

Consumer Perception and Adoption of Cashless Payment Systems: An Empirical Study

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Abstract: The rapid advancement of digital technologies, including internet banking, smartphones, and electronic payment platforms, has significantly transformed consumer payment behaviour in India. Cashless payment systems have emerged as an important component of the digital economy by enabling secure, convenient, and efficient financial transactions. Payment instruments such as debit cards, credit cards, Unified Payments Interface (UPI), Internet banking, mobile wallets, and Immediate Payment Service (IMPS) have increasingly replaced traditional cash-based transactions across both urban and semi-urban regions. The adoption of cashless payment systems reduces the need to carry physical currency, minimizes transaction-related risks, enhances transparency, and improves the overall efficiency of financial transactions. This study examines consumer perception towards cashless payment systems and analyses the factors influencing their adoption and usage. It also evaluates the level of awareness, convenience, security perception, trust, and satisfaction associated with digital payment methods among consumers. The findings indicate that convenience, ease of use, transaction speed, and perceived security are major determinants of cashless payment adoption, while digital literacy and awareness significantly influence consumer acceptance. The study concludes that cashless payment systems have become an integral part of modern financial transactions and play a significant role in promoting digital financial inclusion and economic efficiency.

Keywords: Cashless payment systems, digital payments, consumer perception, payment adoption, financial inclusion, digital transactions

Introduction

The rapid advancement of digital technologies has significantly transformed the payment ecosystem across the world. Governments, policymakers, financial institutions, and business organizations are increasingly promoting cashless transactions as a means of improving transparency, reducing transaction costs, and strengthening financial inclusion. Despite these developments, cash continues to remain an important medium of exchange in many developing economies, including India.

In recent years, India has witnessed substantial growth in digital payment systems due to the widespread use of smartphones, internet banking, mobile applications, and digital payment platforms. Cashless transactions refer to financial transactions conducted electronically without the use of physical currency. Payment instruments such as debit cards, credit cards, Unified Payments Interface (UPI), mobile wallets, Immediate Payment Service (IMPS), and National Electronic Funds Transfer (NEFT) have become increasingly popular among consumers.

Cashless payment systems provide several advantages, including convenience, speed, reduced dependence on physical cash, enhanced record-keeping, and improved transaction security. However, concerns relating to cyber security, privacy, digital fraud, and inadequate technological infrastructure continue to influence consumer perception and adoption of digital payment methods. The effectiveness of a cashless economy therefore depends not only on technological advancement but also on consumer trust, awareness, digital literacy, and the security of payment systems. The present study examines consumer perception towards cashless payment systems and identifies the major factors influencing their adoption and usage among consumers.



Review of Literature

Pathania (2016) observed that cashless transactions contribute positively to economic growth by increasing Gross Domestic Product (GDP), reducing the social cost of cash handling, promoting financial inclusion, minimizing the shadow economy, and facilitating the growth of e-commerce. The study emphasized that India incurs a relatively higher cost of currency management compared with many developed economies.

Kumari (2016) highlighted the concept of cashless transactions and the associated security challenges. The study identified inadequate digital infrastructure, low literacy levels, lack of technological awareness, and cyber security threats as major obstacles to the adoption of cashless payment systems.

Chaudhri (2017) emphasized that the success of a cashless economy depends on robust internet infrastructure and consumer support mechanisms. The study recommended the expansion of internet connectivity, establishment of digital payment assistance centres in banks, elimination of unnecessary transaction charges, and extensive public awareness campaigns to encourage digital payment adoption.

Singhraul (2018) found that India was still at an early stage of cashless payment adoption compared with many developed countries. The study identified poor internet connectivity, lack of financial awareness, transaction costs, and inactive bank accounts as major factors limiting the use of electronic payment systems.

Overall, the existing literature suggests that consumer adoption of cashless payment systems is influenced by technological infrastructure, security perception, awareness, convenience, and institutional support.

Need for the Study

India has undergone significant economic and technological transformation in recent years through digitalization, financial inclusion initiatives, and the expansion of electronic payment systems. Although digital payments have grown rapidly, the proportion of cashless transactions remains relatively low compared with several other emerging economies. Understanding consumer perception and the factors affecting the adoption of cashless payment systems is essential for strengthening the digital payment ecosystem. The study aims to examine the reasons for the continued dependence on cash and the factors that encourage or discourage consumers from adopting cashless payment methods.

Scope of the Study

The study focuses on consumer perception towards cashless payment systems and examines the influence of the following factors:

- Convenience of digital payments
- Security perception
- Social influence
- Technological infrastructure
- Awareness and digital literacy
- Willingness to use cashless payment methods

Research Methodology

The study is based on both **primary and secondary data**.

Primary data were collected through a structured questionnaire administered to selected consumers. Prior to the main survey, a pilot study involving **50 respondents** was conducted to refine the questionnaire and improve the reliability of the measurement scale.

