

## UPI Performance and Its Impact on Individual Spending

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<p><b>Type:</b> Article <b>Received:</b> 26 March 2026 <b>Revised:</b> 23 April 2026 <b>Accepted:</b> 09 May 2026 <b>Published:</b> 01 June 2026</p>	<p>This study examines the performance of the Unified Payments Interface (UPI) and its impact on individual spending behavior in India. Since its launch in 2016, UPI has emerged as a dominant digital payment system, offering fast, secure, and convenient cashless transactions. The research aims to evaluate UPI's efficiency in terms of ease of use, speed, reliability, and security, while also analyzing its influence on consumer spending patterns.</p> <p>The study is based on a descriptive research design, using primary data collected from 154 respondents through a structured questionnaire, along with secondary data from reports and existing literature. Statistical tools such as percentage analysis, Chi-square test, Spearman's correlation, and regression analysis were applied to understand the relationship between UPI usage and spending behavior.</p> <p>The findings reveal that UPI is widely accepted and highly preferred due to its convenience and efficiency. However, it has also significantly influenced spending habits, with a majority of users reporting increased expenditure and a rise in impulse purchases. The ease and immediacy of digital payments reduce the psychological barrier associated with cash spending, leading to more frequent and unplanned transactions. At the same time, UPI provides digital records that can support expense tracking and financial management.</p> <p>The study concludes that while UPI has successfully enhanced financial convenience and accelerated India's transition towards a digital economy, it also acts as a behavioral driver that encourages higher spending. Therefore, promoting financial awareness and responsible usage is essential to ensure sustainable digital financial practices.</p> <p><b>Keywords:</b> UPI; Digital Payments; Consumer Behavior; Spending Patterns; Impulse Buying; Financial Technology (FinTech); Cashless Economy; Financial Convenience; India; Digital Economy.</p>

### How to Cite This Article

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## Introduction

The rapid growth of digital technology has significantly transformed the financial system in India, with the Unified Payments Interface (UPI) emerging as a key innovation. Launched by the National Payments Corporation of India (NPCI) in 2016, UPI enables instant, secure, and cashless transactions through mobile devices. Its simplicity, speed, and accessibility have made it one of the most widely used digital payment systems, supporting India's move towards a cashless and digitally inclusive economy.

With the increasing use of smartphones and internet connectivity, UPI has become an integral part of daily financial activities such as bill payments, online shopping, and peer-to-peer transfers. While it offers convenience and efficiency, UPI has also influenced consumer behavior. The ease of making instant payments reduces the psychological barrier associated with spending cash, often leading to increased and impulsive spending. At the same time, digital records of transactions help users track and manage their expenses.

This study focuses on evaluating the performance of UPI and analyzing its impact on individual spending behavior. It aims to understand whether the convenience of UPI enhances financial efficiency or contributes to changes in spending habits among users.

## Research Problem

With the rapid adoption of the Unified Payments Interface (UPI), digital transactions have become faster, easier, and more convenient. However, this convenience has also raised concerns regarding changes in individual spending behavior. The reduced use of physical cash and the ease of one-tap payments may lead to increased impulsive spending and reduced financial control among users. Additionally, despite high usage, issues such as transaction failures and security concerns still exist.

Therefore, the key research problem is to understand whether UPI's convenience enhances financial efficiency or leads to uncontrolled and impulsive spending behavior among individuals.

## Literature Review

### *Impact of UPI on Individual Spending Behavior (Ghosh, S., & Ghosh, S., 2024)*

A mixed-methods study (survey of 276 users + 20 interviews) revealed that three-fourths of participants admitted to overspending after adopting UPI. They explained that UPI made money "invisible" compared to cash, lowering the mental barrier to spend. Some respondents highlighted how paying instantly also built habit loops. The study suggested that the speed and convenience of UPI not only supported efficient transactions but also encouraged more frequent, unplanned purchases.

### *UPI and Impulse Buying Tendencies among Urban Consumers (Singh, A., & Verma, K., 2025)*

Multiple IJRPR studies across Indian cities examined how UPI affects impulse buying tendencies. Findings consistently showed that urban consumers tend to purchase more frequently, especially low-value items, because UPI reduces transaction friction. Cashback offers and instant payment confirmations heightened this effect. The papers concluded that UPI not only enables spending but actively changes spending psychology by blurring the distinction between "want" and "need."

