International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 10 Issue: 04 | April - 2026 SJIF Rating: 8.659 ISSN: 2582-3930

The Disappearing Pain of Paying: A Systematic Literature Review of UPI and Consumer Spending Behavior

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Abstract— This paper examines the relationship between Unified Payments Interface (UPI) and consumer spending behavior through the lens of pain of paying. The study combines a systematic literature review with secondary evidence from official NPCI monthly transaction statistics. Two objectives guide the paper: first, to identify the major factors influencing UPI and digital payment adoption in India; and second, to examine how frictionless digital payment may influence spending frequency, impulse buying, overspending, and financial self-control. The literature consistently shows that UPI adoption in India is driven by convenience, usefulness, trust, security, and ease of use, while the pain-of-paying literature suggests that digital payment systems reduce the visibility and psychological burden of spending. The statistical evidence confirms strong growth in UPI transaction volume and value, demonstrating that UPI is deeply embedded in everyday payment behavior. The paper concludes that UPI has changed not only how consumers pay but also how they may experience spending, and that more India-specific research is required to measure this behavioral effect directly.

Keywords— UPI, digital payments, pain of paying, consumer spending behavior, overspending, impulse buying, NPCI, systematic literature review.

I. INTRODUCTION

India has experienced a remarkable transformation from cash-based payments to mobile-first transactions. Smartphones, low-cost internet, fintech innovation, merchant QR adoption, and policy support for digital finance have accelerated this transition. Among all payment innovations, the Unified Payments Interface has become the most prominent because it allows real-time bank-to-bank transactions in a format that is fast, low-friction, and easy to repeat in everyday life. UPI is now used in grocery stores, food delivery, travel bookings, utility payments, person-to-person transfers, subscriptions, and countless small retail transactions.

This technological change is important not only for payment systems but also for consumer behavior. Earlier research in behavioral economics suggests that the mode of payment affects how consumers feel while spending money. Cash payments are visible and tangible, so the consumer experiences a stronger sense of loss when handing over money. Digital payments reduce this visibility. The process is faster, more abstract, and physically less salient. As a result, the discomfort associated with spending may decline. This discomfort is referred to in the literature as the pain of paying.

The disappearing pain of paying is especially relevant in India because UPI is designed for speed and repetition. Consumers can complete a transaction in seconds without physically parting with cash, counting notes, or reflecting on the outflow in a concrete way. This ease may make purchase decisions faster and may reduce the hesitation that often accompanies spending. In that sense, the study of UPI should extend beyond adoption and should also consider whether payment design changes spending awareness, self-control, and purchase frequency.

A. Rationale, Problem Statement, and Gap

Most studies on UPI focus on acceptance drivers such as convenience, performance expectancy, social influence, trust, and security. Much less work examines what happens after repeated adoption. The central problem addressed in this paper is that UPI may not only improve efficiency but also reduce consumers' sensitivity to spending. If payment becomes almost invisible, the user may no longer feel the same psychological friction that restrains impulse purchases and repeated low-value spending. This creates an important gap in India-specific research because UPI is now deeply woven into daily financial life.

B. Objectives of the Study

The first objective is to systematically review literature on UPI and digital payment adoption in India and identify the major drivers of consumer use, such as convenience, trust, ease of use, security, and social influence. The second

objective is to examine how UPI and other cashless payment systems may affect consumer spending behavior through the mechanism of pain of paying, with special attention to spending frequency, overspending, impulse buying, and financial self-control.

II. REVIEW OF LITERATURE

A. UPI Adoption and Digital Payment Usage

Studies by Patil et al., Sharma et al., Rao et al., Suganeswari et al., and Aljaradat and Shukla consistently show that convenience, usefulness, trust, grievance redressal, and perceived security are major factors shaping digital payment adoption in India. These studies explain that consumers adopt UPI not only because of technology availability but because the system feels easy, efficient, and increasingly trustworthy in routine transactions. Research by Mishra et al. further indicates that external developments such as demonetization and COVID-19 accelerated the shift toward cashless payment and normalized digital payment behavior across wider user groups.

The broader mobile-payment literature also shows that when a payment method becomes easy and widely accepted, users gradually shift away from traditional modes such as cash or card-based payment. Trutsch and Mew and Millan argue that easier payment systems change habits over time by reducing transaction effort and increasing repeat use. This logic is especially relevant to UPI because it has become a default mode for routine consumption in India.

