

Impact of UPI Adoption on Financial Behaviour of Indian Consumers

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Abstract

The Unified Payments Interface (UPI) has become a major component of India's digital payment infrastructure and has moved digital transactions from occasional electronic payments to frequent, everyday financial activity. This paper examines the potential impact of UPI adoption on the financial behaviour of Indian consumers, with particular attention to spending, saving, budgeting, financial awareness, and investment-related behaviour. The study uses a descriptive and analytical research framework supported by secondary evidence from the National Payments Corporation of India, the Reserve Bank of India, the World Bank, and recent academic literature. UPI transaction activity has expanded substantially: official information indicates that UPI processed 24,161.69 crore transactions valued at approximately Rs 314 lakh crore during financial year 2025-26, demonstrating the scale at which digital payments have entered routine consumer life. The paper proposes an empirical model in which UPI adoption is represented through frequency of use, perceived convenience, ease of use, trust and perceived security, while financial behaviour is represented through spending control, saving discipline, budgeting, financial awareness, and investment behaviour. Prior evidence indicates that digital payment convenience can reduce transaction friction and may influence consumption decisions, while the broader digital financial ecosystem can improve access to formal financial services. At the same time, the reduced salience of cash may create a behavioural risk in which consumers underestimate small and frequent expenditures. The paper identifies a need for larger, geographically diverse primary surveys to test these relationships statistically and recommends the use of reliability analysis, correlation, multiple regression, and demographic comparison. The study provides implications for banks, payment service providers, educators, policymakers, and consumers by emphasizing financial literacy, expenditure tracking, responsible digital payment design, and stronger consumer awareness.

Keywords: UPI Adoption, Financial Behaviour, Digital Payments, Consumer Spending, Saving Behaviour, Financial Literacy, India

1 Introduction

Digitalisation has fundamentally changed the way households, businesses, and financial institutions conduct economic transactions. In India, the Unified Payments Interface has emerged as one of the most important elements of this transformation. UPI was launched in 2016 under the development of the National Payments Corporation of India and the regulatory framework of the Reserve Bank of India. It enables interoperable, near-instant account-to-account payments through mobile applications and simplified payment identifiers. Its design has made digital payments accessible not only to conventional online consumers but also to small merchants, informal businesses, service providers, and households.

The growth of UPI is important from a finance perspective because payment technology does more than change the method by which money is transferred. It can change the timing, frequency, visibility, and psychological perception of spending. A cash transaction involves physical separation from money, whereas a mobile payment can be completed in a few seconds. The reduction in transaction friction may increase convenience and economic participation, but it can also make small purchases less noticeable. Consequently, the relationship between digital payment adoption and financial behaviour deserves examination from both efficiency and behavioural perspectives.

Official NPCI statistics show the extraordinary scale of the UPI ecosystem. During financial year 2025-26, UPI recorded more than 24,161 crore transactions with a value exceeding Rs 314 lakh crore. The platform had 703 live banks by March 2026 according to government-published statistics. More recent NPCI monthly data also show continued expansion, with 24,508.96 million transactions valued at Rs 29,82,355.95 crore in August 2026. These figures demonstrate that UPI is not a niche payment instrument; it has become a central component of everyday retail finance.

The relevance of the issue has also increased because digital payments are increasingly integrated with household consumption, bill payments, peer-to-peer transfers, subscriptions, online commerce, and small-value merchant transactions. NPCI's ecosystem statistics show substantial activity across grocery, restaurant, telecommunications, fuel, pharmacy, and other categories. Such transaction breadth makes UPI potentially relevant to household budgeting and expenditure patterns.

Financial behaviour refers to the way individuals manage income, expenditure, savings, borrowing, budgeting, risk, and investment decisions. Responsible financial behaviour is generally associated with planning expenditure, maintaining savings discipline, understanding financial products, and making informed decisions. Digital payment adoption can support these behaviours by creating transaction records, reducing the need to carry cash, and improving payment convenience. Conversely, frequent frictionless payments may encourage unplanned consumption if users do not actively monitor cumulative expenditure.

The present study therefore examines UPI adoption from a broader financial-behaviour perspective rather than restricting the analysis to technology acceptance or payment satisfaction. The focus is on whether increased use and perceived convenience of UPI are associated with changes in spending control, savings discipline, budgeting practices, financial awareness, and investment orientation. The study also considers the role of perceived security and trust because financial behaviour is unlikely to be affected positively if consumers perceive digital transactions as unsafe.

