes alone for revenue growth.
- Banks able to integrate UPI into their broader digital offerings (loans, deposits, investment services) are positioned to improve profitability.

Suggestions

- Banks should treat UPI not just as a payment channel, but as a customer engagement and data acquisition tool analyse transaction data (volume, merchant category, frequency) to tailor personal offers.
- Redesign pricing/fee models: since many UPI transactions are low margin, banks must focus on value-added services (premium features, embedded finance, merchant-services) rather than solely on transaction counts.
- Invest in digital infrastructure and analytics capabilities to scale cost-efficient platforms and enable faster product roll-outs.
- Build partnerships with merchants and digital ecosystems to capture retail deposit and loan flows: for e.g. merchant-acquiring banks, co-branded offers.
- Monitor regulatory/future payment landscape changes (for example open banking, real-time credit via payment-platforms) and ensure strategic flexibility

Conclusion

The rise of UPI has completely changed how people in India make payments. It has made money transfers fast, easy, and almost free for everyone. For banks, UPI has brought both opportunities and challenges. On one hand, it has reduced cash handling costs, increased customer engagement, and helped more people use formal banking channels. On the other hand, the zero or very low transaction fees mean banks earn less directly from these digital payments.

In the short term, this has put some pressure on bank profits, especially from lost card and transaction fees. But in the long run, UPI can still help banks become more profitable if they use it wisely by turning digital users into loyal customers, offering them loans, insurance, and other financial services.

Overall, UPI has boosted the digital economy and financial inclusion in India. Its impact on profitability depends on how well banks adapt their business models to this new, low cost, digital world. Those that innovate and build new value from UPI's massive transaction base are likely to gain the most in the future.

The emergence and rapid growth of the Unified Payments Interface (UPI) have significantly transformed the landscape of retail banking in India. Introduced as a real-time digital payment system, UPI has revolutionized the way financial transactions are conducted by offering a seamless, secure, and cost-effective platform for users. Its widespread adoption across individuals, businesses, and government institutions highlights its importance as a key driver of India's digital economy.

From the perspective of retail banking profitability, the impact of UPI is multifaceted. On one hand, UPI has led to a decline in traditional fee-based income sources for banks. Revenue streams such as merchant discount rates (MDR), transaction fees, and charges on card-based payments have been adversely affected due to the zero-cost or low-cost nature of UPI transactions. This has created short-term pressure on banks' non-interest income, compelling them to rethink their conventional revenue models.

On the other hand, UPI has contributed positively to banking efficiency and long-term profitability. The shift from physical to digital transactions has significantly reduced operational costs related to branch management, cash handling, and ATM maintenance. This cost optimization has improved the overall cost-to-income ratio of banks. Additionally, the high volume of UPI transactions has increased customer engagement and strengthened the relationship between banks and their customers.

Another important benefit of UPI is its role in promoting financial inclusion. By providing easy access to digital payments, UPI has brought a large segment of the previously unbanked and underbanked population into the formal financial system. This expansion of

the customer base offers banks new opportunities to cross-sell financial products such as savings accounts, loans, insurance, and investment services. Moreover, the data generated through UPI transactions enables banks to better understand customer behavior, leading to improved credit assessment and personalized financial solutions.

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