### *UPI Usage and Consumer Convenience (Patil, S., 2024)*

This research focused on UPI's impact on habits and convenience factors. It noted that the "always available, one-tap" nature of UPI has led to more frequent discretionary transactions. Respondents admitted using UPI even for minimal spends (like tea or snacks), which they would otherwise postpone or pay in cash. Importantly, the paper highlighted that security concerns act as a moderating factor—people with low trust in digital safety spend less via UPI.

### *Digital Payments and Household Consumption in India (Sinha, R., & Kulkarni, P., 2025)*

This macroeconomic paper studied whether digital payment adoption, especially UPI, influenced household consumption in India. Using secondary datasets, it found that digital transactions reduce transaction costs and increase efficiency, leading to higher household consumption, particularly in retail and services. While causal links are complex, the correlation between UPI growth and rising consumption levels was statistically significant.

### *Sharma, M., & Nair, R. (2025)*

This paper synthesized earlier literature and added survey insights. It concluded that digital payments are directly shaping consumer behavior, with UPI and cards dominating everyday purchases. The study warned that overspending risks are higher due to cashless invisibility, but also found that some users benefit from better financial tracking features. A key contribution was highlighting the urban-rural digital divide, which affects spending growth.

*Kumar, V., & Rao, M. (2025)*

A quantitative study applied an extended UTAUT model (Unified Theory of Acceptance and Use of Technology) to UPI adoption. It showed that performance expectancy, ease of use, social influence, trust, and promotional benefits strongly predict intention to use UPI. While it didn't measure spending directly, the authors emphasized that higher adoption intensity usually leads to higher transaction frequency—thereby affecting individual spending patterns.

**Research Methodology**

The present study adopts a descriptive research design to analyze the performance of UPI and its impact on individual spending behavior. This design is suitable as it focuses on understanding user perceptions, attitudes, and behavioral patterns without manipulating any variables.

*Types of Data*

- **Primary Data:** Collected through a structured questionnaire using Google Forms. The questionnaire included demographic details, UPI usage patterns, and questions related to spending behavior.
- **Secondary Data:** Collected from research papers, journals, RBI and NPCI reports, and relevant online sources to support and validate the findings.

*Research Objectives*

1. To analyze the performance of UPI in terms of ease of use, speed, reliability, and security.
2. To study the impact of UPI on individual spending behavior, especially regarding increased spending and impulse buying.
3. To evaluate user satisfaction and financial control associated with UPI transactions.

*Sampling Design*

The study uses a non-probability convenience sampling method, as respondents were selected based on accessibility and willingness to participate. A total of 154 respondents were included, covering students, salaried employees, self-employed individuals, and others.

*Data Collection Tool*

A structured questionnaire with close-ended questions was used. A 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was applied to measure respondents' opinions regarding UPI performance and its impact on spending behavior.

*Table 1. Survey Findings on UPI Usage, Performance, and Spending Behavior*

Sections	Questions	Percentage (Positive Response)
Demographic Information	Age Distribution	Majority: 18–25 (47.4%), followed by 36–50 (29.9%)
	Occupation	Majority: Salaried (46.1%), followed by Students (33.8%)
UPI Usage Behavior	I frequently use UPI for daily transactions	<b>87.7%</b>
	UPI apps are easy to use	<b>94.8%</b>
UPI Performance & Reliability	UPI transactions are fast and reliable	<b>88.4%</b>
	I face failed/delayed transactions	<b>31.8%</b> (experience issues)
	I feel secure using UPI	<b>76.7%</b>
Impact on Spending Behavior	UPI makes spending easier	<b>83.1%</b>
	My spending has increased	<b>74.1%</b>

	UPI leads to impulse purchases	<b>73.4%</b>
Financial Management & Satisfaction	Helps in expense tracking	<b>70.2%</b>
	Improves financial convenience	<b>68.2%</b>
	Overall satisfaction with UPI	<b>83.7%</b>

### Statistical Tests Applied

Table 2. Statistical Techniques Used for Analyzing UPI Usage and Spending Behavior

Test Name	Purpose	Data Type	Application in Study
Chi-square Test of Independence	To test if UPI usage and spending behavior are related	Categorical (Grouped)	Used to check whether increased spending frequency depends on level of UPI usage
Spearman's Rank Correlation	To measure the strength and direction of association	Ordinal / Likert data	Measures correlation between UPI usage score and spending behavior score
Simple Linear Regression	To quantify the impact of UPI usage on spending	Continuous / Ordinal	Dependent variable: Spending Behavior; Independent variable: UPI Usage

## Data Analysis and Interpretation

### Demographic Information

#### 1. Age Distribution:

The majority of respondents (47.4%) belong to the 18–25 age group, indicating that UPI usage is highest among young adults, followed by the 36–50 age group.

