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## Digital Payments in India: Exploring the Convenience, Risks, and Strategies to Protect Users from Fraud

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### ABSTRACT

Digital payments are the fastest-growing form of payment in the fastest-growing digital age. Digital payment refers to payment made through digital methods like bank transfers, QR codes, UPI, internet banking, and other payment options such as debit cards and credit cards.

In India, digital payment has become necessary rather than a luxury since the demonetization in 2016 and the COVID-19 pandemic in 2020. Demonetization in 2016 emerged as a driven move for the acceptance of digital payment systems, but COVID-19 came out as an inevitable shift toward the usage of digital payment systems. Due to its ease of use and convenience, users who switched to digital payments are now reluctant to use their prior payment methods, primarily cash. The volume of total digital payment transactions has increased to 22,831 crores in FY 2024-25 from 2,071 crores in FY 2017-18 at a CAGR of 41%.

As people become more aware of the use of digital payment applications, their use and acceptance are going to keep increasing. But the growing dependence on digital banking additionally opens up users and financial institutions to a variety of cybersecurity risks, such as ransomware, malware, phishing, data breaches, cyberthreats and unauthorized access, resulting in large financial losses and customer mistrust. The government of India is making efforts to make people aware of digital frauds, to promote digital literacy, to improve digital infrastructure, and to strengthen digital security measures.

This study suggests that Digital Payments are convenient only if people use them with caution; otherwise, they can become risky. One should never share the OTP, PIN, or personal banking details with anyone and should use secure and trusted apps only. By being alert and careful, users can enjoy the benefits of digital payments safely.

*Keywords:* Digital payment, Online Payment, Cashless Economy, Cyberfraud, UPI.

## 1. INTRODUCTION

To strengthen the Indian economy by means of paperless, faceless, and cashless transactions, the Govt. of India has introduced the Digital Payment under the "Digital India flagship program" with the vision of transforming India into a cashless and digitally empowered economy (Singhal & Gupta, 2021; Upadhyaya, 2023). "Digital payment" is an emerging technique in which two or more people perform a monetary transaction using an online or digital platform without the physical exchange of money (Singhal & Gupta, 2021). There are many apps in India providing the facility of digital payment using mobile phones or other digital devices, such as Paytm, PhonePe, Google Pay, and Amazon Pay (George et al., 2021).

The concept of digital payments started gaining ground in India in 2016 after the announcement of demonetization on November 8, 2016. This refers to removing the 500-and 1000-rupee notes as legal tender and replacing them with new currency notes of 500 and 2000. Holders of the old notes could deposit them at a bank, but they could not be used for transactions. As a result, the use of mobile wallets, internet banking, credit cards, and debit cards has increased (Kumar & Jagathi, 2023; Agrawal et al., 2024). However, the use of digital payments rose drastically during the COVID-19 pandemic. During the COVID-19 pandemic, trade dropped, but digital payments flourished. People who had earlier been hesitant to use digital payment had to switch to it due to social distancing norms and safety worries about the spread of the virus. Thus, Covid turned up as a further opportunity for the expansion of digital payments in India (George et al., 2021; Kaur, 2024).

Digital payments are becoming more popular because of their speed, reliability, and potential to shorten the payment process, making day-to-day purchases faster and more efficient. Ease of use and convenience are the important factors behind the popularity of digital payments (Bano, 2024).

Unlike real cash, digital payments have less of an emotional impact on consumers' spending behaviour, as they do not feel separated from money in the case of digital payments. This detachment often leads users to spend more frequently without any hesitation (Bano, 2024).

Although the use of digital payments has multiple advantages, there are several people who are hesitant to make payments electronically (Kumar & Jagathi, 2023). Growing dependence on digital payment systems opens the door for a variety of cybersecurity risks (Waliullah et al., 2025).

This paper examines the convenience, challenges, and necessary cautions associated with the use of digital payment systems. It emphasizes the importance of security awareness, responsible usage, and regulatory support to ensure safe and secure digital transactions.