B. Post-Adoption Behavior and Research Gaps

Systematic reviews by Aji et al., Hameed et al., Jain and Jain, and George et al. suggest that digital payment research remains heavily centered on adoption intentions, acceptance frameworks, and technology-use models. These reviews repeatedly point out that post-adoption behavior is less studied. In other words, researchers have focused more on why consumers start using digital payments than on how repeated digital payment use changes decision-making, spending awareness, and financial self-control.

This gap is important because payment systems are not behaviorally neutral. When a payment mode becomes habitual, the consumer may stop paying close attention to the act of payment itself. The routine of purchase may remain visible, but the routine of paying may fade into the background. This is exactly where the concept of pain of paying becomes relevant.

C. Pain of Paying and Consumer Spending

Khan et al. provide evidence that payment mode changes the emotional and cognitive response of consumers during spending. Ahn et al. show that mobile payment can increase overspending, particularly among users with weaker financial knowledge. Van der Cruijsen and colleagues explain that when payment happens very quickly and effortlessly, it hurts less, and consumers may spend more. Together, these studies support the idea that frictionless digital payment weakens payment salience and may reduce spending restraint.

In the Indian context, Agarwal et al., Dev et al., Anand, and Dhruva et al. connect digital payments and UPI more directly to spending behavior. Their findings suggest that UPI encourages quick and repeated purchases, especially in day-to-day low-value transactions. Because small-value UPI payments are easy to authorize and hard to feel in a concrete way, they may accumulate without generating strong spending discomfort. The significance of this literature is that UPI may influence not only payment efficiency but also the subjective experience of consumption.

Table 1. Thematic summary of the reviewed literature

Theme	Main finding	Relevance
Adoption drivers	Convenience, usefulness, trust, and security repeatedly explain UPI use.	Shows why UPI became a default payment method in India.
Systematic reviews	Research is strong on intention and acceptance but weaker on post-adoption consequences.	Justifies the need to examine spending behavior after adoption.
Pain of paying	Cashless payment reduces spending salience and weakens discomfort.	Provides the main behavioral mechanism used in this paper.
India-specific spending studies	UPI can increase transaction ease, spending frequency, and low-value purchase repetition.	Connects UPI directly with consumer behavior outcomes.

III. RESEARCH METHODOLOGY

The study follows a descriptive and analytical research design based completely on secondary data. Academic sources from the last ten years were selected because of their direct relevance to UPI, digital payments, pain of paying, and consumer spending behavior. The analysis also uses official monthly UPI statistics available from NPCI to support the discussion of adoption scale and transaction growth in India.

The data-collection strategy is therefore source-based rather than respondent-based. Journal articles, conference papers, review studies, and official payment statistics were selected purposively. Thematic review was used to organize the literature under recurring concepts such as convenience, trust, security, overspending, impulse buying, and research gaps. SPSS-supported statistical summaries were used to present the official transaction indicators in a structured form.

The statistical plan in the source document includes descriptive analysis, percentage analysis, trend analysis, average ticket size analysis, correlation analysis, and regression analysis. These techniques help explain the scale and pattern of UPI growth but do not directly capture emotional or psychological variables. As a result, the behavioral interpretation of pain of paying remains literature-led rather than fully measured by transaction data.

Table 2. Summary of research methodology

Component	Description
Research design	Descriptive and analytical design supported by systematic review and secondary transaction statistics.
Data source	Published research papers, review studies, and official monthly UPI statistics from NPCI.
Sampling logic	Purposive selection of directly relevant literature and official indicators.
Variables used	Month, volume, average daily volume, value, average daily value, and average ticket size.
Analytical tools	Thematic interpretation, descriptive analysis, percentage analysis, trend analysis, correlation, and regression.

IV. DATA ANALYSIS AND INTERPRETATION

The statistical analysis presented in the source file confirms very high UPI activity during the observed period. Monthly transaction volume remained above 18,000 million from May 2025 to January 2026, and monthly transaction value stayed above Rs 24,00,000 crore in most complete months. The highest complete-month volume and value both appear in January 2026, confirming that UPI has become a deeply used national payment system.

The descriptive and percentage interpretations indicate that both transaction volume and transaction value showed an overall increase during the period. The source text reports that transaction volume rose from 18,677.45 million in May 2025 to 21,703.46 million in January 2026, while transaction value rose from Rs 25,14,297.01 crore to Rs 28,33,481.26 crore. This supports the view that UPI has not merely stabilized at a high level but is still expanding.

