

Behavioural Determinants of Digital Payment Adoption in India: An Analysis

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Abstract—Digital payment systems have expanded rapidly in India which has significantly transformed consumer behaviour and financial transaction patterns in their daily life. The increasing use of the Unified Payments Interface (UPI), mobile wallets, and internet banking has made financial transactions faster, easier, and more accessible which has encouraged a shift from traditional cash-based methods. The study examines the major determinants of digital payment adoption and their influence on consumer behaviour in India. Consumer behaviour is influenced by factors like convenience, ease of use, safety and security considerations, trust, accessibility and demographic boundaries. The study lays significant emphasis on strengthening digital financial literacy and improving fraud protection mechanisms supported by prudent regulatory measures by policymakers, financial institutions, and payment service providers.

Index Terms—Consumer Behaviour, Digital Payments, Digital Financial Literacy, Fraud Protection, Cyber Security

I. INTRODUCTION

The economic life of India is undergoing significant changes with the rapid adoption of digital payment systems. Digital payment systems have expanded rapidly in India, transforming the way individuals carry out financial transactions in their daily lives. The widespread adoption of technologies such as UPI, mobile wallets, and online banking has encouraged a shift from traditional cash-based methods to more efficient digital alternatives. Studies suggest that convenience is the most influential factor driving digital adoption, followed by security and accessibility. Promotional benefits provided by banks and payment service providers also contribute positively to usage behaviour. The increasing usage of digital payment systems has been shaping consumer behaviour and emphasizes the need to enhance user

experience and accessibility to support wider adoption.

Consumer behaviour is central while building effective marketing strategies, using the decision-making processes and physical activities associated with the acquisition and use of goods and services. Understanding consumer behaviour enables businesses to segment markets, do interesting things, show better pricing strategies, make brands popular. Knowing the variety of consumer behaviour depicting complex, conflict-reducing, habitual, and demanding traits, enables marketers to tailor their strategies accordingly. Consumer behaviour is influenced by factors such as situational, personal, social, emotional and psychological factors. Analysing these factors helps companies make informed decisions and develop strategies tailored to customer preferences and needs. Digital transformation is changing business tasks and client cooperations by incorporating computerized advances and is driving a social shift towards development and change.

In recent years, India has witnessed a significant increase in the adoption of digital payment systems, leading to notable changes in the way financial transactions are carried out. Technological advancements such as Unified Payments Interface (UPI), mobile wallets, and internet banking have provided users with efficient and flexible payment options. In addition, policy initiatives promoting digital transactions have further accelerated this transition. Digital payment systems simplify financial activities by enabling faster transactions and improving accessibility. Users are able to perform payments conveniently without relying on cash, which has contributed to the integration of digital payments into everyday activities such as shopping, bill payments, and fund transfers. Consequently,

consumer behaviour has evolved, with individuals increasingly preferring digital modes of payment. This study explores the relationship between digital payment adoption and its subsequent impact on consumer behaviour. This study examines the key factors influencing the adoption of digital payment methods with a focus on perceived ease of use, security considerations, and government incentives. It examines how these factors and demographics influence consumer choices about mobile wallets, UPIs, online banking and debit/credit cards. The study also examines the impact of digital payments on consumer purchasing behaviour in India looking at potential changes in online shopping habits, impulse buying trends and consumer tracking. The objective of this study is to deepen understanding of the factors influencing the adoption of digital payment systems in India and their shopping habits affecting the consumer behaviour.