Recent academic research supports the need for this broader approach. Research on digital payments has identified adoption factors such as usefulness, convenience, perceived risk, and behavioural intention. Other evidence has linked digital payment availability with changes in consumption behaviour. A recent Indian study has specifically examined UPI and consumer financial behaviour and reported both increased convenience and concerns regarding savings discipline. These findings suggest that the

financial effects of UPI may be dual in nature: digital payments can improve access and efficiency while simultaneously changing spending psychology.

2 Review of Literature

2.1 Digital Payments and Consumer Behaviour

Li and Ruan examined the relationship between digital payments and consumer spending using the differential exposure to digital payment technology associated with the 2016 Indian demonetisation. Their findings provide evidence that payment digitalisation can influence consumption behaviour, indicating that the payment mechanism itself can have behavioural consequences [1]. This is important for the present study because UPI reduces the time and effort involved in completing transactions and may therefore influence purchase frequency and expenditure monitoring.

2.2 UPI Adoption and Behavioural Intention

Kiran and Sailaja investigated factors influencing behavioural intentions toward digital payment services in India using the Unified Theory of Acceptance and Use of Technology framework. The study highlighted the importance of adoption factors and perceived risk in understanding digital payment intentions [2]. A related study by the same authors examined UPI adoption and usage and emphasized the importance of usability, security, social influence, and facilitating conditions [3]. These studies establish that technology adoption is influenced by both functional benefits and perceived risk.

2.3 Digital Financial Inclusion

The World Bank describes payment systems and digital financial services as important mechanisms for expanding financial inclusion, economic development, and participation in the digital economy [4]. Its India digital-finance indicators also show that account ownership is high while the use of digital payments varies across demographic groups, suggesting that access to an account does not automatically translate into identical patterns of digital financial behaviour [5]. UPI therefore needs to be considered as part of a wider financial-inclusion ecosystem rather than as an isolated payment application.

2.4 UPI and Financial Behaviour

A recent Indian study examined the impact of UPI and digital payments on consumer financial behaviour using a survey of active UPI users and reported high perceived convenience and increased accessibility alongside concerns about savings discipline [6]. While the study provides useful evidence, its relatively small survey base indicates the need for larger and more geographically diverse samples. Another recent study examined UPI and consumer spending with specific attention to impulse buying and financial self-control [7]. The present paper extends this line of inquiry by including spending, saving, budgeting, financial awareness, and investment orientation within one analytical framework.

2.5 Research Gap

The existing literature has developed strongly around digital-payment adoption, behavioural intention, perceived risk, and consumer spending. However, fewer studies combine payment frequency and convenience with a wider definition of personal financial behaviour that includes saving discipline,

budgeting, financial awareness, and investment orientation. There is also a need for evidence across different age, income, occupation, education, and location groups. The present study addresses this gap by proposing a multidimensional financial-behaviour model and a questionnaire that can be tested with a larger Indian consumer sample.

3 Research Objectives

1. To examine the growth and significance of UPI adoption in India's retail digital-payment ecosystem.
2. To identify the major dimensions of UPI adoption among Indian consumers, including frequency, convenience, ease of use, trust, and perceived security.
3. To examine the relationship between UPI adoption and consumer spending behaviour.
4. To assess whether UPI usage is associated with changes in saving discipline and budgeting behaviour.
5. To examine the relationship between UPI adoption and financial awareness and investment-oriented behaviour.
6. To develop an empirical framework that can be tested across demographic groups of Indian consumers.
7. To provide recommendations for responsible digital-payment usage and consumer financial education.

4 Research Hypotheses

1. H1: UPI adoption has a significant relationship with the financial behaviour of Indian consumers.
2. H2: Perceived convenience of UPI has a significant positive relationship with UPI usage frequency.
3. H3: Higher UPI usage frequency is significantly associated with changes in consumer spending behaviour.
4. H4: UPI adoption has a significant relationship with consumers' saving and budgeting behaviour.
5. H5: Trust and perceived security significantly influence consumers' continued use of UPI.
6. H6: Financial awareness significantly influences the relationship between UPI adoption and responsible financial behaviour.

5 Conceptual Framework

The proposed conceptual framework considers UPI adoption as the principal explanatory construct and financial behaviour as the outcome construct. UPI adoption is operationalised through usage frequency, perceived convenience, ease of use, trust, and perceived security. Financial behaviour is operationalised through spending control, saving discipline, budgeting practice, financial awareness, and investment orientation. Demographic characteristics are proposed as control variables.

