

International Conference on Multidisciplinary Perspectives in Education, Science, and Technology (ICMPEST)

Organized by- Jeevan Jyoti College of Commerce Management & Technology, Dayalpur, Purkaji
Lakshar Road, Block Khanpur, Haridwar (09 May 2026)

In IJESH ISSN: 2250-3552

www.ijesh.com

Impact of Digital Payments on Consumer Buying Behaviour

Debashis Chatterjee

Research Scholar, Department of Commerce, Indian Institute of Management Kozhikode,
Kerala, India

Abstract

Digital payments have changed the way consumers search, evaluate, purchase and pay for goods and services. In India, the combined push of demonetisation in 2016, the launch of the Unified Payments Interface (UPI), smartphone penetration, low-cost mobile data and strong policy support has moved a large share of retail transactions from cash to digital modes. This paper examines how this shift influences consumer buying behaviour, with special attention to spending pattern, frequency of purchase, impulse buying, convenience, trust and perceived security. The study is entirely based on secondary data collected from reports of the National Payments Corporation of India (NPCI), the Reserve Bank of India (RBI), and published research articles and books. Three comparison tables are prepared: year-wise growth of UPI transactions, comparison of volume growth, value growth and average ticket size, and a comparison of cash and digital payment modes on the basis of buying behaviour indicators reported in earlier studies. The analysis shows that UPI volume increased far faster than value, which means that digital payment is increasingly used for small and frequent purchases. Earlier studies also indicate that lower "pain of paying" in digital modes raises the chance of unplanned and higher spending, while perceived usefulness, ease of use and trust drive adoption. The paper concludes that digital payments make buying faster, more convenient and more frequent, but they also demand better consumer awareness, security and responsible spending habits.

Keywords: Digital Payments, UPI, Consumer Buying Behaviour, Cashless Economy, Impulse Buying, Technology Acceptance, Pain of Paying

Introduction

Money and the method of paying for goods have always shaped trade. Barter gave way to metal coins, coins to paper currency, and paper currency to cheques and cards. The latest stage in this journey is the digital payment, in which value moves from the payer to the payee through electronic channels such as internet banking, mobile banking, cards, mobile wallets and instant payment interfaces without the physical exchange of cash. The growth of the internet, the smartphone and secure authentication has made these channels available to ordinary consumers and not just to large businesses (Dahlberg et al. 166). Researchers who reviewed the early mobile payment literature observed that technology alone did not decide success; usability, trust and the presence of a wide merchant network were equally important (Dahlberg et al. 172).

In India the transition was slow until 2016. Cards and net banking were limited to a small urban population, and cash remained the dominant instrument for everyday purchases. The withdrawal of high-value currency notes in November 2016 forced a large number of consumers and small

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merchants to try mobile wallets and bank-based apps for the first time (Sivathanu 146). The launch of UPI in the same year then offered a common, interoperable and almost cost-free platform, which allowed any bank account holder to pay any other account holder using a virtual payment address or a QR code (Gochhwal 1177). From that point the payment landscape changed from a few isolated products to an integrated ecosystem.

Consumer Buying Behaviour

Consumer buying behaviour refers to the decisions and actions of individuals who search for, select, purchase, use and dispose of products and services to satisfy their needs. Classical models describe the process in stages: need recognition, information search, evaluation of alternatives, purchase decision and post-purchase behaviour (Kotler and Keller 179). Payment is the final operational step of this process, yet it is not a neutral step. The way a consumer pays can change the amount spent, the speed of the decision and the satisfaction felt after the purchase (Soman 461).

Behavioural research explains why. When a person hands over physical cash, the loss is visible and immediate. When the payment is made through a card, wallet or UPI, the loss is less visible and is often postponed or hidden behind a screen. This difference is called the pain of paying, and it is one of the most cited reasons why payment mode influences spending (Prelec and Simester 6). Consumer behaviour is also affected by personal factors such as age, income and education, psychological factors such as perception and attitude, and social factors such as family and peer influence (Schiffman and Kanuk 24). Digital payments interact with all of these, which makes the topic important for both marketers and policy makers.