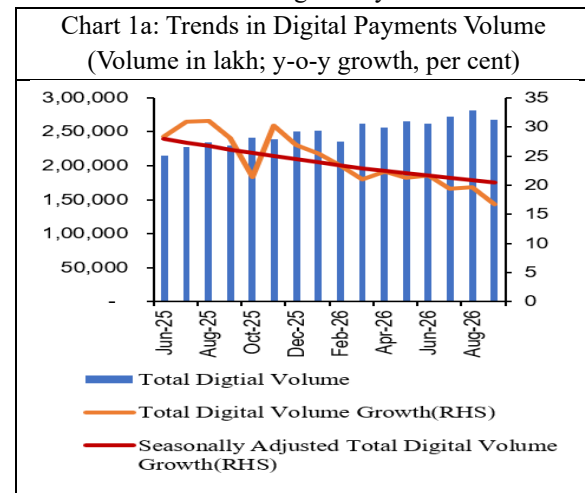
The study is divided into five sections with Section I presents the objectives and motivation of the study. Section II provides an overview of the digitalisation of payment system in India. In the Section III, review of literature presented covering studies done in India and abroad. The changing traits of consumer behaviour due to digital payment accessibility is explained in Section IV. Section V provides concluding observations.

II. DIGITALISATION OF PAYMENT SYSTEM IN INDIA: AN OVERVIEW

The Digital India program, launched in July 2015, has helped in transforming the country into a digitally empowered society and knowledge economy having a strong digital presence with 85.5 per cent of the households' owning smartphones¹, the second highest

app downloads in the world in 2023², and over 1.3 billion wireless telephone subscribers as of March 2026³. Extensive total and mid-band 5G coverage has been established India, now covering 95 percent of the population.⁴ India has emerged as the global leader in fast payments.⁵ With more than 21 billion monthly transactions⁶, UPI now dominates retail payments, demonstrating that world-class infrastructure can serve the masses at scale. Digital payments continued to register steady growth in 2026-27 so far (up to September 2026). Total digital payments⁷ recorded 2,682.46 crore transactions valued at ₹326.93 lakh crore in September 2026, growing (y-o-y) by 16.7 per cent in volume and 17.3 per cent in value⁸, relative to 19.7 per cent and 23.1 per cent in August 2026 (Chart 1). Real-Time Gross Settlement (RTGS) accounts for 72.1 per cent of total digital payment value, relative to 70 per cent in the previous month.⁹ RTGS volume increased (y-o-y) by 16 per cent and value by 18.8 per cent in September 2026, relative to 21.3 per cent and 25.7 per cent in August 2026.

Chart 1: Trends in Digital Payments in India



¹ Results of Comprehensive Modular Survey: Telecom, 2025 (January – March, 2025) by Ministry of Statistics and Programme Implementation.

² State of Mobile 2024 report by Data.ai

³ Telecom Subscription Data as on 31st March 2026-TRAI

⁴ Ericsson Mobility Report-November 2025

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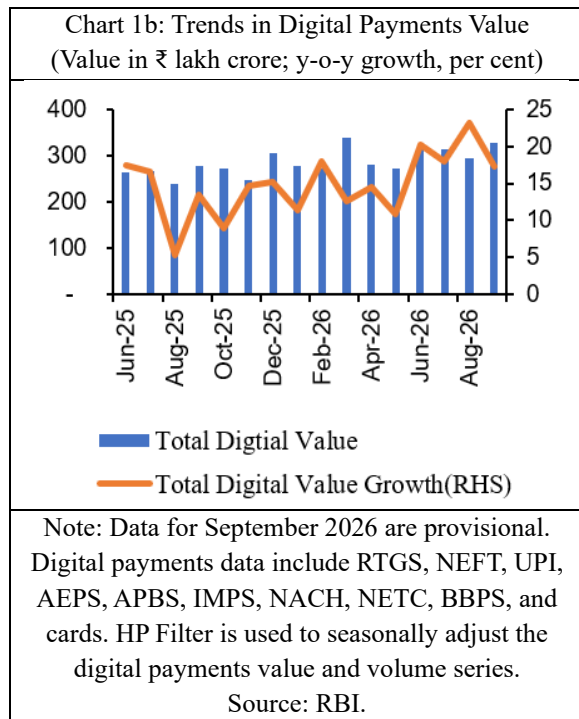
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⁶ Last 6 months average volume of transactions is 21.5 billion. Source: NPCI

⁷ Digital Payments include RTGS, NEFT, UPI, AEPS, APBS, IMPS, NACH, NETC, BBPS, and cards.