Table 1: Proposed Constructs and Measurement Dimensions

Construct	Dimensions	Indicative Measures
UPI Adoption	Usage frequency	Transactions per day or week; preferred payment mode
UPI Adoption	Convenience	Speed, ease, availability, merchant acceptance
UPI Adoption	Trust and security	Confidence in authentication and transaction safety
Financial Behaviour	Spending	Purchase frequency, impulse spending, expenditure monitoring
Financial Behaviour	Saving	Regular saving, savings discipline, emergency fund behaviour
Financial Behaviour	Budgeting	Budget preparation, expense tracking, adherence to budget
Financial Behaviour	Financial awareness	Awareness of transaction records, fees, fraud risks
Financial Behaviour	Investment	Planning, diversification, long-term financial orientation

Conceptually, the expected relationship is: UPI Adoption → Payment Convenience and Frequency → Changes in Financial Behaviour, with financial awareness and demographic characteristics influencing the strength of this relationship.

6 Research Methodology

The study adopts a descriptive and analytical research design. Secondary data are used to establish the growth and economic relevance of UPI, while a structured primary questionnaire is proposed for testing the relationship between UPI adoption and financial behaviour. The primary survey component should be conducted before the statistical results are submitted as empirical findings.

The target population consists of Indian consumers who use UPI for at least one financial transaction. A sample of 300 respondents is recommended for the proposed study because it provides a practical base for reliability testing, correlation analysis, multiple regression, and demographic comparisons. Respondents may be selected using purposive and convenience sampling, with efforts made to include variation across age, gender, income, occupation, education, and place of residence.

Primary data should be collected through a structured questionnaire containing demographic questions, UPI usage questions, and five-point Likert-scale statements. The scale may range from 1 for strongly disagree to 5 for strongly agree. A pilot test of approximately 30 respondents is recommended before final data collection. Ambiguous or redundant items should be removed after pilot feedback.

The principal independent construct is UPI adoption. It includes frequency of use, perceived convenience, ease of use, trust, and perceived security. The dependent construct is financial behaviour, represented by spending control, saving discipline, budgeting, financial awareness, and investment orientation. The proposed model can be estimated using multiple regression after reliability and validity checks.

Reliability should be evaluated using Cronbach's Alpha. A coefficient of 0.70 or above may generally be treated as acceptable for exploratory social-science research, although the value should be interpreted together with item quality and construct validity. Pearson correlation can be used to examine bivariate relationships, while multiple regression can assess the explanatory contribution of UPI adoption dimensions to financial behaviour. Independent-samples tests or analysis of variance may be used to compare demographic groups where assumptions are satisfied.

The study uses secondary information from official NPCI and government sources for contextual analysis. The latest official information available at the time of drafting shows continued growth in UPI activity. NPCI reported 24,508.96 million transactions in August 2026, valued at Rs 29,82,355.95 crore, across 752 banks. These data demonstrate the scale of the ecosystem but do not by themselves establish individual-level behavioural causation.

7 Secondary Evidence on UPI Growth

The rapid expansion of UPI provides an important context for studying consumer financial behaviour. Government information published in April 2026 reported that annual UPI transaction volume had increased from 2 crore transactions in financial year 2016-17 to 24,161.69 crore transactions in financial year 2025-26. Transaction value exceeded Rs 314 lakh crore in financial year 2025-26, and 703 banks were live on the platform by March 2026 [8].

NPCI's product statistics further show that the system continued to expand during financial year 2026-27. In August 2026, 752 banks were live on UPI and monthly transaction volume reached 24,508.96 million, with transaction value of Rs 29,82,355.95 crore [9]. The scale of these transactions indicates that UPI has become embedded in everyday financial activity.

Table 2: Selected UPI Ecosystem Indicators

Indicator	Reported Figure	Period
UPI annual transaction volume	24,161.69 crore	FY 2025-26
UPI annual transaction value	Rs 314 lakh crore	FY 2025-26
Banks live on UPI	703	March 2026
UPI monthly transaction volume	24,508.96 million	August 2026
UPI monthly transaction value	Rs 29,82,355.95 crore	August 2026
UPI banks live	752	August 2026

Source: National Payments Corporation of India and Government of India publications [8, 9]. Figures are presented as reported by the respective sources.

8 Proposed Statistical Analysis

Because no original respondent dataset was supplied for this paper, individual-level survey results are deliberately not fabricated. The following analysis plan specifies how the completed dataset should be analysed in SPSS or equivalent statistical software. The results section should be populated only after primary data have been collected and validated.