Table 3. Selected statistical results reported in the source analysis

Measure	Result	Type	Meaning
Volume growth	16.2%	Percentage	UPI transaction volume increased over the observed period.
Value growth	12.7%	Percentage	Transaction value also increased strongly.
Volume-value correlation	.879	Correlation	High-volume months also show high transaction value.
Average ticket size	Approx. Rs 1,240-1,350	Derived indicator	UPI is heavily used for repeated small-value payments.

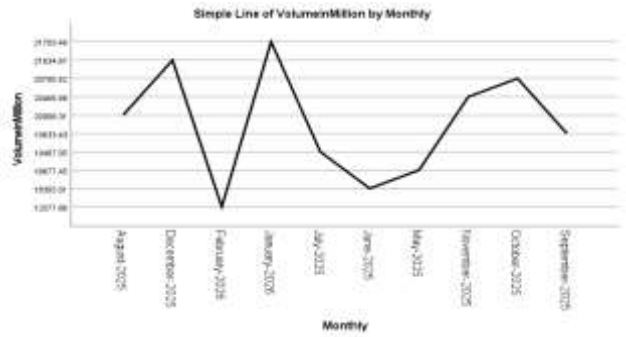

Figure 1. Monthly UPI transaction volume trend

Interpretation: The line graph shows a generally upward movement in volume with some short-term fluctuations. The long-run direction is clearly positive and supports the conclusion that UPI is becoming more deeply embedded in everyday consumer transactions.

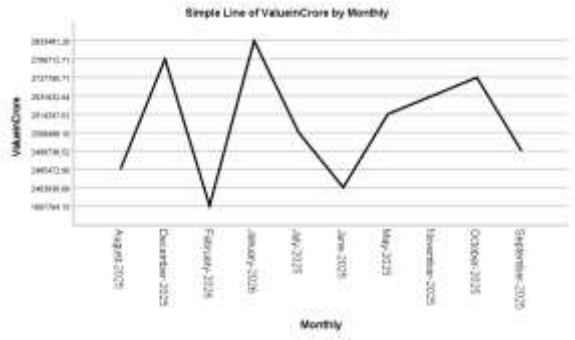

Figure 2. Monthly UPI transaction value trend

Interpretation: The transaction-value pattern broadly tracks the rise in volume, indicating that growth is occurring in both the number of payments and the overall amount moving through the system. This demonstrates structural strengthening of UPI usage.

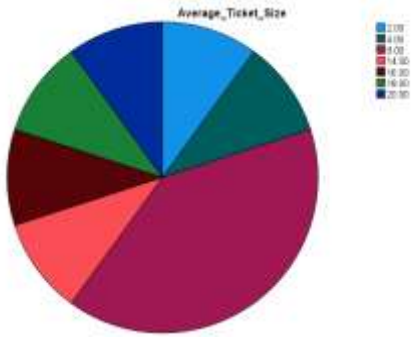

Figure 3. Average ticket size distribution

Interpretation: The average ticket size remains relatively modest. This indicates that UPI is widely used for frequent, lower-value everyday transactions, which is precisely the context in which the pain of paying may weaken because the act of spending becomes repetitive and low-visibility.

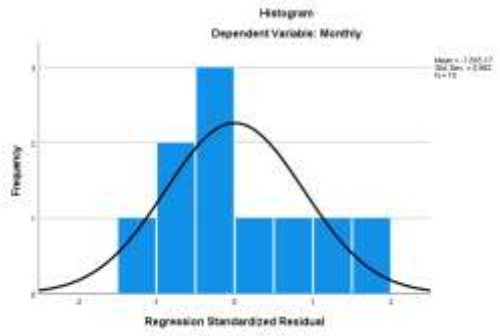

Figure 4. Regression residual output from the source analysis

Interpretation: This image is included as supporting statistical output from the original file. It reinforces that the available quantitative analysis is mainly structural and should not be mistaken for a direct measure of consumer psychology or overspending behavior.

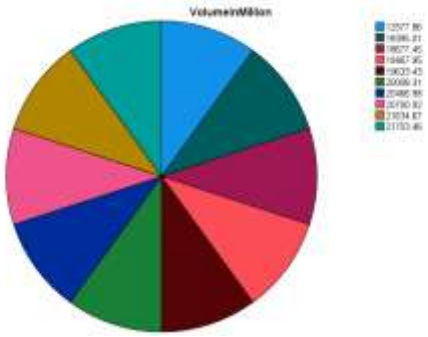

Figure 5. Distributional view of volume categories in the source file

Interpretation: The pie-chart style view highlights the presence of multiple volume levels in the observed data. Although not a direct behavioral measure, it supports the broader argument that UPI activity operates at very large transactional scale.