⁸ Data for September 2026 are provisional and cards-related data gets updated with a lag.

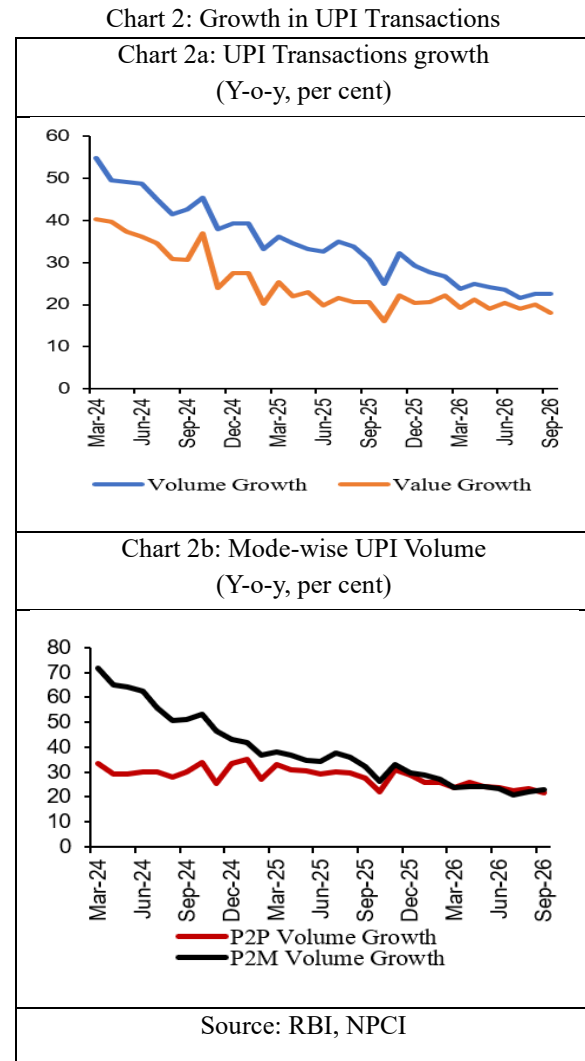
⁹ Corresponding large-value payments shares for US, Euro Area, Brazil and China were 94, 95, 97 and 92 per cent respectively. Source: BIS Red Book Statistics.



Retail payments¹⁰ recorded 2,683.45 crore transactions valued at ₹97.4 lakh crore during the month, growing (y-o-y) by 16.7 per cent and 13.1 per cent respectively, relative to 19.7 per cent and 16.8 per cent in August 2026. UPI recorded 2,406.8 crore transactions valued at ₹29.37 lakh crore, with volume and value growing by 22.6 per cent and 18 per cent respectively, relative to 22.5 per cent and 20 per cent in August 2026. UPI accounts for 89.7 per cent of digital payment volume but only 8.9 per cent of value (Chart 2). UPI volume continues to grow faster than value, resulting in low average ticket sizes of ₹1,220 in September 2026 and ₹1,216 in August 2026. This suggests that UPI is progressively substituting cash at lower transaction values. Overall, average ticket size for P2P transaction is ₹2,320 and P2M is ₹582 in September 2026.¹¹ The aggregate UPI transaction volume growth has been stabilised.

¹⁰ Retail Payments include all Paper-based transactions and Digital payments minus RTGS.