**What is Digital Payment:** Digital payments refer to financial transactions done electronically through digital channels with the help of the internet or a mobile network without using physical cash. It works by transferring funds from one account to another electronically. For transferring funds, the sender of money has to enter the account details or scan the QR code of the receiver of money. The money is transferred quickly within a short period of time. It reduces the requirement of physical cash, making transactions more secure and faster (Bajaj Finserv, 2024).

## 2. COMMON MODES OF DIGITAL PAYMENT IN INDIA

- **Debit Cards and Credit Cards** - Debit and credit cards are issued by banks. Using a debit card, one can make a payment directly from his/her bank account. Whereas credit cards allow users to borrow funds for payment up to a certain limit.
- **Internet and Mobile Banking** - Mobile banking and internet banking allow users to make financial transactions using the mobile application and the official website of a particular bank.
- **Mobile Wallets** - Many applications like Paytm, Google Pay, and PhonePe allow users to store money electronically from their bank accounts up to a certain limit. This amount can be used for making payment digitally (online) when needed.
- **Unified Payments Interface (UPI)** - UPI is a real-time payment system that allows users to transfer funds from one bank account to another instantly using a third-party application or a particular bank's application.

## Benefits of Digital Payment –

- It offers speedy and effortless transfer of funds by saving time and energy in making payments.
- It also reduces the risk of loss of money, as there is no need to carry physical cash for making payments.
- It offers greater accessibility and flexibility. Payment can be made at anytime from anywhere, round the clock (24×7) across the globe.
- It provides an automatic record of transaction history. Users can monitor and manage their spending patterns.
- It makes it easier to pay for utility bills, recharges, school or college fees, and shopping.
- Some digital payment applications provide offers or discounts for making payments using them.

## Limitations of Digital Payment Systems or Issues Associated with Digital Payment Systems –

- Digital payment systems are susceptible to cybersecurity risks such as phishing attacks, identity theft, data breaches, and unauthorized access to bank accounts.
- Fear of data privacy and misuse of personal information reduces confidence among users.
- Low levels of digital literacy and poor access to digital infrastructure lead to improper utilization of digital platforms.
- Poor internet connectivity and electricity service can interrupt transactions, particularly in rural and remote areas.
- Elderly users and less experienced users feel hesitant to make payments digitally.

What is Digital Payment Fraud? Digital payment fraud is a type of cybercrime where fraudsters use electronic means such as false messages, deceptive links, fake QR codes, and malicious mobile applications to illegally steal money or personal financial information of the user without his/her permission.

## 3. COMMON DIGITAL PAYMENT FRAUDS AND THEIR SAFETY MEASURES

- Phishing attacks happen where cyber attackers use misleading websites, emails, or SMS to lure users into revealing personal data.

To avoid this situation, users should not click on suspicious links and should never share their OTP, PIN, or password.

- QR code fraud involves replacing original QR codes with fake QR codes or placing fake QR codes on the names of others. Users should always verify the receiver's ID or QR code before paying to avoid such fraud.
- Customer care Fraud involves scammers who pose as customer support representatives over calls or messages and request personal details, such as bank account numbers, ATM card numbers, ATM PINs, and OTPs from customers to steal money from their bank accounts. Users should always contact customer support only through official websites and never share their personal details.
- UPI payment request fraud occurs when users are informed via SMS that they must scan a QR code or share their OTP or UPI PIN to receive a payment. Once they provide the OTP or PIN, money is stolen from their account. Users should always be aware that receiving money does not require any OTP or PIN. Scanning a QR code and entering a UPI PIN is only meant for making payments.
- Harmful websites and mobile applications are designed by hackers to gain unauthorized access to users' payment information and login credentials by intercepting messages, emails, or other sensitive data. To prevent such frauds, users should download applications only from authorized app stores, avoid installing third-party or unverified applications, and refrain from granting unnecessary permissions to mobile applications or websites.