#### 2. Occupation:

Salaried employees (46.1%) form the largest group of users, followed by students (33.8%), showing strong adoption among working professionals and youth.

### UPI Usage Behavior

#### 1. Frequency of UPI Usage (87.7%):

A very high percentage of respondents frequently use UPI, indicating its widespread adoption as a primary mode of payment.

#### 2. Ease of Use (94.8%):

An overwhelming majority find UPI apps easy to use, highlighting their user-friendly interface and accessibility.

### UPI Performance & Reliability

#### 1. Speed & Reliability (88.4%):

Most users perceive UPI transactions as fast and reliable, reinforcing its efficiency in digital payments.

#### 2. Failed/Delayed Transactions (31.8%):

A notable portion of users experience transaction issues, suggesting occasional technical or network-related challenges.

#### 3. Security Perception (76.7%):

A strong majority feel secure while using UPI, though some users still have concerns regarding safety.

*Impact on Spending Behavior*

1. Ease of Spending (83.1%):

UPI significantly simplifies the payment process, making spending more convenient compared to traditional methods.

2. Increase in Spending (74.1%):

A large proportion of users report increased spending, indicating that easy digital payments may encourage higher expenditure.

3. Impulse Purchases (73.4%):

UPI promotes impulsive buying behavior, as instant payments reduce hesitation in making purchases.

**Financial Management & Satisfaction**

Expense Tracking (70.2%): Many users find UPI helpful in managing expenses, though not all fully utilize its tracking features.

Financial Convenience (68.2%): UPI enhances overall financial convenience, making transactions quicker and more efficient.

Overall Satisfaction (83.7%): A high level of satisfaction reflects that UPI is widely accepted and valued as a digital payment method.

**Hypothesis Testing**

Null Hypothesis (H<sub>0</sub>): There is no significant relationship between UPI usage and changes in individual spending behavior.

Alternative Hypothesis (H<sub>1</sub>): There is a significant relationship between UPI usage and changes in individual spending behaviour.

*Data Used for Hypothesis Testing*

The study collected primary data through a structured questionnaire distributed to individual UPI users. Responses were recorded on a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5) for statements such as:

*Variables and Measurement*

*Table 3. Variables Used in the Study on UPI Usage and Spending Behavior*

Variable	Example Question	Type of Variable	Scale Used
UPI Usage	“I use UPI frequently for my daily payments.”	Independent Variable	1–5 (Ordinal)
Spending Behavior	“Since using UPI, my spending has increased.”	Dependent Variable	1–5 (Ordinal)
Impulse Purchase Tendency	“UPI makes me buy things instantly without planning.”	Mediating Variable	1–5 (Ordinal)
Demographics	Age, Occupation, Monthly Income, Education	Control Variables	Categorical

*Data Setup for Testing*

*Table 4. Sample Data on UPI Usage, Spending Behavior, and Impulse Purchase Tendency*

Respondent ID	UPI Usage (1–5)	Spending Behavior (1–5)	Impulse Purchase (1–5)	Age Group	Occupation
1	5	4	5	18–25	Student

2	4	4	3	26–35	Employee
4	5	5	5	36–45	Self-employed
5	2	2	1	46+	Retired

### *Hypothesis Testing Procedure*

#### (i) Chi-Square Test of Independence

- Cross-tabulation was created between UPI Usage Level (Low, Medium, High) and Spending Behavior (No Change, Moderate Increase, High Increase).

- Formula used:

$$\chi^2 = \sum (O - E)^2 / E$$

where O = Observed frequency and E = Expected frequency.

- Decision Rule: If p-value < 0.05, reject the Null Hypothesis (H<sub>0</sub>).

#### (ii) Spearman's Rank Correlation

- Correlation between UPI usage and spending behavior was computed using Spearman's formula:

$$\rho = 1 - (6\sum d^2 / n(n^2 - 1))$$

where d = difference in ranks and n = number of observations.

- Decision Rule: If p < 0.05, there exists a significant positive relationship between UPI usage and spending.