¹¹ In September 2026, Peer-to-merchant (P2M) dominates in UPI volumes (63 per cent share in total UPI volume), as below ₹500 is 87 per cent and above ₹2000 is 4 per cent of total transaction volume. In value terms, peer-to-peer (P2P) lead (70 per cent share in total UPI value), with 85 per cent of P2P values



Showcasing its might in the digital payment ecosystem, India has been the largest player in real-time payments globally, accounting for close to 50 per cent of the transactions.¹² This has been buoyed by swift merchant onboarding onto the UPI platform, growing digital awareness and concerted efforts towards its internationalisation. The Reserve Bank of India (RBI) has undertaken several measures to sustain

being above ₹2000, followed by 11 per cent in ₹501-₹2000 band (Chart 3). Overall, average ticket size for P2P transaction is ₹2,320 and P2M is ₹582 in September 2026.

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<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2200569®=3&lang=2>

the moment of digital payments. Recently, RBI issued a discussion paper inviting public comments on proposed safeguards to curb rising digital payment frauds, particularly Authorized Push Payment (APP) frauds driven by social engineering. The aim remains to balance security in digital payments with convenience, enhance fraud detection, and empower users¹³. The latest draft Master Directions on Prepaid Payment Instruments (PPIs) proposes amendments and streamlines existing guidelines to develop a conducive framework for long term growth of PPIs and a competitive payments ecosystem, while further strengthening security of transactions¹⁴. The consolidated framework for digital payments e-mandates simplifies auto-debit systems while strengthening customer protection across UPI, prepaid payment instruments (PPIs), and cards, including both domestic and cross-border transactions¹⁵.

UPI is already expanding beyond the physical borders of India. Stakeholders are actively working with other countries to integrate their payment systems with UPI to enable efficient cross border payments for remittances as well as merchant payments on foreign grounds. India has established partnerships with Singapore, the UAE, France, Mauritius, Nepal, Bhutan and other countries on similar lines.¹⁶ UPI is further planned to expand over 20 countries by FY29.¹⁷ The National Payments Corporation of India (NPCI) is also working towards the final stages of simplifying the KYC process for its UPI One World service, which is meant to enable UPI payments for foreigners visiting India. Together, these developments would significantly add to UPI's global scale, positioning it as a significant player in cross-border digital

payments. The RBI's Payments Vision 2025 also aims to bring efficiency in the cross-payments. The latest guidelines to facilitate faster cross-border inward payments intends to address certain frictions identified in inward cross-border payments to facilitate the timely intimation of payment information and crediting of funds to the beneficiary's account¹⁸. To improve further adoption and access, the Government of India has recently launched a pilot project to transfer food subsidies using Central Bank Digital Currency (CBDC) under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) in Chandigarh, Puducherry and three districts of Gujarat¹⁹.

RBI has undertaken tokenisation initiatives including Certificates of Deposit issued through the Unified Markets Interface using wholesale Central Bank Digital Currency (CBDC) and the tokenisation of corporate bonds with settlement through CBDC as a joint initiative with SEBI and with the involvement of other stakeholders²⁰. National Payments Corporation of India (NPCI) notified a merchant discount rate (MDR) framework of 0.4 per cent on UPI person-to-merchant transactions above ₹2,000 effective October 15, 2026.²¹

III. REVIEW OF LITERATURE

The adoption of digital payments is influenced by multiple factors. Elements such as ease of use, trust, accessibility, and promotional incentives play a critical role in shaping user decisions. At the same time, concerns related to privacy and security continue to affect adoption among certain groups. Understanding these determinants is essential for

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¹⁶ UPI–The Global Benchmark for Digital Payments October 2025 report by NPCI

¹⁷ UPI–The Global Benchmark for Digital Payments October 2025 report by NPCI

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¹⁹http://timesofindia.indiatimes.com/articleshow/127783489.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

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https://rbi.org.in/scripts/BS_SpeechesView.aspx?Id=1578

²¹https://www.npci.org.in/uploads/FA_Qs_Merchant_Discount_Rate_MDR_on_Select_UPI_P2_M_Transactions_58dba1d39e.pdf

analysing how digital payment systems influence consumer behaviour.