Secondary data were collected from research articles, books, reports of the Reserve Bank of India (RBI), government publications, and relevant online sources.

Sample Size

The final analysis is based on **30 respondents** selected using convenience sampling.

Analysis And Result:

Analysis and Results

The demographic characteristics of the respondents were analysed to understand the profile of consumers using cashless payment systems. The analysis indicates that demographic factors such as age, gender, and educational qualification influence the adoption and usage of cashless transactions. The majority of respondents reported that reducing the risk associated with carrying physical cash was one of the primary reasons for preferring digital payment methods.

Table 1.1 Demographic Profile of Respondents

Demographic variables	Categories	No. of respondents	Percentage
Gender	Male	20	66.7
	Female	10	33.3
Age group	Below 30 years	6	20.0
	30-40 years	8	26.7
	40-50 years	12	40.0
	Above 50 years	4	13.3
Educational qualification	Secondary	5	16.7
	Diploma	4	13.3
	Graduates	15	50.0
	Postgraduates	6	20.0

The data indicate that **66.7% of the respondents were male**, while **33.3% were female**. In terms of age distribution, the largest group of respondents belonged to the **40-50 years age category (40.0%)**, followed by **30-40 years (26.7%)**, **below 30 years (20.0%)**, and **above 50 years (13.3%)**.

Regarding educational qualification, **graduates constituted the majority of respondents (50.0%)**, followed by postgraduates (20.0%), secondary education holders (16.7%), and diploma holders (13.3%). The findings suggest

that individuals with higher educational qualifications demonstrate greater acceptance and usage of cashless payment systems.

Table 1.2 Most Preferred Digital Payment Method

Digital payment method	No. of respondents	Percentage
PhonePe / UPI	10	33.3
E-wallets	3	10.0
Debit/Credit Cards	10	33.3
Others	7	23.4

The results show that **UPI-based applications such as PhonePe and debit/credit cards were the most preferred digital payment methods**, each accounting for **33.3% of respondents**. E-wallets were preferred by only **10.0% of respondents**, while **23.4% used other digital payment options**, including net banking and other mobile payment applications.

The findings indicate that consumers prefer payment methods that offer convenience, quick transaction processing, and wide merchant acceptance. The increasing preference for UPI-based transactions reflects the growing digitalization of the payment ecosystem in India.

Major Findings

The study reveals the following important findings:

1. The **40-50 years age group** exhibited the highest adoption of cashless payment systems among the respondents.
2. **Male respondents constituted a larger proportion of digital payment users**, although female respondents demonstrated a favourable perception towards the convenience and safety of cashless transactions.
3. **Graduates showed higher adoption of cashless payment systems**, indicating that educational attainment positively influences digital payment acceptance.
4. The **reduction in the risk of carrying physical cash** emerged as a major factor encouraging consumers to adopt cashless transactions.
5. **UPI-based payment applications and debit/credit cards were the most commonly used digital payment instruments**.
6. Consumers identified **internet connectivity issues, cyber security concerns, lack of awareness, digital illiteracy, and transaction-related charges** as major barriers to cashless payment adoption.

Suggestions

Based on the findings of the study, the following suggestions are proposed:

1. **Strengthen digital infrastructure:** The Government should improve internet connectivity and digital payment infrastructure, particularly in rural and semi-urban areas.
2. **Enhance financial literacy:** Banks and financial institutions should conduct regular awareness programmes and digital literacy campaigns to educate consumers about secure digital payment practices.



3. **Improve cyber security:** Stronger security mechanisms, fraud detection systems, and consumer protection measures should be implemented to increase public confidence in digital payment systems.
4. **Reduce transaction costs:** Unnecessary service charges on digital payment transactions should be minimized to encourage greater adoption among consumers.
5. **Provide incentives for digital payments:** Cashback schemes, reward programmes, and tax-related incentives can motivate consumers and merchants to increase the use of cashless payment methods.
6. **Expand merchant acceptance:** Small retailers and local businesses should be encouraged and supported to adopt digital payment technologies.

Conclusion

The study concludes that cashless payment systems have become an important component of India's digital economy. Consumers generally perceive digital payment methods as convenient, efficient, and safer than carrying physical cash. However, concerns relating to cyber security, internet connectivity, digital literacy, and transaction costs continue to affect the widespread adoption of cashless transactions.

The analysis indicates that demographic factors, particularly **age and educational qualification**, significantly influence consumer adoption of digital payment systems. The growing popularity of UPI-based payment applications demonstrates the increasing acceptance of technology-driven financial transactions among Indian consumers.

For a successful transition towards a less-cash economy, policymakers and financial institutions must focus on improving digital infrastructure, strengthening cyber security, enhancing financial literacy, and increasing consumer awareness. A secure and inclusive digital payment ecosystem will not only improve transaction efficiency but also contribute to financial inclusion, transparency, and sustainable economic development in India.

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