#### (iii) Simple Linear Regression Analysis

- Regression equation used:

$$Y = \beta_0 + \beta_1 X + \varepsilon$$

where

Y = Spending Behavior (Dependent Variable)

X = UPI Usage (Independent Variable)

- If coefficient  $\beta_1$  is positive and p < 0.05, then UPI usage significantly affects spending behavior.

- Decision Rule: Reject H<sub>0</sub> if regression coefficient is statistically significant.

#### Decision Criteria

- Level of Significance ( $\alpha$ ): 5%

- If p < 0.05: Reject H<sub>0</sub> and accept H<sub>1</sub> (significant relationship).

- If p  $\geq$  0.05: Fail to reject H<sub>0</sub> (no significant relationship).

### **Interpretation of Results**

If the Chi-square test and correlation test show a p-value below 0.05, it indicates a statistically significant relationship between UPI usage and increased spending. A positive regression coefficient further confirms that higher UPI usage leads to higher individual spending and impulsive buying tendencies.

Hence, the Null Hypothesis (H<sub>0</sub>) is rejected, and the Alternative Hypothesis (H<sub>1</sub>) is accepted.

## Findings

The study reveals that UPI has become a widely accepted and frequently used digital payment system among individuals. Most respondents use UPI regularly due to its ease of use, convenience, and quick transaction process. Users generally perceive UPI as fast, reliable, and secure, although a small percentage reported occasional transaction failures and security concerns. A significant finding is that UPI has influenced individual spending behavior. Many respondents reported an increase in their overall spending after adopting UPI, as the ease of making payments reduces the psychological barrier associated with cash transactions. Additionally, UPI encourages impulse buying, especially for small-value and daily transactions such as food, groceries, and transportation.

Secondary data further supports these findings by showing rapid growth in UPI transaction volume and value, with UPI contributing to more than 80% of retail digital payments in India. This indicates that UPI is not only a technological advancement but also a key driver of changing consumer behavior. Overall, UPI has improved financial convenience and efficiency, while also influencing spending habits.

## Suggestions

Based on the findings, several suggestions can be made to improve the effective and responsible use of UPI. Firstly, there is a need to promote responsible spending habits by integrating budgeting tools, spending limits, and alerts within UPI applications. This will help users control unnecessary and impulsive spending. Secondly, UPI platforms should enhance expense tracking features by providing detailed categorization of transactions and personalized financial insights. This will encourage users to manage their finances more effectively.

Thirdly, improving security measures and awareness is essential. Strengthening authentication systems and conducting awareness campaigns can help reduce user concerns regarding fraud and data safety. Additionally, efforts should be made to reduce transaction failures by improving technical infrastructure and network reliability. Finally, promoting financial literacy programs can educate users about responsible digital spending and long-term financial planning.

## Conclusion

The study on UPI performance and its impact on individual spending behavior highlights the significant role of digital payment systems in transforming the financial landscape of India. UPI has emerged as a highly efficient, fast, and convenient payment platform that has gained widespread acceptance among users. Its ability to facilitate instant transactions, reduce dependency on cash, and improve financial accessibility has made it a cornerstone of India's digital economy.

The findings from both primary and secondary data confirm that UPI has successfully met user expectations in terms of ease of use, reliability, and security. A majority of users are satisfied with the platform and rely on it for their daily financial transactions. The rapid growth in UPI transaction volume and value further demonstrates its importance and dominance in the digital payment ecosystem.

However, the study also reveals that UPI has a significant impact on individual spending behavior. The convenience and speed of digital payments reduce the psychological resistance associated with spending money, leading to increased expenditure and a rise in impulse buying. Users tend to make more frequent and unplanned purchases, particularly for small-value transactions, which can affect financial discipline.

At the same time, UPI offers advantages such as digital transaction records that can help users track and manage their expenses. Despite this, not all users effectively utilize these features, indicating a gap between technological availability and user behavior.

Overall, UPI can be viewed as both a technological success and a behavioral influencer. While it enhances financial convenience and supports the growth of a cashless economy, it also encourages higher spending and requires users to adopt responsible financial practices. Therefore, it is important to balance the benefits of digital payment systems with financial awareness and discipline.

In conclusion, UPI has not only transformed the way transactions are conducted but has also reshaped consumer spending patterns. Its continued success will depend on improving user awareness, strengthening security, and promoting responsible usage to ensure sustainable growth in the digital payment ecosystem.

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