Here are some other measures to prevent digital payment fraud:

- Always avoid making online payments on public Wi-Fi.
- Set strong, unique online banking passwords with letters, numbers, and special characters. The password must not include the user's name, mobile number, date of birth, or marriage anniversary.
- Update your password regularly.
- Enable the app lock feature on payment apps to prevent unauthorised access.
- Activate transaction alerts via SMS or email to receive timely notifications of all financial transactions and to detect suspicious activity early.
- Use the hide notification feature on messaging apps so that no one can read your messages or OTPs.
- If you are a victim of cyber financial fraud, report it immediately to the helpline no. 1930 or contact your bank.

#### 4. LITERATURE REVIEW:

Contrary to regular cash payments, digital payments are made through digital means. For this purpose, both the payer and payee need digital means of payment to send and receive money. It is also known as electronic payment (George et al., 2021). It can be done using either mobile banking applications or third-party applications like PhonePe, Paytm, Amazon Pay, Google Pay, BHIM, and others (Upadhyaya, 2023). Waliullah et al. (2025) state that financial transactions have transformed drastically as a result of the speedy digitalization of banking services, offering customers more efficiency and convenience.

The initiative of demonetization in 2016 by the Indian Govt. marked a milestone in India's journey toward digitalization (Bano, 2024). Agrawal et al. (2024) also observe that, following the demonetisation, consumers who had previously relied on cash now switched to digital payments due to the shortage of cash. But the findings of Singhal and Gupta (2021) indicate that there is a high increase in the adoption of digital payment services using multiple applications in towns and villages in India, which was not particularly high before the Covid-19 pandemic. In India, demonetization emerged as a driven move for the acceptance of digital payment systems, but Covid-19 came out as an inevitable shift toward the adoption of digital payment systems in India (George et al., 2021). Almost every sector throughout the world, like transportation, retail, fashion, tourism, airlines, and many more, experienced adverse effects from COVID-19. But few sectors, such as medicines, groceries, and OTT (over-the-top) channels for entertainment, get boosted with the use of online payment methods (Singhal & Gupta, 2021). According to a household survey carried out by People Research on India's Consumer Economy and Citizen Environment (PRICE) in partnership with the National Payments Corporation of India (NPCI), 32% of the households surveyed made their first digital transactions during the lockdown (Saroy et al., 2022). People who switched to digital payments during the COVID-19 period are now reluctant to use their prior payment methods, primarily cash (George et al., 2021).

Ease of use and convenience are key factors behind the popularity of digital payments (Bano, 2024). According to Dev et al. (2024), the Unified Payments Interface (UPI) is a remarkable innovation that is revolutionising digital payment systems in India. It has transformed financial transactions by offering greater convenience and security. Users consider UPI a safe and effective mode of payment that reduces concerns about carrying large amounts of cash. Yang et al. (2021) also

demonstrate the positive effects of perceived usefulness, ease of use, social influence, lifestyle compatibility, and perceived trust on the desire and adoption of e-wallets (digital payments). Digital payments have been beneficial for paying utilities, including fuel, electricity bills, house rent, school or college fees, and even periodic savings (Singhal & Gupta, 2021). Digital payments are not only used for online purchases but have also become more popular for offline purchases (Bano, 2024).

The youngsters are the primary users of electronic modes of payment, but older age groups have yet to catch on (George et al., 2021). According to Agardi and Alt (2022) Generation X is more influenced by the perceived ease of use, subjective norms, and financial risk of NFC mobile payments. Generation Z, on the other hand, intended to use NFC (Near Field Communication) mobile payment more often if they felt it would fit in with their lifestyle (Agárdi & Alt, 2022).

