

# Going Cashless in India: Awareness and Usage of Digital Payment Systems

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**Abstract**—*The rapid expansion of information and communication technology has transformed India's financial ecosystem, leading to a steady shift from cash-based transactions toward digital payment systems. Government initiatives such as Digital India, Jan Dhan Yojana, Aadhaar linkage, and the Unified Payments Interface (UPI), along with increased smartphone penetration and affordable internet access, have accelerated this transition. However, adoption remains uneven across different socio-economic groups. The present study examines (i) the level of awareness of digital payment services and (ii) the usage patterns and preferences of users toward digital payment systems. Primary data were collected from 153 respondents using a structured questionnaire. Descriptive statistics and Chi-square tests were employed for analysis. The findings reveal that while basic awareness of digital payments is widespread, variations exist across gender and occupational roles in specific services such as e-wallet usage and certain security-related practices. The study highlights the need for targeted digital literacy and awareness programs to strengthen India's progress toward a more inclusive cashless economy.*

**Keywords:** *Digital Payments, Cashless Economy, UPI, Awareness, Usage Patterns, India*

## I. INTRODUCTION

The rapid advancement of information and communication technology has brought a fundamental transformation in the global financial system. One of the most visible outcomes of this transformation is the gradual movement from a cash-based economy to a cashless or digitally driven payment ecosystem. A cashless economy refers to an economic system in which most financial transactions are conducted through digital modes such as debit and credit cards, mobile wallets, UPI, net banking, and other electronic platforms rather than physical currency.

In India, digital payments have grown significantly over the last decade due to increased smartphone usage, affordable internet services, expansion of banking infrastructure, and strong policy support from the government. Initiatives such as Digital India,

Pradhan Mantri Jan Dhan Yojana, Aadhaar-enabled services, and the introduction of UPI have played a crucial role in promoting digital transactions. Digital payments offer several advantages including convenience, speed, transparency, reduced transaction costs, and enhanced financial inclusion.

Despite these benefits, India continues to exhibit a high dependence on cash, particularly in rural and semi-urban areas. Issues such as digital illiteracy, cybersecurity concerns, infrastructure gaps, and lack of trust in technology restrict wider adoption. Therefore, it is essential to understand users' awareness and usage behaviour regarding digital payment systems in order to design effective policies for strengthening the cashless ecosystem.

## II. STATEMENT OF THE PROBLEM

Although digital payment systems have expanded rapidly in India, their adoption is not uniform across population groups. Many individuals still rely heavily on cash because of limited awareness, low digital skills, fear of fraud, and inadequate infrastructure. Furthermore, differences in awareness and usage patterns may exist across gender and occupational roles. These disparities create a gap between policy intentions and actual ground-level adoption. Hence, there is a need to empirically examine users' awareness and usage patterns of digital payment systems.

## III. OBJECTIVES OF THE STUDY

The study is undertaken with the following two objectives:

1. To assess the level of awareness about digital payment services among users.
2. To examine the usage patterns and preferences of digital payment services among users.

## IV. REVIEW OF LITERATURE

Existing literature by Padmaja (2019), Venkataraman, Maisuria (2021), Baghla (2018), Sanghvi (2020), and Vatsa (2020) documents the rapid growth of digital payment systems in India under initiatives such as Digital India and the expansion of UPI, mobile wallets, cards, AEPS, and internet banking. These studies highlight that technological advancement, smartphone and internet penetration, demonetization, and the COVID-19 pandemic significantly accelerated cashless adoption. Research by Srouji (2020) and Jatin Jangid (2025) suggests that while digital payments offer convenience, transparency, and efficiency, cash and digital modes often coexist due to socio-economic inequality, behavioural preferences, and infrastructure gaps. Andrea Birigozzia (2025) and Prakash Kumar Thakur (2023) emphasize the importance of financial literacy, trust, and behavioural factors in influencing adoption, along with the positive impact of digital payments on financial inclusion and economic growth. Walied Askarzai (2025) further points out that small businesses face specific challenges such as high transaction costs and technological constraints. Overall, the literature concludes that although digital payments are transforming the financial ecosystem, inclusive policies, strong cybersecurity, and widespread awareness programs are essential for sustainable cashless growth.

## V. RESEARCH METHODOLOGY

### HYPOTHESES

H01: There is no significant association between socio-demographic factors (gender and role) and awareness of digital payment services.

H02: There is no significant association between socio-demographic factors (gender and role) and usage patterns and preferences of digital payment services.

### SOURCES OF DATA

Primary Data: Collected through a structured questionnaire using a five-point Likert scale.

Secondary Data: RBI reports, government publications, journals, books, and credible online sources.

