

Impact of UPI on Banking Transactions

A Study of Digital Payment Usage and Customer Experience

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Abstract

This research paper examines the impact of Unified Payments Interface (UPI) on banking transactions, with a focus on usage patterns, customer satisfaction, convenience, and challenges experienced by users.

Keywords: UPI, Digital Payments, Banking Transactions, Customer Satisfaction, FinTech

1. Introduction

Digital transformation has changed the way customers interact with banks. Traditional banking transactions that once required physical visits, cash handling or card-based payments can increasingly be completed through mobile applications. UPI is a major part of this transformation. The Reserve Bank of India describes UPI as a platform that enables transfers between bank accounts through a smartphone and notes that it can support instant transfers on a 24×7 basis. [cite]turn0search24[

UPI was publicly launched in 2016 and was designed to facilitate interoperable, real-time payments using identifiers such as a virtual payment address. NPCI is the network operator and coordinator of the UPI system. [cite]turn0search26[turn0search25[Over time, UPI has expanded beyond person-to-person transfers to merchant payments, bill payments, recurring mandates and other digital payment use cases.

The scale of the ecosystem is substantial. NPCI's published statistics show 24,508.96 million UPI transactions in August 2026, with transaction value of ₹29,82,355.95 crore and 752 live banks. [cite]turn0search2[Against this broader context, the present research focuses on the user-level experience reflected in a small primary survey.

2. Problem Statement

Although UPI has simplified many banking and payment activities, users may still experience transaction failures, network interruptions, security concerns and payment limits. The research problem is therefore to understand how users perceive UPI's

effect on convenience, cash usage, branch visits, payment habits and satisfaction, while also identifying the major difficulties encountered during use.

3. Objectives of the Study

- To examine the frequency and major purposes of UPI usage among respondents.
- To study users' perception of UPI security and convenience.
- To assess whether UPI has reduced cash usage and the need for physical bank branch visits.
- To examine changes in respondents' overall banking and payment habits.
- To measure overall satisfaction with UPI services.
- To identify the major benefits and problems associated with UPI usage.
- To assess respondents' overall perception of UPI's impact on banking transactions.

4. Research Questions

1. What is the frequency and primary purpose of UPI usage among the surveyed respondents?
2. To what extent do users perceive UPI as convenient and secure?
3. Has UPI reduced cash usage and branch visits?
4. What are the main benefits and problems experienced by users?
5. Do respondents perceive UPI as having a positive impact on banking transactions?

5. Hypotheses

H0: UPI does not have a positive perceived impact on banking transactions among the surveyed respondents.

H1: UPI has a positive perceived impact on banking transactions among the surveyed respondents.

For this study, the hypotheses are treated as conceptual hypotheses. Because the survey uses a non-probability sample, the paper emphasizes descriptive analysis rather than claiming population-level statistical significance.

6. Review of Background and Literature

RBI's financial awareness material explains that UPI enables real-time transfers between bank accounts through smartphones and highlights 24×7 availability and the use of a virtual ID as important features. [cite\turn0search24] NPCI's UPI documentation describes UPI as an interoperable payment infrastructure connecting customers, banks,

merchants and technology participants.

[cite\turn0search25]

NPCI's current product information also illustrates the widening scope of UPI. UPI-powered applications can support international merchant acceptance in selected locations, while UPI can also be linked with RuPay credit cards for QR-based payments. [cite\turn0search0\turn0search8]

These developments suggest that UPI is not only a payment method but an increasingly broad interface between customers and financial services.

Previous academic and industry discussions commonly associate digital payments with speed, convenience, reduced dependence on cash and greater accessibility, while also identifying risks such as fraud, privacy concerns, connectivity problems and failed transactions. The present study contributes a small primary-data perspective by examining these dimensions together.

7. Research Methodology

Parameter	Description
Research design	Descriptive and exploratory survey
Data source	Primary data collected through Google Forms
Sample size	survey respondents
Sampling method	Convenience / non-probability sampling
Research instrument	Structured questionnaire with closed-ended and one opinion-based section
Study area	Respondents reached through the researcher's survey distribution
Analysis method	Frequency, percentage and descriptive interpretation
Study period	September 2026

The survey results should be interpreted as the perceptions of the survey respondents who participated. They should not be generalized to the entire population of UPI users without a larger and more representative sample.

