

## **DIGITAL PAYMENT SYSTEM IN INDIA – PROSPECTS AND BARRIERS**

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### **ABSTRACT**

The Digital Payment System in India has seen a rapid growth in recent years, owing to government initiatives, technological developments and increased usage of mobile phones. The Government of India initiation of Digital India, with a goal of transforming the country into a digitally enabled society and knowledge economy. The Government's initiative in promoting cashless transactions has played an important role in the growth of Digital Payment System. The introduction of the Unified Payment Interface (UPI), Aadhar-enabled payments and Digital wallets has transformed financial transactions, making them faster, safer and more accessible to a wider range of people. This paper examines the future prospects and barriers of India's Digital Payment System focusing on key platforms including UPI, IMPS and Bharat BillPay.

**Keywords:** Digital Payment, UPI, IMPS

### **INTRODUCTION**

A Digital Payment System is a method of transferring money electronically without the use of physical cash. It allows individuals and businesses to make payments through digital devices such as smartphones, computers, and payment cards. With the growth of the internet and mobile technology, digital payments have become an essential part of daily life. These systems include online banking, mobile wallets, debit and credit card transactions, QR code payments, and contactless payments. They provide fast, secure, and convenient ways to complete financial transactions anytime and anywhere. Digital Payment Systems reduce the risks associated with carrying cash and help maintain transparent financial records. They also support e-commerce, online services, and global trade by enabling quick and seamless transactions. Advanced security features like encryption and authentication help protect users from fraud and cyber threats. Furthermore, digital payments promote financial inclusion by giving more people access to banking services. Overall, Digital Payment Systems are transforming the way money is exchanged, making economies more efficient, modern, and connected.

Digital payment systems in India have grown rapidly, especially after demonetization (2016) and the Digital India initiative. India is now one of the global leaders in digital transactions. The advent of internet and rapid technological advances have impacted the way people conduct financial transactions. Online payment systems, once considered an uncommon innovation, have now become a key component of worldwide trade. Online payment technologies have substantially impacted the worldwide financial environment. These systems have transformed individuals and businesses to adopt cashless transactions making it easier, faster, more accessible and affordable. Digital Payments System in India such as Debit/Credit cards, Mobile Banking, Aadhar Enabled Payment System (AEPS), Micro ATM, UPI, E-Wallets, POS, BBPS, IMPS, NEFT and RTGS etc. have made convenient to transact

both to rural and urban users in India. This paper focuses on the various Digital Payment Systems in India and its prospects and barriers.

## **OBJECTIVES OF THE STUDY**

1. To explore the different modes of Digital Payment System in India
2. To study the future prospects of Digital Payment System
3. To identify the barriers and risks in Digital Payment System

## **RESEARCH METHODOLOGY**

The research is of descriptive in nature and secondary sources of information are collected from various Published Journals, Government websites and handbooks related to Digital Payment Systems.

## **DIFFERENT MODES OF DIGITAL PAYMENT SYSTEM IN INDIA**

As part of promoting cashless transactions and converting India into less-cash society, various modes of Digital Payments available in India are:

### **1. Banking cards (Debit/Credit/Cash/Travel/Others)**

Banking cards such as debit and credit cards provide the consumers with more convenience, control and security. These cards allow two factor authentication for safe payments such as PIN and OTP. Some of the examples of card payments include RuPay, Visa, Mastercard. These cards allow the users to purchase items in stores or over the internet. These cards are a Point of Sale (POS) machines, ATMs, Micro ATMs, shops, wallets, online transactions and e-commerce websites.

### **2. Unstructured Supplementary Service Data (USSD)**

The newly developed payment service \*99# operates on the Unstructured Supplementary Service Data (USSD) channel. This service allows mobile banking transactions to be completed using a simple feature mobile phone; no mobile internet data is required to use USSD based mobile banking. It is intended to give financial depth and inclusion of underprivileged communities in conventional banking services. Banking customers can avail this service by dialling \*99#, a "Common number across all Telecom Service Providers (TSPs)" on their mobile phone and transact through an interactive menu displayed on the mobile screen.

### **3. AADHAAR Enabled Payment System (AEPS)**

Aadhaar Enabled Payment System is a payment service that allows a bank customer to use Aadhaar as his or her identity to access his or her respective Aadhaar enabled bank account and perform basic banking transactions such as balance inquiry, cash deposit, cash withdrawal and remittances via a Business Correspondent.

### **4. BHIM UPI**

Bharat Interface for Money (BHIM) is an app that allows you to perform simple, straight forward and quick payment transactions via the Unified Payments Interface (UPI). It is one of the popular methods of Digital Payment Systems. You can make easy and quick bank to bank payments and pay and receive money using only your cell phone number or Virtual Payment Address (UPI ID). Each Bank provides its own UPI App for Android, Windows and iOS mobile platforms. One should have a bank account linked with the

mobile number, a smart phone with internet facility and a debit card for resetting the MPIN.