Besides ease of use, digital payment applications entice people with coupons and cash back offers on payment to attract potential users and to retain existing users. These offers not only encourage people to use the applications but also influence their spending patterns (Bano, 2024). According to Dev et al. (2024), UPI has led to overspending for the majority of consumers. The intangible nature of digital transactions promotes psychological changes, which contribute to impulsive spending. Some users later regret their spending when they check their bank balance or transaction history and realise they overspent, a reaction that is more common with UPI payments than with cash due to the absence of a physical sense of money.

Although the use of digital payments has multiple advantages, the growing dependence on digital banking additionally opens up users and financial institutions to a variety of cybersecurity risks, such as ransomware, malware, phishing, data breaches, and unauthorized access. Malware and phishing attacks continue to be the most commonly exploited cyberthreats, resulting in large financial losses and customer mistrust. There are several people who are hesitant to make payments electronically (Kumar & Jagathi, 2023; Waliullah et al., 2025). Many people in rural and semi-urban areas are struggling with digital payments, as they have less knowledge and confidence needed to manage the digital payment system properly. This absence of digital competency becomes a barrier to effective usage of the digital payment system. Furthermore, poor internet connectivity and frequent power cuts limit the use of these platforms consistently, which degrades and prevents wider acceptance in these areas (Bano, 2024). To achieve the

goals of a digital and cashless economy, the government of India must make additional efforts to promote digital literacy, improve digital infrastructure, and strengthen digital security measures (Kumar & Jagathi, 2023).

## 5. RESEARCH METHODOLOGY

For this research paper, data have been collected from secondary sources like the Reserve Bank of India (RBI), National Payments Corporation of India (NPCI), research articles, and research papers. The literature review is based on papers published from 2021 to 2025, searched with keywords such as "digital payment," "online payment," etc. Papers included for the literature review are based on the year of publication and the number of citations.

This paper focused on convenience, challenges, and necessary cautions associated with the use of digital payment systems.

## 6. RESULT AND DISCUSSION

Financial transactions have transformed drastically as a result of the speedy digitalization of banking services, offering customers more efficiency and convenience (Waliullah et al., 2025). Users started using digital payment following major economic and social shifts, particularly demonetisation and pandemic-related lockdowns due to its ease of use and convenience (Dev et al., 2024; George et al., 2021).

As people become more aware of the use of digital payment applications, their use and acceptance are going to keep increasing (Singhal & Gupta, 2021).

Growing dependence on digital payment systems opens the door for a variety of cybersecurity risks. Malware, phishing attacks, OTP and PIN theft, fake links, and unauthorized access to accounts continue to be the most commonly exploited cyberthreats, resulting in large financial losses and customer mistrust (Waliullah et al., 2025). This risk can be minimized by the vigilance and responsible behaviour of the users. Users should never share their OTP, PIN, or password with anyone. Always use a strong and unique password on payment applications and keep updating it from time to time. One should not use public Wi-Fi while making payments. One should not click on any suspicious link just for

the sake of a small discount. Users should also activate transaction alerts through SMS or email.

Therefore, Digital Payments are convenient only if people use them with caution; otherwise, they can become risky. By being alert and careful, users can enjoy the benefits of digital payments safely.

## 7. CONCLUSION

Digital payments are becoming more popular because of their speed, reliability, and potential to shorten the payment process, making day-to-day purchases faster and more efficient. The integration of digital payment apps and promotional incentives has expedited the adoption of digital payments, making transactions more lucrative and valuable for consumers. Increased use of the internet and the convenience of digital payment systems have increased the risk of digital financial fraud (Indian Cyber Crime Coordination Centre).

This paper concludes that while digital payments have many benefits, their safe use depends on the awareness and alertness of users. To achieve the goals of a digital and cashless economy, the government of India must make additional efforts to promote digital literacy, improve digital infrastructure, and strengthen digital security measures.

The public awareness campaign by RBI emphasizes safe digital banking practices, such as not sharing passwords, PINs, OTPs, or CVVs, and avoiding clicking on suspicious links to prevent fraud. "RBI Kehta Hai... Jaankaar Baniye, Satark Rahiye!"

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