Table 3: Proposed Statistical Analysis Plan

Analysis	Purpose	Expected Output
Frequency and percentage	Describe respondent profile and UPI usage	Demographic and usage distribution
Mean and standard deviation	Assess central tendency and dispersion	Descriptive statistics
Cronbach's Alpha	Test internal consistency	Reliability coefficient
Pearson correlation	Examine associations	Correlation coefficients and significance
Multiple regression	Estimate explanatory effect	R, R ² , beta, t, significance
t-test or ANOVA	Compare demographic groups	Group differences and significance

9 Expected Findings and Discussion

Based on the existing literature and the growth of UPI, it is reasonable to expect that convenience, ease of use, and transaction speed will be strongly associated with frequent UPI use. The technology reduces several frictions associated with conventional payment methods and allows consumers to complete small and large transactions through a familiar mobile interface. Such convenience is likely to strengthen continued usage.

A second expected relationship concerns spending behaviour. The ease of making very small payments can reduce the psychological salience of individual expenditures. When a consumer pays electronically, the physical experience of handing over cash is absent. As a result, frequent low-value transactions may accumulate without being immediately perceived as significant. The literature on digital payments and consumption provides support for examining this mechanism [1]. The effect should not, however, be interpreted as uniformly negative because transaction histories can also improve expenditure visibility when consumers actively review their records.

UPI may also support responsible financial behaviour through transaction traceability. Digital records can make it easier to identify recurring expenses, review merchant payments, monitor household expenditure, and reconcile account activity. For financially aware consumers, these features can support

budgeting. The same digital record may therefore have a positive or negative behavioural effect depending on whether the consumer actively monitors it.

Saving behaviour represents a particularly important area for investigation. If UPI increases discretionary consumption without a corresponding increase in budgeting discipline, savings may be crowded out. On the other hand, if digital payments are accompanied by financial planning tools, automated saving, and better transaction visibility, digitalisation could support savings. This suggests that the effect of UPI on savings is likely to be conditional rather than universally positive or negative.

Financial awareness may act as an important protective factor. Consumers who understand budgeting, fraud risks, transaction limits, bank statements, and investment principles may be better able to use UPI as a financial-management tool rather than merely as a frictionless consumption mechanism. Financial literacy education should therefore accompany the expansion of digital payment infrastructure.

Trust and security are equally important. UPI transactions generally involve authentication mechanisms and banking infrastructure, but consumers remain exposed to social engineering, fraudulent requests, malicious links, screen-sharing scams, and mistaken transfers. Perceived security may therefore influence both adoption and responsible usage. Consumer education should emphasise that a UPI PIN is used for authorising payments and should never be disclosed to another person.

Demographic differences may also be expected. Younger and more digitally connected consumers may report higher frequency of UPI usage, while differences by income and education may appear in financial awareness and budgeting practices. The study should avoid assuming that age alone determines responsible financial behaviour; actual analysis should rely on observed survey data.

10 Managerial and Policy Implications

1. Payment service providers should develop spending dashboards that summarise expenditure by merchant category, frequency, and time period. Such tools could help consumers recognise cumulative small-value spending.
2. Banks and fintech firms should integrate responsible financial-management messages into digital payment applications without creating unnecessary friction in routine transactions.
3. Financial literacy programmes should include practical instruction on digital payment safety, budgeting, transaction monitoring, fraud awareness, and the behavioural consequences of frictionless payments.
4. Educational institutions can incorporate digital financial behaviour into finance and financial-literacy courses so that students understand both the efficiency benefits and behavioural risks of digital payments.
5. Policymakers should continue strengthening consumer protection, grievance redressal, fraud prevention, interoperability, and digital financial literacy as UPI adoption expands.

6. Consumers should be encouraged to review bank statements and UPI transaction histories regularly, establish monthly spending limits, separate essential and discretionary expenditure, and maintain savings before increasing discretionary consumption.

11 Limitations of the Study

1. The primary empirical component has not been populated because no original respondent dataset was supplied. Consequently, the paper does not claim individual-level statistical results.
2. The proposed sampling method is non-probability sampling, which may limit the generalisability of future survey findings to the entire Indian population.
3. Self-reported financial behaviour may contain recall bias and social-desirability bias.
4. Cross-sectional survey data can identify association but cannot by themselves establish long-term causal effects. A longitudinal design would provide stronger evidence.
5. UPI is part of a broader digital-payment ecosystem. Consumers may simultaneously use cards, wallets, internet banking, cash, and other payment instruments, making it difficult to isolate the effect of UPI alone.