The various features of BHIM UPI include

- Balance Enquiry and Transaction History
- Change of PIN
- QR Code Scanning for Payments
- Sending and Receiving of Money
- One can switch over to multiple bank accounts that is linked with the app
- BHIM is available in 20 languages
- Bill Payments can be made through BHIM
- UPI Auto payments can be enabled for recurring payments

## **5. Mobile Wallet**

A Mobile Wallet is nothing but cash in digital form. One can link the credit and debit card information in their cellphones through mobile wallet application or can transfer money online to mobile wallet. It enables cashless and cardless transactions directly from one's smartphone. Instead of using debit and credit cards to make purchases, one can make payment through the smartphone, tabs or smart watches with an active internet connection. To load money into a digital wallet, an individual's account must be linked to it. Some of the examples of mobile wallets include Apple Pay, Google Pay, Samsung Pay, Airtel Money, Jio Money etc.

## **6. Point of Sale (POS)**

Sales are made at a Point of Sale (PoS). It enables PoS holders to use swaps to collect money from their customers. Additionally, there is no need to visit a bank to complete a purchase or sale transaction. Retailers identify a Point of Sale (PoS) as the location where a customer completes a transaction, such as a checkout counter. However, the merchant's bank account and GPS system are required.

## **7. Internet Banking**

Internet banking, often known as online banking, e-banking, or virtual banking, is an electronic payment system that allows customers of a bank or other financial institution to execute a variety of financial transactions via the firm's website. Banks and other financial institutions provide this service that enables users to access banking services online. To take advantage of every little service, customers do not have to go to the branch office of their bank. Internet banking is not accessible to all account holders. One must register for the service while opening the account or later if one wants to use internet banking. To access your online banking account, one must enter the password and registered customer ID.

## **8. National Electronic Fund Transfer (NEFT)**

A nationwide payment system called National Electronic Funds Transfer allows money to be sent between any bank and any branch. The system allows individuals, businesses, and corporations to electronically transfer money from any bank branch to any person, business, or corporation that has an account with any other bank location around the nation. Not only may account holders deposit money into another person's account from

anywhere, but anyone without an account can do the same. However, the maximum amount for such a cash transaction Rs. 50,000. A person can use this service to deposit up to Rs. 50,000, and the option is only available during business hours.

### **Real-Time Gross Settlement (RTGS)**

For high-value and urgent transactions, banks and other financial institutions employ this specialized electronic money transfer technology. The transactions are done very quickly within few minutes or seconds. Each transaction is settled separately and in full, without netting or balancing against previous transactions, as indicated by the term "gross" in RTGS. This reduces counterparty risk by guaranteeing that the money is moved safely and independently of other transactions. To maintain the stability and integrity of the financial system, central banks or other financial authorities frequently run and supervise real-time gross settlement systems.

### **9. Immediate Mobile Payments Services (IMPS)**

IMPS stands for Immediate Mobile Payments Services. Real-time interbank money transfers are made easier by this internet payment method. The important feature is that it works on real time basis even on bank holidays. The maximum amount of transfer is Rs. 2,00,000. In terms of both financial and non-financial aspects, IMPS is a crucial instrument for instantaneous money transfers between banks throughout India via mobile, internet, and ATM. It is also safe.

### **10. Mobile Banking**

A bank or other financial institution may provide its clients mobile banking, which enables them to use a mobile device, like a tablet or smartphone, to perform various financial operations remotely. It makes use of software often referred to as an app-that is made available by banks or other financial institutions. Every bank offers a mobile banking app for the IOS, Windows, and Android operating systems.

### **11. Micro ATM**

In places with inadequate financial infrastructure, Micro ATMs are small electronic machines that offer basic banking services. By enabling consumers to use their debit cards or biometric verification to conduct operations including cash withdrawals, balance inquiries, and fund transfers, they assist in reducing the gap between traditional banking and underprivileged groups. Micro ATMs are usually run by BCs (Banking Correspondents), who are approved people or organizations designated by banks to provide basic banking services on their behalf. BCs might be people, non-profits, or commercial organizations.

### **12. QR Code**

Two-dimensional barcodes known as QR codes can be scanned with a smartphone or other mobile device that has a camera. It is becoming a popular way to make payments. Customers can use their smartphones to scan a QR code that merchants show at their point of sale in order to start the payment process. Mobile wallets or banking apps are usually used to process QR code payments, which can be utilized for both in-person and remote transactions, on techniques like biometric authentication or one-time passwords. Some of the popularly used QR codes include GPay, Phonepe, Paytm, Amazon pay etc.