Digital Payments Ecosystem in India

The Indian digital payments ecosystem consists of banks, payment service providers, card networks, wallet companies, fintech start-ups and a central regulator. The RBI supervises the system under the Payment and Settlement Systems Act, while NPCI operates retail payment infrastructure such as UPI, IMPS, RuPay and the National Electronic Toll Collection. The Government of India has supported the shift through the Jan Dhan accounts, Aadhaar-based identification and mobile connectivity, often described together as the JAM trinity. Lower merchant costs for UPI, the use of QR codes and the availability of regional-language interfaces have helped even small vendors, vegetable sellers and auto drivers to accept digital payments (Singh et al. 40).

For consumers, the main attractions are speed, round-the-clock availability, record keeping, cashback and reward schemes, and the ability to pay without carrying cash or visiting an ATM. At the same time, concerns about fraud, phishing, failed transactions and data privacy remain present, and they influence the willingness of some groups, especially older and rural consumers, to adopt these services (Chawla and Joshi 1595). The coexistence of strong benefits and persistent risk makes it necessary to study how digital payment actually changes buying behaviour.

Objectives, Scope and Significance of the Study

1. To understand the growth of digital payments in India with the help of UPI data.

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2. To examine the relationship between payment mode and consumer spending behaviour as reported in earlier studies.
3. To compare the characteristics of cash and digital payment modes in relation to buying behaviour.
4. To suggest measures for the safe and responsible use of digital payments.

Review of Literature

The literature on payment mode and buying behaviour can be grouped into three streams: behavioural studies on spending, technology adoption studies, and Indian studies on digital payment usage.

Soman showed in experimental work that consumers who pay by credit card or cheque tend to recall past spending less accurately than those who pay by cash, because the transparency of payment is lower, and this leads to weaker spending control (Soman 465). Prelec and Simester reported that willingness to pay for the same product was substantially higher when students expected to pay by credit card than by cash, which suggests that card payment reduces the pain of paying (Prelec and Simester 8). Raghubir and Srivastava found that spending was higher when the form of payment was less like real money, such as gift certificates or scrip, and that coupling between the payment and the product reduced overspending (Raghubir and Srivastava 218). Thomas, Desai and Seenivasan observed that payment by credit card increased the purchase of unhealthy and impulsive food items compared with cash (Thomas et al. 131). Runnemark, Hedman and Xiao extended the idea to debit cards and reported that consumers were willing to pay more with debit cards than with cash, even though the money leaves the bank account immediately (Runnemark et al. 288). Together these studies suggest that non-cash instruments, in general, loosen the budget constraint psychologically.

Davis proposed the Technology Acceptance Model, in which perceived usefulness and perceived ease of use explain the intention to use a new system (Davis 320). Venkatesh and colleagues integrated several models into the Unified Theory of Acceptance and Use of Technology, which names performance expectancy, effort expectancy, social influence and facilitating conditions as the main drivers (Venkatesh et al. 447). A later extension added hedonic motivation, price value and habit for the consumer context (Venkatesh et al. 159). Ajzen's Theory of Planned Behaviour adds attitude, subjective norm and perceived behavioural control as predictors of intention (Ajzen 182). Kim, Mirusmonov and Lee found that perceived usefulness, ease of use, personal innovativeness and trust shaped the intention to use mobile payment (Kim et al. 315). Slade and co-authors reported that performance expectancy, social influence and perceived risk were relevant to remote mobile payment adoption (Slade et al. 865). Rogers' diffusion theory further explains how relative advantage and compatibility help new payment forms spread through society (Rogers 229).

Sivathanu examined the adoption of digital payment after demonetisation and found that innovativeness, perceived benefits and social influence encouraged adoption, while perceived risk worked against it (Sivathanu 152). Gochhwal described UPI as an advancement over earlier systems because of its interoperability, single-click authentication and low cost, and noted its potential for

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micro-payments (Gochhwal 1180). Singh, Sinha and Liebana-Cabanillas studied mobile wallet users in India and showed that attitude, trust and convenience influenced both adoption and the intention to recommend the service (Singh et al. 43). Chawla and Joshi reported that perceived usefulness, ease of use and security concerns jointly affected consumer attitude toward mobile wallets (Chawla and Joshi 1600). The reports of RBI and NPCI document the scale of transactions and the structure of the payments system (RBI 14; NPCI 3). The literature therefore shows that digital payments influence buying behaviour through two channels. The first is psychological, because payment becomes less painful and less visible. The second is practical, because payment becomes faster and more convenient. Most Indian studies concentrate on adoption, and fewer examine how aggregate transaction data reflect changes in buying patterns; this paper attempts to fill that gap using secondary data.