### SAMPLE DESIGN

Convenience sampling technique was used. A total of 153 respondents from different age groups, genders, and occupational roles were surveyed.

### RELIABILITY OF INSTRUMENT

The internal consistency of the questionnaire was tested using Cronbach's Alpha. The overall Cronbach's Alpha value was above the acceptable threshold of 0.70, indicating that the instrument used for measuring awareness and usage of digital payment services is reliable

### TOOLS OF ANALYSIS

Descriptive statistics, Cross-tabulation, Chi-square test of association. The study adopts a descriptive and analytical research design.

## VI. DATA ANALYSIS AND DISCUSSION

Table 1. Assess the level of awareness about digital payment services among gender

S. No.	To assess the level of awareness about digital payment services.	$\chi^2$ value	df	p-value (Pearson / Fisher)	Result
1	Do you have your own smartphone	1.621	1	0.203 / 0.503	Not Significant
2	Do you have access to the internet	1.621	1	0.203 / 0.503	Not Significant
3	Awareness of UPI-based payment systems (BHIM, GPay, PhonePe)	3.729	3	0.292 / 0.288	Not Significant
4	Knowledge of mobile banking and net banking services	3.290	3	0.349 / 0.351	Not Significant
5	Awareness of e-wallets (Paytm, Amazon Pay)	8.887	3	0.031 / 0.023	Significant
6	Knowledge that Aadhaar can be linked with bank account for digital services	6.566	2	0.038 / 0.031	Significant
7	I am aware that utility bills (electricity, water etc.) can be paid digitally	8.276	3	0.041 / 0.026	Significant

Table 1 shows that awareness of basic digital prerequisites—such as smartphone ownership, internet access, UPI usage, and knowledge of mobile/net banking—does not differ significantly between males and females, indicating similar basic exposure to digital payment systems across gender. However, significant gender differences are observed

in awareness of e-wallets, knowledge about Aadhaar–bank account linkage, and awareness of digital utility bill payments. This suggests that while foundational digital awareness is comparable, gender-based variation exists in familiarity with specific and advanced digital payment services.

Table 2 Examine the usage patterns and preferences of digital payment services among gender

S. No.	Examine the usage patterns and preferences of digital payment services	$\chi^2$ value	df	p-value (Pearson / Fisher)	Result
1	I regularly use digital platforms for financial transactions	2.660	3	0.447 / 0.486	Not Significant
2	I use mobile apps to send and receive money	17.196	3	0.001 / 0.000	Significant
3	I prefer using digital payment modes (UPI, cards) over cash	5.287	3	0.152 / 0.158	Not Significant
4	I recharge phone/DTH/data pack using online methods	6.502	4	0.165 / 0.139	Not Significant
5	I use internet banking or mobile banking for financial activities	5.441	3	0.142 / 0.147	Not Significant

Table 2 indicates that regular use of digital platforms, preference for digital payments over cash, online recharges, and use of internet or mobile banking do not differ significantly between males and females, reflecting similar overall usage behaviours. However, a highly significant gender difference is observed in the use of mobile apps for sending and receiving money, suggesting that this specific digital payment activity varies notably between male and female respondents.

#### VII. AWARENESS OF DIGITAL PAYMENT SERVICES

The results show that basic awareness regarding smartphone ownership, internet access, UPI, and mobile/net banking is generally high and does not differ significantly across gender and roles. However, awareness of e-wallets and certain advanced digital services shows significant variation, indicating uneven familiarity with specific platforms.

#### VIII. FINDINGS

The study reveals that awareness of basic digital payment services is widespread among users, while awareness of e-wallets varies across certain groups. Usage patterns are largely similar across gender and roles, with only limited exceptions. However,

variations in advanced digital skills indicate the need for focused and targeted training programs.

#### IX. LIMITATIONS OF THE STUDY

The study is based on a convenience sampling method, which may limit generalizability and the sample size is relatively small. Responses are based on self-reporting and may contain personal bias.

#### X. CONCLUSION

India has made substantial progress toward a cashless economy through technological advancement and supportive policies. The study finds that while awareness and usage of digital payments are generally high, gaps remain in familiarity with specific services and advanced digital skills. Strengthening digital literacy, improving infrastructure, and enhancing trust in digital systems are essential for ensuring inclusive and sustainable growth of digital payments in India.

#### XI. SUGGESTIONS

Regular digital literacy and awareness programs should be conducted to enhance users' understanding of digital payment systems, while cybersecurity

awareness must be strengthened to build trust and confidence. Improving internet connectivity in rural and semi-urban areas, encouraging user-friendly application design, and promoting demonstrations and hands-on training for UPI and e-wallet usage are also essential.

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