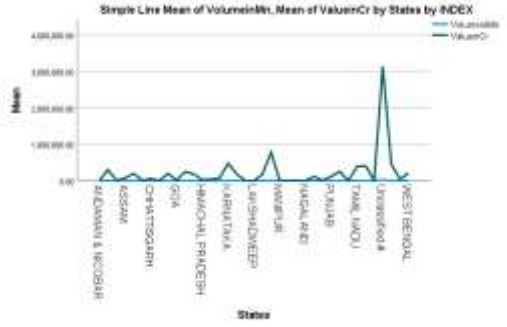

Figure 6. Comparative statistical image from the source file

Interpretation: This supporting visual is retained from the source document to preserve the graphical element of the analysis. It reflects the source's effort to visually summarize movement across quantitative indicators.

The correlation result in the source file shows a strong positive relationship between transaction volume and transaction value. This is expected in a growing payment ecosystem: as the number of transactions rises, the overall value transacted through UPI also rises. However, the regression output itself does not directly explain overspending, impulse buying, or reduced self-control. It only confirms structural growth in the payment platform.

The most behaviorally relevant finding in the quantitative evidence is the continued dominance of small-value high-frequency payment. When a payment system is used repeatedly for ordinary purchases, the payment act becomes routine. The consumer notices the purchase but may no longer consciously register the payment in the same way as a cash transaction. This is why the official data, although not psychological by itself, still supports the conceptual discussion when interpreted together with the literature.

V. DISCUSSION

The integrated interpretation of literature and official data suggests that UPI changes the spending environment in at least three ways. First, it lowers transaction friction. Second, it reduces payment visibility. Third, it encourages repetition because the system is easy enough to become habit-based. These conditions do not prove that every consumer overspends, but they do support the argument that payment design can change spending awareness and reduce the natural hesitation associated with parting with money.

This discussion should not be read as an argument against digital payments. UPI has clear benefits in convenience, speed, merchant reach, and financial inclusion. The central issue is not whether UPI is good or bad, but how the ease of payment may interact with human psychology. A highly efficient payment system can still create spending risks if consumers lose visibility over cumulative outflow, especially in app-based environments where purchases are frequent and nearly effortless.

The paper therefore aligns with studies that call for financially responsible interfaces. Spending summaries, transaction dashboards, daily or weekly limits, and cumulative expenditure alerts can restore salience without removing convenience. In the Indian context, such design changes may be especially useful for younger consumers, frequent app-based shoppers, and users who rely on UPI for many low-ticket daily transactions.

A broader academic implication also emerges. Research on UPI should move beyond technology-acceptance models and pay greater attention to post-adoption behavior. Once millions of users adopt a payment system, the more important question becomes how routine use affects budgeting discipline, emotional control, and long-term financial habits. This transition from adoption logic to behavioral consequence is the key research need identified by this paper.

VI. RECOMMENDATIONS

First, future India-specific studies should combine official transaction statistics with consumer-level behavioral data. Surveys, interviews, experiments, or panel designs can directly measure pain of paying, spending awareness, and impulse buying in ways that NPCI monthly data cannot. Second, digital payment providers should introduce or strengthen features such as cumulative spending summaries, budget reminders, daily alerts, and friction-restoring visual cues that keep the user aware of outflow. Third, financial-literacy initiatives should teach consumers that easy payment does not mean low spending. Many small UPI transactions may appear harmless individually, but together they can create substantial expenditure over time.

VII. CONCLUSION

The present paper examined the disappearing pain of paying through a systematic review of UPI and consumer spending behavior, supported by official NPCI transaction indicators. The findings show that UPI has become one of the most deeply integrated payment systems in India because of its speed, convenience, and ease of use. The reviewed literature further indicates that digital payment systems reduce payment salience and can weaken the psychological discomfort associated with spending. This matters because reduced discomfort may increase spending frequency, enable impulse buying, and weaken financial self-control in some contexts.

At the same time, the study recognizes a key limitation: official transaction data alone cannot directly capture consumer psychology. The relationship between UPI and pain of paying is therefore supported most strongly through literature synthesis rather than through direct behavioral measurement in the available dataset. Even so, the combination of evidence clearly suggests that UPI has changed both the payment process and the experience of spending. This makes it an important topic for future consumer behavior research in India.

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