Research Methodology

The study follows a descriptive and analytical design based on secondary data. Data on UPI volume and value for the financial years 2017-18 to 2023-24 were taken from the statistics published by NPCI and the annual reports and payment system reports of RBI. The theoretical and empirical background was drawn from peer-reviewed journals, books and institutional reports listed in the references. Simple statistical tools, namely year-on-year percentage growth and average transaction size (total value divided by total volume), were used to convert raw figures into comparable indicators. All figures are rounded and are meant for comparison and trend analysis; readers should verify the latest values from the official NPCI and RBI websites before using them in any further work.

The study has some limitations. It uses aggregate data and cannot describe the behaviour of individual consumers by age, income or location. UPI is only one part of the digital payment system, and the data do not separate purchases from person-to-person transfers. The behavioural findings are drawn from earlier studies conducted in different countries and periods, so they should be read as indications, not as proof for the Indian consumer in every situation.

Data Analysis and Discussion

UPI is the clearest available indicator of how quickly consumers have moved to digital payment. Table 1 presents the number and the value of UPI transactions for seven financial years. The number of transactions rose from about 91.5 crore in 2017-18 to about 13,116 crore in 2023-24, and the value rose from about ₹1.09 lakh crore to about ₹199.89 lakh crore (NPCI 3; RBI 14).

Table 1: Year-wise Volume and Value of UPI Transactions (2017-18 to 2023-24)

Financial Year	Volume (in crore)	Value (₹ lakh crore)	Volume Compared with 2017-18 (times)
2017-18	91.5	1.09	1
2018-19	535	8.77	5.8

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2019-20	1,254	21.31	13.7
2020-21	2,233	41.04	24.4
2021-22	4,597	84.17	50.2
2022-23	8,375	139.15	91.5
2023-24	13,116	199.89	143.3

Source: Compiled from NPCI UPI product statistics and RBI reports; figures rounded.

The last column shows that, in only six years, the number of UPI transactions became more than 143 times its starting level. Such a rise is not possible through the use of a few high-income consumers alone. It indicates that UPI has entered everyday purchases, including grocery, fuel, transport, food delivery, utility bills and small local shops. This pattern fits the technology acceptance view that a service spreads when it is perceived as useful and easy to use (Davis 320; Venkatesh et al. 447). The sharp rise in 2018-19 and 2019-20 also shows the effect of the earlier demonetisation push, which had created initial familiarity (Sivathanu 146). The pandemic year 2020-21 added a further reason, namely the wish to avoid physical contact, and that year still recorded a rise of more than 78 per cent in volume.

A simple count of transactions does not reveal what kind of purchases are being paid for. For this reason Table 2 compares the year-on-year growth in volume with the growth in value and calculates the average value per transaction, often called the ticket size.

Table 2: Comparison of Volume Growth, Value Growth and Average Ticket Size of UPI

Financial Year	Volume Growth (%)	Value Growth (%)	Average Ticket Size (₹)	Change in Ticket Size (%)
2017-18	-	-	1,191	-
2018-19	484.7	704.6	1,639	37.6
2019-20	134.4	143	1,699	3.7
2020-21	78.1	92.6	1,838	8.2
2021-22	105.9	105.1	1,831	-0.4
2022-23	82.2	65.3	1,662	-9.2
2023-24	56.6	43.7	1,524	-8.3

Source: Author's calculation from Table 1 (average ticket size = total value divided by total volume).

Table 2 shows two distinct phases. Up to 2020-21, value grew faster than volume, and the average ticket size increased from about ₹1,191 to about ₹1,838. In this phase consumers were moving larger and more important payments, such as rent, bills and online shopping, to UPI. From 2021-22 the position reversed. Volume continued to grow at a higher rate than value, and the ticket size fell to

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about ₹1,524 in 2023-24. This indicates that UPI is increasingly being used for small, routine and frequent payments, which earlier would have been made in cash. The inference is supported by the behavioural literature. When payment becomes almost effortless, consumers are more likely to make small unplanned purchases, because the cost of each act of payment is perceived as lower (Prelec and Loewenstein 12; Thaler 205). It should be noted, however, that the data cannot separate purchases from person-to-person transfers, so the interpretation is indicative and not conclusive.