Survey analysis is based on valid Google Forms responses collected in September 2026. Percentages are presented for descriptive interpretation and may not represent the wider population.

8. Data Analysis and Interpretation

8.1 Demographic Profile

Age Group

Response	Frequency (%)
20 - 30 year	17 (89.5%)
Above 50	1 (5.3%)
41 - 50 year	1 (5.3%)

Gender

Response	Frequency (%)
Female	11 (57.9%)
Male	8 (42.1%)

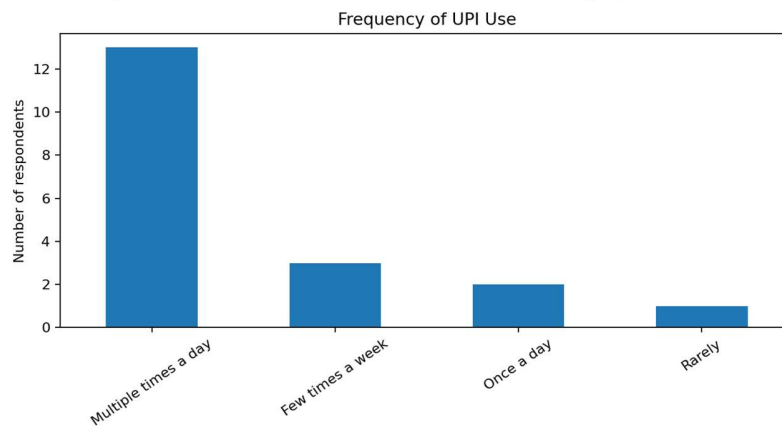
Occupation

Response	Frequency (%)
Salaried Employee	9 (47.4%)
Student	8 (42.1%)
Business/Self-employed	1 (5.3%)
Others	1 (5.3%)

8.2 UPI Usage Frequency

Response	Frequency (%)
Multiple times a day	13 (68.4%)
Few times a week	3 (15.8%)
Once a day	2 (10.5%)
Rarely	1 (5.3%)

Interpretation: 13 respondents (68.4%) use UPI multiple times a day. Adding those who use it once a day, 15 respondents (78.9%) use UPI daily. This indicates that UPI is a routine payment channel for most respondents.



8.3 Main Purpose of UPI Usage

Response	Frequency (%)
Shopping/Online payments	9 (47.4%)
Utility bill payments	5 (26.3%)
Food/Travel payments	3 (15.8%)
Recharge	1 (5.3%)
Others	1 (5.3%)

Shopping/online payments were the leading purpose, selected by 9 respondents (47.4%), followed by utility bill payments at 5 respondents (26.3%). This shows that UPI is used across both everyday consumption and recurring payment activities.

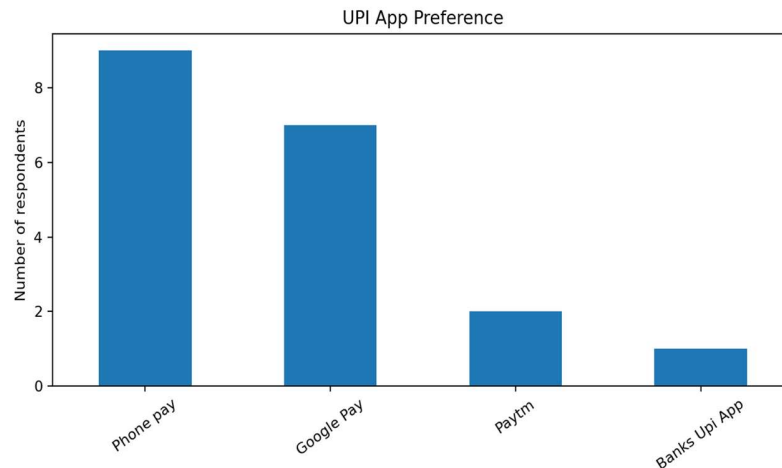
8.4 Perception of Security

Response	Frequency (%)
Secure	12 (63.2%)
Neutral	4 (21.1%)
Very Secure	3 (15.8%)

12 respondents (63.2%) considered UPI secure and another 3 (15.8%) considered it very secure. Four respondents (21.1%) remained neutral. No respondent selected an explicitly insecure category in the collected responses.