12 Conclusion

UPI has transformed India's retail payment environment by making real-time, interoperable digital payments available at exceptional scale. The expansion of UPI creates an important finance research question: whether changing the mechanism of payment also changes the way consumers manage money. The available evidence suggests that the relationship is multidimensional. Convenience and accessibility can strengthen digital financial participation, while frictionless transactions may also influence spending psychology. The same digital records that make payments easy can support budgeting and expenditure monitoring when consumers actively use them.

This paper develops a structured framework for examining these effects among Indian consumers. It identifies UPI usage frequency, convenience, ease of use, trust, and perceived security as key adoption dimensions and spending, saving, budgeting, financial awareness, and investment orientation as key dimensions of financial behaviour. The proposed hypotheses and questionnaire provide a basis for primary-data testing using SPSS.

The most important implication is that digital payment expansion should be accompanied by responsible financial behaviour. UPI itself is neither inherently beneficial nor harmful to personal finance. Its effect depends substantially on consumer awareness, spending discipline, financial planning, and the design of digital financial services. Future empirical research using a sufficiently large and geographically diverse sample can provide stronger evidence about the direction and magnitude of these relationships and can help banks, fintech firms, educators, and policymakers design interventions that preserve the convenience of digital payments while supporting healthier financial outcomes.

13 Appendix

13.1 Proposed Questionnaire

Instruction: Please indicate the extent to which you agree with each statement using a five-point scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

UPI Adoption and Usage

1. I use UPI for routine day-to-day payments.
2. I use UPI several times during a typical week.
3. UPI is one of my preferred methods for merchant payments.
4. I prefer UPI over cash for many small-value transactions.
5. I use UPI for bill payments and other recurring payments.

Convenience and Ease of Use

6. UPI makes financial transactions faster.
7. UPI is easy to use.
8. UPI is convenient for small-value payments.
9. UPI reduces the need to carry cash.
10. UPI is widely accepted by merchants and service providers.

Trust and Perceived Security

11. I feel confident using UPI for financial transactions.
12. I consider UPI authentication mechanisms reliable.
13. I believe UPI transactions provide adequate security when used correctly.
14. I am aware of common UPI fraud risks.
15. I trust the banking infrastructure supporting UPI.

Spending Behaviour

16. UPI makes it easier for me to make unplanned purchases.
17. I make more frequent small purchases because UPI is convenient.
18. I monitor my UPI expenditure regularly.
19. Digital payment records help me understand where my money is spent.
20. I sometimes underestimate my total expenditure because individual UPI payments are small.

Saving and Budgeting Behaviour

21. I maintain a regular savings habit.
22. I prepare or follow a monthly budget.
23. I review my UPI transactions while monitoring my monthly expenditure.
24. I set limits on discretionary spending.
25. UPI usage has encouraged me to pay greater attention to my personal finances.

Financial Awareness and Investment Orientation

26. I understand the importance of maintaining an emergency fund.
27. I compare financial products before investing.
28. I understand the importance of long-term financial planning.
29. I use transaction records to support my financial decisions.
30. I consider saving and investing before increasing discretionary expenditure.

13.2 Demographic Information

1. Age group: Below 20; 20–30; 31–40; 41–50; Above 50.
2. Gender: Male; Female; Other; Prefer not to say.
3. Education: School; Undergraduate; Postgraduate; Doctoral; Other.
4. Occupation: Student; Salaried; Business/Self-employed; Professional; Homemaker; Other.
5. Monthly household income: Below Rs 25,000; Rs 25,000–50,000; Rs 50,001–1,00,000; Above Rs 1,00,000.
6. Place of residence: Rural; Semi-urban; Urban; Metropolitan.
7. Years of UPI usage: Less than 1 year; 1–3 years; 3–5 years; More than 5 years.
8. Approximate UPI transaction frequency: Less than 5 per week; 5–10 per week; 11–20 per week; More than 20 per week.

14 Authors' Biography

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Research Data Integrity Note

This manuscript has been prepared without inventing respondent-level survey observations. The secondary statistics cited above are sourced from official or published materials. Before journal submission as an empirical paper, the author should collect the proposed primary survey data, conduct the stated statistical tests, replace the methodology placeholder language with the actual sample details, and report the resulting descriptive, reliability, correlation, regression, and hypothesis-testing results.