## PROSPECTS OF DIGITAL PAYMENT SYSTEMS IN INDIA

- **A growth of adoption in rural regions**

Though digital payments have become very popular in cities, there is still a sizable unexplored market in rural areas. With the government's emphasis on fintech inclusion and the development of digital infrastructure in rural areas, digital payment providers have a huge chance to enter this market.

- **Interoperability of net banking**

The RBI's planned interoperability initiative for the net banking system will reduce the requirement for integration, speed up go-to-market, and streamline payment processes, enhancing user experience and allowing merchants to settle more quickly. It will simplify bank and PA operations, promoting a more inclusive and competitive financial sector. It is anticipated that this action will reduce platform and usage fees, encourage innovation in the payment industry, and lessen settlement risks.

- **Collaboration with the traditional financial institutions**

Through collaboration, traditional financial institutions and digital payment providers may accelerate growth of digital payments and open up new avenues for innovation. Additionally, this will contribute to a more secure and smooth payment experience for customers.

- **Integrating E Commerce**

The growing popularity of e-commerce in India presents a chance for digital payment companies to link with online marketplaces and offer customers a smooth payment experience. Their adoption will rise as a result, pushing the nation's e-commerce industry forward.

- **Enhanced Transparency**

Digital payments can lower the risk of fraud and corruption while increasing transaction transparency. It is simpler to identify and stop fraudulent activity when digital payment systems offer an auditable record of transactions.

- **Economic Growth**

By encouraging financial inclusion, decreasing the unorganized cash-based economy, and raising tax receipts for the government, digital payments can stimulate the economy for the government.

- **Enhanced Security**

Since digital payments remove the dangers of carrying cash and the potential for counterfeit money, they provide increased security. Additionally, digital payment systems usually employ encryption technology along with additional security measures to safeguard private and financial data.

## BARRIERS TO DIGITAL PAYMENT SYSTEMS IN INDIA

- **Poor infrastructural facility**

In certain locations, digital payment infrastructure is still lacking. According to this, those residents would either not have access to digital payment options or they would be limited or unreliable. Reliable internet access is still lacking in many Indian rural communities.

- **Poor internet connection**

In a country like India, not all people have access to the Internet. Residents find it difficult to use digital payment services since many remote regions lack internet connectivity, Internet connectivity is crucial for digital payments. They are inaccessible in the majority of rural parts of India due to sporadic connectivity issues.

- **Resistant to adapt Digital Payment System**

Although there is an increasing trend in the usage of digital payment systems, there is still resistance in the minds of the people to adapt to the Digital Payment Systems.

- **Security and trust issues**

Another challenge in Digital Payment Systems is that Some customers are being cautious when using these services because of cases of digital payment fraud that have occurred in India. The government and digital payment service providers need to find solutions to boost user confidence.

- **Digital illiteracy**

Awareness programmes regarding digital literacy are required from the Government as well as from various Financial Institutions to increase the usage of digital payment system. Even now many people are not aware of the various e-payments system available in India due to lack of knowledge.

- **Scams and Cyber Frauds**

Another important challenge in adopting digital systems is the increase of scams and frauds. Inadequate investment in security technologies and a lack of public knowledge regarding cyber-crimes and frauds are the main causes of online payment fraud. As a result, consumers fall prey to these scams, which erodes confidence in electronic payment methods. Cyber fraud can be decreased by strengthening regulations, establishing a strong infrastructure, promptly resolving fraud cases with severe fines, and raising consumer and merchant knowledge.

- **Payment and Transaction Failure Problem**

Due to technical glitches, there might be delay in payments or sometimes failure in the transactions which lead to financial losses.

- **Misuse of personal information**

There is a concern over data privacy as the information collected from the customers during the payment might be leaked or misused or hacked.

## **CONCLUSION**

The Government of India has taken more steps to create a Digital Payment System, Over the past few years, digital payments have grown remarkably. Individuals are actively embracing new digital payment methods. It guarantees that government action and target-based implementations will undoubtedly support future economic development at a faster pace of growth. Digital payments are no doubt beneficial and effective to the economy but still challenges remain. With new developments like biometric authentication, artificial intelligence, and the creation of central bank digital currencies, the future of online payments appears bright. These developments are anticipated to improve digital financial systems security, usability, and inclusivity, opening the door for safer and more seamless international

transactions. It will be crucial that everyone has fair access to these technologies. E-payment systems will likely keep developing as essential parts of the global financial system. In order to reach their full potential, initiatives must concentrate on improving security, closing the digital divide, and encouraging equitable, long-term growth in the digital economy. The future of online payments will be greatly influenced by ongoing research and cooperation between governments, corporations, and technical innovators.

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