8.5 Most Frequently Used UPI Applications

Response	Frequency (%)
Phone pay	9 (47.4%)
Google Pay	7 (36.8%)
Paytm	2 (10.5%)
Banks Upi App	1 (5.3%)



PhonePe was the most frequently reported application in this sample with 9 users (47.4%), followed by Google Pay with 7 users (36.8%). These figures describe this survey sample only and should not be interpreted as market-share estimates.

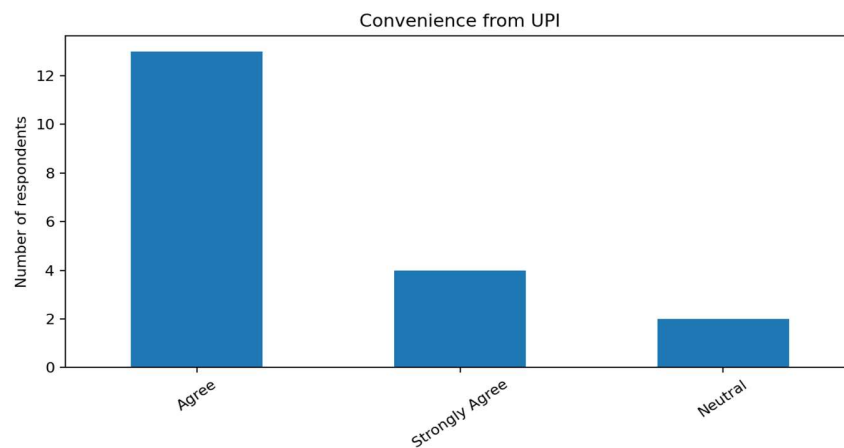
8.6 Effect on Cash Usage

Response	Frequency (%)
To a great extent	8 (42.1%)
Very little	5 (26.3%)
To some extent	3 (15.8%)
Completely	3 (15.8%)

Eight respondents (42.1%) said UPI reduced their cash use to a great extent and 3 (15.8%) said it reduced cash use completely. Thus, 11 respondents (57.9%) reported a substantial reduction in cash use.

8.7 Convenience of Banking Transactions

Response	Frequency (%)
Agree	13 (68.4%)
Strongly Agree	4 (21.1%)
Neutral	2 (10.5%)



13 respondents (68.4%) agreed and 4 (21.1%) strongly agreed that UPI made banking transactions more convenient. Together, 84.2% expressed an explicitly positive convenience response.

8.8 Failed or Pending Transactions

Response	Frequency (%)
Rarely	11 (57.9%)
Sometimes	7 (36.8%)
Often	1 (5.3%)

Transaction reliability remains an issue. Eleven respondents (57.9%) said they rarely faced failed or pending transactions, while 7 (36.8%) faced them sometimes and 1 (5.3%) often. Therefore, 8 respondents (42.1%) experienced failures/pending transactions at least sometimes.

8.9 Effect on Bank Branch Visits

Response	Frequency (%)
Yes, significantly	10 (52.6%)
No major change	4 (21.1%)
Yes, to some extent	4 (21.1%)
No	1 (5.3%)

Ten respondents (52.6%) stated that UPI significantly reduced their need to visit a bank branch and 4 (21.1%) reported a reduction to some extent. Only 1 respondent said there was no reduction. This suggests a perceived shift of routine transactions from physical branches to digital channels.

8.10 Change in Banking and Payment Habits

Response	Frequency (%)
Moderately	9 (47.4%)
Significantly	7 (36.8%)
Not at all	2 (10.5%)
Slightly	1 (5.3%)

Seven respondents (36.8%) reported a significant change in their banking/payment habits and 9 (47.4%) reported a moderate change. Thus, 84.2% reported at least a moderate change.

8.11 Satisfaction with UPI

Response	Frequency (%)
Satisfied	12 (63.2%)
Very satisfied	6 (31.6%)
Neutral	1 (5.3%)

12 respondents (63.2%) were satisfied and 6 (31.6%) were very satisfied. Therefore, 18 respondents (94.7%) expressed a positive satisfaction response.