Comparison of Cash and Digital Payment Modes on Buying Behaviour Indicators

Table 3 brings together the findings of earlier studies and compares cash, cards and UPI or wallet payments on seven indicators of buying behaviour. The levels shown (Low, Medium, High) are comparative ratings derived from the direction of results reported in the cited studies and from the analysis of Tables 1 and 2; they are not measured values.

Table 3: Comparison of Cash, Cards and UPI/Wallet on Buying Behaviour Indicators

Indicator	Cash	Cards (Credit/Debit)	UPI / Mobile Wallet	Supporting Author (Page)
Pain of paying	High	Low	Very Low	Prelec and Simester 8; Soman 465
Tendency to spend more	Low	High	High	Runnemmark et al. 288; Hirschman 62
Impulse buying	Low	High	High	Thomas et al. 131; Feinberg 352
Frequency of small purchases	Medium	Medium	Very High	Table 2 of this paper
Speed and convenience	Medium	High	Very High	Davis 320; Gochhwal 1180
Perceived security concern	Low	Medium	Medium to High	Chawla and Joshi 1600; Slade et al. 865
Automatic record of spending	Absent	Present	Present	Singh et al. 43

Source: Compiled by the author from the studies cited in the last column.

The comparison shows that digital modes are better on speed, convenience and record keeping, but they are also associated with a lower pain of paying and therefore with a higher chance of overspending and impulse purchases. Cash, on the other hand, acts as a natural brake because the money in the wallet is limited and visible (Soman 465). Hirschman reported that card users made more purchases in several product categories than non-card users (Hirschman 62), and Feinberg

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argued that credit card logos and cues work as stimuli that encourage spending (Feinberg 352). Digital payment has an additional advantage in the form of an automatic record, which allows motivated consumers to track their expenses, but this benefit is realised only when the consumer actually reads the record. Perceived security concern remains the main barrier, particularly for new and older users (Chawla and Joshi 1600).

Major Findings

The analysis of secondary data leads to the following findings. First, digital payment through UPI has grown at an exceptional rate, and transaction volume in 2023-24 was more than 143 times that of 2017-18. Second, the average ticket size increased until 2020-21 and has declined since, which suggests that UPI is now widely used for small and frequent purchases. Third, earlier studies agree that digital modes reduce the pain of paying and are associated with higher spending and more impulse buying than cash. Fourth, usefulness, ease of use, social influence and trust are the main drivers of adoption, whereas perceived risk is the main barrier. Fifth, digital payment gives convenience, speed and record keeping, so it changes not only the way consumers pay but also how often and how quickly they buy.

Suggestions

Banks and payment companies should keep improving transaction security, fraud alerts and quick grievance redressal so that trust is maintained. Retailers can use the convenience of digital payment, loyalty points and personalised offers to increase repeat purchase, but they should avoid aggressive prompts that push consumers toward unplanned spending. Consumers should use the spending summaries available in payment apps, set monthly limits and review transactions regularly to compensate for the lower pain of paying. Educational institutions and government agencies should include digital literacy and financial literacy in awareness campaigns, with special attention to rural, elderly and first-time users. Future research may collect primary data from consumers of different age and income groups to test the relationships suggested in this paper.

Conclusion

Digital payments have become a central part of consumer life in India. The data on UPI show a rapid rise in both the number and the value of transactions, and the changing ticket size shows that digital payment is moving from occasional large transactions to routine small purchases. The behavioural literature explains the consequence: when payment is easy and less visible, the psychological resistance to spending falls, and purchases become faster, more frequent and sometimes less planned. At the same time, convenience, record keeping and wide acceptance make shopping easier for consumers and increase sales opportunities for merchants. The benefits of the cashless system will therefore be fully realised only if trust, security and responsible spending habits grow along with technology. Marketers, regulators and educators have a shared responsibility to ensure that the shift toward digital payment improves consumer welfare and does not merely increase consumption.

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