Liébana-Cabanillas et al. (2020) highlight that mobile payment technologies enhance transaction efficiency and improve user experience through ease of use and perceived usefulness. Similarly, Dwivedi et al. (2021) emphasize the importance of technological infrastructure, system quality, and social influence in shaping adoption behaviour. Convenience is consistently recognised as a key determinant of adoption. Pal et al. (2021) note that consumers prefer payment systems that minimize effort and transaction time, thereby increasing usage frequency. Supporting this view, Chawla and Joshi (2020) observe that ease of use and convenience significantly influence mobile wallet adoption and user engagement. Compatibility with users' lifestyles also plays an important role. Chen et al. (2021) argue that digital payment systems are more likely to be adopted when they align with users' daily routines and technological familiarity. This alignment enhances user comfort and reduces resistance to new technologies. Trust is another critical factor influencing consumer behaviour. Alalwan et al. (2020) suggest that perceived reliability and transparency of digital payment platforms encourage adoption. Similarly, Humbani and Wiese (2020) find that trust developed through positive user experiences leads to continued usage of digital payment systems. Zhou (2020) indicates that concerns related to privacy and fraud can negatively affect adoption, while the presence of secure systems enhances user confidence. However, as digital payment systems mature, users may increasingly assume a baseline level of security. Financial literacy is an additional determinant affecting adoption behaviour. Raza et al. (2021) explain that individuals with higher financial knowledge are more likely to adopt fintech services, as they better understand the associated benefits and risks. Promotional incentives such as cash back, earning of points for future discounts, have also been found to influence consumer behaviour. Aji et al. (2020) highlight that cashback offers, discounts, and rewards act as motivating factors that encourage adoption, particularly among new users. Several studies also emphasise the broader technological and behavioural context of adoption. Baabdullah et al. (2021) underline the role of perceived benefits and technological readiness, while Shaikh et al. (2020) identify trust and technological preparedness as

critical factors across different regions. Apanasevic (2021) further highlights that user experience and system integration significantly influence adoption in retail settings. Sivathanu (2021) suggests that attitudes, subjective norms, and perceived behavioural control significantly shape user intention towards digital payments. In addition to adoption determinants, digital payment systems have been found to influence consumer behaviour. Soman (2020) explains that digital payments reduce the psychological "pain of paying," leading to increased spending behaviour. Similarly, Yan and Yang (2022) observe that the ease and speed of digital transactions can encourage impulsive purchasing decisions. Demographic factors have also been examined in several studies. Singh et al. (2020) find that younger and more educated individuals are more likely to adopt digital payment systems. However, Malik et al. (2021) emphasize that digital literacy and access to technology are equally important in determining adoption levels. Furthermore, digital payment systems play a crucial role in promoting financial inclusion. Kumar et al. (2020) highlight that digital platforms provide easier access to financial services, particularly for underserved populations. This is further supported by Kumar et al. (2021), who note that digital payments contribute to inclusive economic growth by improving accessibility.

Hassan et al. (2022) also emphasize that fintech development has significantly transformed consumer financial behaviour by enhancing accessibility and efficiency in financial services. Overall, the literature indicates that digital payment adoption is influenced by a combination of technological, behavioural, and contextual factors. While variables such as convenience, trust, accessibility, and promotional incentives positively influence adoption, factors such as security concerns and financial literacy may affect user perceptions.

There have been several studies that have investigated the socio-economic and demographic factors that influence the adoption of digital payment methods. Sharma et al. (2020) noticed that persons who are younger, urban, and educated are more inclined to use digital payment solutions. On the other hand, rural people confront substantial challenges, such as low levels of financial knowledge, limited internet access, and cultural opposition to cashless transactions (Kumar & Singh, 2021). Gender dynamics also play a

role, with women's access to mobile devices and digital financial services being significantly lower than that of men's, particularly in rural regions.