8.12 Major Benefits and Problems

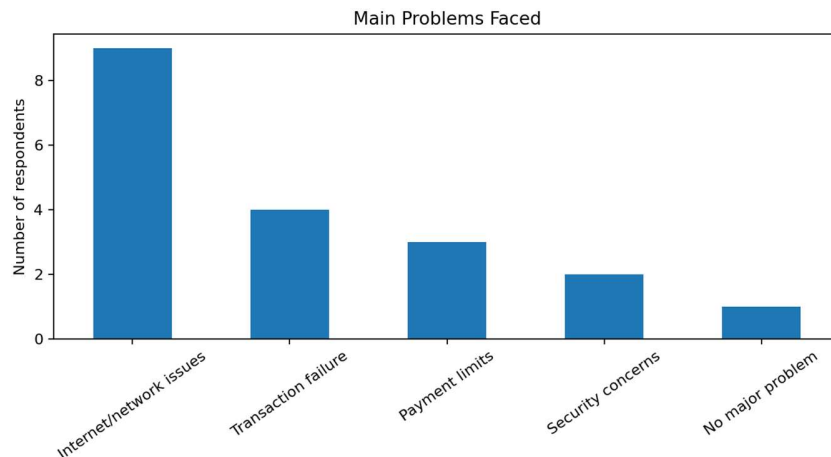
Major benefit

Response	Frequency (%)
24×7 availability	9 (47.4%)
Fast transactions	6 (31.6%)
Convenience	2 (10.5%)
Other	1 (5.3%)
No need to carry cash	1 (5.3%)

The leading benefit was 24×7 availability, selected by 9 respondents (47.4%), followed by fast transactions with 6 respondents (31.6%).

Major problem

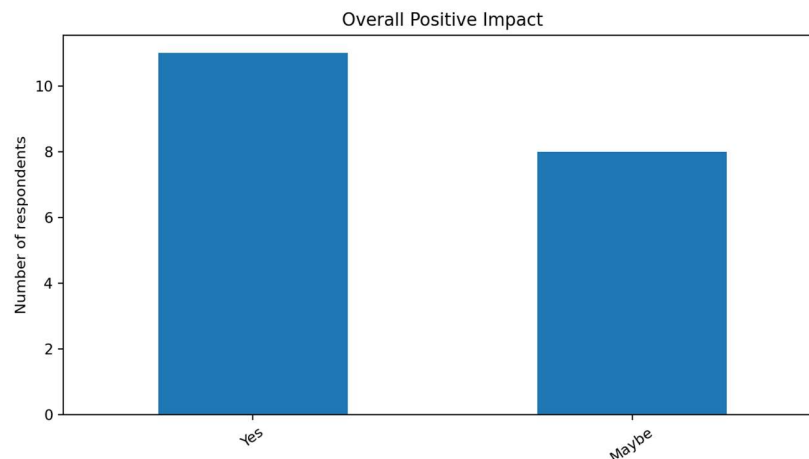
Response	Frequency (%)
Internet/network issues	9 (47.4%)
Transaction failure	4 (21.1%)
Payment limits	3 (15.8%)
Security concerns	2 (10.5%)
No major problem	1 (5.3%)



Internet/network issues were the most frequently reported problem, selected by 9 respondents (47.4%). Transaction failure was second with 4 respondents (21.1%). Payment limits and security concerns were also reported.

8.13 Overall Perceived Impact

Response	Frequency (%)
Yes	11 (57.9%)
Maybe	8 (42.1%)



Eleven respondents (57.9%) answered 'Yes' when asked whether UPI had positively impacted banking transactions, while 8 (42.1%) answered 'Maybe'. No respondent selected 'No'. The result therefore indicates a generally favorable perception within this sample, while the relatively large 'Maybe' group also suggests that some respondents may see benefits alongside unresolved concerns.

9. Cross-Analysis

UPI frequency	Maybe	Yes	Total
Multiple times a day	7	6	13
Once a day	0	2	2
Few times a week	1	2	3
Rarely	0	1	1

The cross-tabulation shows that even among frequent users, perceptions are not uniformly 'Yes'. For example, among the 13 respondents using UPI multiple times a day, 6 answered 'Yes' and 7 answered 'Maybe'. This indicates that high usage alone does not automatically translate into an unequivocal overall assessment of impact.

10. Major Findings

- UPI usage is highly frequent in the sample: 68.4% use it multiple times a day and 78.9% use it at least once daily.
- Shopping/online payments are the most common use case, accounting for 47.4% of responses.
- 78.9% of respondents rated UPI as secure or very secure.
- 84.2% agreed or strongly agreed that UPI has made banking transactions more convenient.
- 57.9% reported a substantial reduction in cash use (great extent or completely).
- 73.7% reported that UPI reduced the need for bank branch visits either significantly or to some extent.

- 84.2% reported moderate or significant changes in their banking/payment habits.
- 94.7% were satisfied or very satisfied with UPI services.
- Network/internet issues were the most common problem, reported by 47.4% of respondents.
- 57.9% gave a direct 'Yes' to positive overall impact, while 42.1% selected 'Maybe'.

11. Discussion

The survey results indicate that UPI is embedded in the everyday payment behavior of the respondents. The combination of high usage frequency, perceived convenience and high satisfaction supports the view that UPI has shifted many routine transactions from cash or physical banking channels toward mobile payments.

The results also highlight an important distinction between adoption and reliability. Respondents continue to use UPI frequently even though 42.1% reported failed or pending transactions at least sometimes. The largest reported problem was network/internet connectivity. This suggests that

improvements in digital payment infrastructure and customer support can be important for maintaining trust and continuity.

At the banking-channel level, the reduction in branch visits reported by respondents may reflect the migration of routine transactions—such as payments, transfers and bill payments—to digital self-service channels. This does not imply that branches have become unnecessary, because complex services, advisory needs, cash-related requirements and exceptions can still require physical or assisted banking.

12. Suggestions / Recommendations

- Improve transaction reliability and network resilience to reduce failed and pending payments.
- Provide clear and fast customer support for failed transactions, reversals and disputed payments.
- Continue user awareness programs on UPI PIN safety, fraud prevention and verification of payment requests.
- Improve digital literacy among less frequent users and customers who are less comfortable with mobile payments.
- Banks should monitor UPI-related customer complaints and use complaint trends to improve digital service quality.
- Maintain alternative channels such as branches, ATMs and assisted service points for customers who face connectivity or digital-access limitations.

13. Limitations of the Study

- The sample size is limited to the survey respondents.
- The study uses convenience sampling and therefore may not represent the wider population of UPI users.
- Most respondents belong to the 20–30 age group, limiting age-wise generalization.
- The analysis is based primarily on self-reported perceptions rather than transaction-level banking data.
- The study uses descriptive statistics; no causal relationship between UPI adoption and banking outcomes is established.

14. Conclusion

This study examined the perceived impact of UPI on banking transactions using primary survey responses. The evidence from the sample shows frequent UPI usage, strong perceived convenience, high satisfaction, reduced cash dependence and fewer routine branch visits. Respondents also reported meaningful changes in their banking and payment habits. At the same time, network problems and failed or pending transactions remain practical challenges.

Overall, 11 respondents (57.9%) directly perceived a positive impact, while the remaining 8 (42.1%) selected 'Maybe'. Thus, within the surveyed group, UPI is associated with a broadly favorable perception of banking transaction convenience and digital payment behavior, but the findings should be treated as sample-specific rather than as a statistical representation of all Indian banking customers.

15. References

6. Reserve Bank of India. Financial Awareness Messages (FAME), Unified Payments Interface section. RBI.
7. National Payments Corporation of India (NPCI). Unified Payments Interface (UPI) Product Statistics.
8. National Payments Corporation of India (NPCI). UPI Product Booklet.
9. National Payments Corporation of India (NPCI). UPI Global Acceptance / UPI for NRIs.
10. National Payments Corporation of India (NPCI). RuPay Credit Card on UPI.

Official web sources consulted:

<https://www.rbi.org.in/commonman/images/FAME%20Booklet%20second%20edition/FAME%20Booklet%20English/FAME30072020.pdf>
<https://www.npci.org.in/product/upi/product-statistics>
<https://www.npci.org.in/PDF/npci/upi/Product-Booklet.pdf>
<https://www.npci.org.in/product/upi-global-acceptance>
<https://www.npci.org.in/product/rupay/credit-card-on-upi>

Appendix A: Survey Questionnaire

11. Age Group
12. Gender

13. Occupation
14. How frequently do you use UPI?
15. What do you mainly use UPI for?
16. Do you consider UPI transactions secure?
17. Which UPI application do you use most frequently?
18. Has UPI reduced your use of cash for daily transactions?
19. Has UPI made your banking transactions more convenient?
20. How often have you faced failed or pending UPI transactions?
27. king transactions?
21. Has UPI reduced your need to visit a bank branch?
22. Has UPI changed your overall banking/payment habits?
23. Overall, how satisfied are you with UPI services?
24. In your opinion, what is the biggest benefit of UPI?
25. What is the biggest problem you face while using UPI?
26. Overall, do you think UPI has positively impacted ban