IV. IMPACT OF DIGITALISATION ON CONSUMER BEHAVIOUR

Digital payment systems simplify financial activities by enabling faster transactions and improving accessibility. It makes buying easier, faster, and more frequent, but they also raise concerns about overspending, security, and a digital divide. Users can perform payments conveniently without relying on cash, which has contributed to the integration of digital payments into everyday activities such as shopping, bill payments, and fund transfers. Consequently, consumer behaviour has evolved, with individuals increasingly preferring digital modes of payment.

Digitalization has shifted consumers from relatively passive buyers into informed, connected, and empowered participants who search, compare, purchase, pay, review, and influence brands across digital channels. It has made convenience, speed, personalization, and trust central to purchase decisions.

The traditional consumer purchases used to depend on awareness, interest, desire, and action. Consumers have now become more dynamic in finalise their preferences for purchase of good and services through discovering products and services through search engines, social media, advertisements, peer review recommendations. They evaluate alternatives using reviews, comparisons, ratings, and peer opinions. Purchase through websites, apps, marketplaces, or social platforms have become quite common in day-to-day life. Further, demographic differences also play an important role in adaptation of digital transactions as younger, urban, and more educated consumers adopt fastest, while elder and rural users often lag due to lower digital literacy and trust concerns.

The major advantage of adoption of digital payments the ease of buy and sell of goods and services are set out below:

- **Transparency:** Easy comparison of prices of goods and services with similar utility, features and specifications, and customer reviews improves bargaining power.
- **Choice:** Digital platforms expand access of goods and services from local sellers to the stores

situated across nation and even easy reach out to global sellers.

- **Engagement:** Personalising goods and services brands based on choices and incentives and building long term relationships through personalized content, loyalty programmes, and interactive communication.
- **Financial inclusion:** Digital payments facilitate financial inclusion especially in the unbanked areas by making transactions easier, secure and accessibility of funds to facilitate the churning of funds for continuity of business transactions. In a way, it facilitates low value customers and economically weak shopkeepers in a remote village to perform their business transactions on a digital platform.

The major challenges and risks of digital transactions are as under:

- **Information overload:** Too many options, advertisements, and reviews can create confusion and decision fatigue.
- **Privacy concerns:** Personalized marketing depends on consumer data, raising concerns about surveillance and misuse.
- **Digital divide:** Unequal access to smartphones, internet connectivity, and digital literacy can exclude some consumers.
- **Impulse buying:** Paying digitally reduces the "pain of paying" that cash creates, so people tend to spend more and buy more spontaneously and encourage unplanned spendings resulting in overspending which can lead to persistent debt burden on a customer's consumer cycle.
- **Trust issues:** Counterfeit products, misleading reviews, cyber fraud, and weak grievance redressal can damage confidence in online markets.
- **Credit-like behaviour:** Schemes such a Buy Now Pay Later (BNPL) encourages buying of goods and services beyond immediate means.
- **Security and privacy concerns:** Frequent cases of digital fraud, phishing, data misuse remain the main barrier to adoption of digital payments. The case of mule account misusing a larger number of small ticket accounts for transactions of money laundering and illegal funds has been quite rampant especially in the rural and remote areas.

V. CONCLUSION

Digital payment usage is primarily driven by functional and experiential factors rather than demographic characteristics. Convenience, safety and security are the most influential determinants, highlighting the importance of ease, speed, efficiency and security in shaping consumer preferences. Trust, accessibility, and promotional benefits are also observed to have a significant positive impact on consumer behaviour. These factors collectively enhance user engagement by ensuring reliability, improving access, and providing additional incentives for usage. It is observed that consumers are more inclined to adopt and continue using digital payment systems when they perceive them as convenient, trustworthy, and beneficial. However, digital transactions are exposed to security and digital fraud risks. The sustained benefits of digital payments guiding for rational consumer behaviour depend on digital financial literacy, fraud protection and cyber security, supported by prudent regulatory measures and support.

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