

Types, Opportunities and Challenges of Digital Payment Systems in India

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Introduction

We are now in the era of digital world. India is heading on the path of a major digital revolution. In today's world, the intensified connectivity provided by the Internet has transformed the nature of financial transactions. In the past decade there is a magnificent progress in the usage of various gadgets like smart phones, laptops, iPads, tabs and internet in India. Due to the increase in the number of users of internet, smartphones and initiatives taken by Government such as Digital India are acting as catalyst which leads to exponential growth in use of digital payment. India stabs to treading towards digital payment system. Digital payment system is a payment system made through an electronic network and digital modes. All the transactions in digital payments are completed online. It is an instant and convenient way to make payments. With the vision of promoting cashless transactions and converting India into digital economy various modes of digital payments are available such as: banking cards, USSD, UPI, AEPS, Mobile wallets, POS terminals, Micro-ATMs and internet, mobile banking, BHIM.

Objectives of the Study

- To study the various types of digital payment systems.
- To know the opportunities and challenges of digital payment systems.
- To offer suggestions to improve & identify the future of digital payment system in India.

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Research Methodology

This is a conceptual study; secondary data has been collected from various research papers, journals, magazines and websites.

Literature Review

Sujth T.S and Julie C.D (2017) In a conceptual paper the researchers have studied about various e-payment systems (such as E-wallets, UPI, Plastic money, net banking, AEPS). They identified certain advantages like convenience, low risk and promptness and there are also some challenges like risk of data theft, security in the digital payments. Emergence of e-commerce is a reason for the growth of online payment system is being analyzed in this study. They suggested that if more incentives and proper security of transaction is assured, it will improve the volume and value of digital transactions. They anticipate that there is a bright future for digital payments, since its usage shows increasing trend.

Deepanker Roy and Amerendra Sahoo (2016) This paper explains the urge to rejuvenate the payment system and transpose from paper based to electronic mode of payment system to enhance efficiency and save cost. They found that payment system of any advance and sophisticated countries experience various risks and issues which hinder the effectiveness of monetary policy of the economy and adversely affect the confidence of users. They enunciate that transformation in payment system from cash to click will take place at a quicker pace since e-commerce is ubiquitous. Therefore the central banks regulators should take appropriate efforts to minimize risks and endlessly work towards promotion of robust payment system to attract more user base.

Arun Ingle and Rajendrasingh Pardeshi (2012) In a conceptual study the researchers have explained about internet banking in India and have identified the advantages and disadvantages of internet banking to banks as well as to customers. Advantages for banks are cost-effective, enhancement of customer service, increased revenue, competitive pressure, etc., for customers the advantages include convenience, quick transaction, ubiquity etc.,. The disadvantages for banks are complexity, technology problem, for customers the disadvantages include delay in online registration process, and lack of trust, continuous changes in bank website hinders navigation. The study suggests that banks should provide education and explain about the advantages of internet banking to customers which will initiate them to adopt internet banking services.

P. Sathiya Bama and Dr. K.Gunasundari (2016) In a conceptual study, the researchers studied about the challenges and future prospects of plastic money. They found that the usage of plastic money is increasing tremendously due to its numerous advantages. These plastic cards can be used for making payments at brick and mortar store as well as for online shopping. Nowadays banks are facing many

challenges as they are driven by technology and customer-oriented, to meet the competition, Banks use technology intensive delivery channels (internet, mobile banking) to reduce operating cost, enhance the productivity and efficiency of service and for customer convenience and satisfaction, Recently digital transactions are slowly gaining popularity which is expected to supplant cash transactions and move towards cashless society. Hence for the adoption of plastic money and digital transaction and to induce banking among unbanked consumers the payment process should be simple, seamless and secured.

Various Types of Digital Payment Systems

Every transaction that is made online are governed, managed and controlled by the central bank, Reserve Bank of India (RBI). Then by 2013, National Payment Corporation of India (NPCI) was incorporated and RBI also encouraged this for making a single window organisation for making the online retail payments. So the various types of digital payment controlled by RBI are: banking cards, internet banking, mobile banking, mobile wallets, point of sale terminals, banks pre-paid cards, prepaid instruments, and digital payment managed by NPCI are: Rupay, IMPS, USSD, UPI, Bharat QR code, BHIM, AEPS, BBPS.

- **Banking Cards (Debit/Credit/Cash/ Travel/Others)**

Cards are issued by banks to their customers to perform a number of financial transactions for in-store and online store dealings. Example: MasterCard, Visa, Rupay.

- **Mobile Wallets**

A mobile wallet is a technique to transfer cash in digital mode and a form of virtual wallet service that can be made use of by downloading an app. Users can link their credit card or debit card or bank account information in an encoded format in mobile device. Example: Paytm, PayUMoney, Mobikwik.

- **Point of Sale**

Conventionally, PoS terminals signified to those that were mounted in all stores where customers make their payment for purchases using credit/debit cards. With digitization the scope of PoS is enhancing and this service is also offered on mobile platforms and via internet browsers by scanning Bar or QR codes. There are various types of PoS terminals such as:

- Physical PoS terminals are the ones that are available at shops and stores.
- Mobile PoS terminals can work on smartphone. This is advantageous for small time business owners as they do not have to invest in expensive electronic registers.
- Virtual PoS systems practice web-based applications to process payments.

- **Internet Banking**

Internet banking refers to the process of carrying out banking transactions online. These may include many services such as transferring funds, opening a new fixed or recurring deposit, closing an account, etc. Internet banking is also referred to as e-banking/online/virtual banking. Internet banking is usually used to make online fund transfers via (NEFT, RTGS, and IMPS)

- National Electronic Fund Transfer: Bank customers can transfer funds to other accounts electronically and are maintained by Reserve Bank of India
- Real Time Gross Settlement: Usually for high value online transaction this system is being used and is maintained by Reserve Bank of India.
- Immediate Payment Service: It is a prompt real-time and inter-bank electronic funds transfer system in India and is managed by the National Payments Corporation of India (NPCI)

- **Mobile Banking**

Mobile banking is termed as the process of performing financial/banking transactions with the help of a smartphone. The scope of mobile banking is growing with the launch of many mobile wallets, digital payment apps and other services like the UPI. Most of the banks have their own apps for Android, Windows, iOS mobile platforms and customers can download the same to perform their banking transactions at the click of a button and by a touch of an icon.

- **Banks Pre-Paid Cards**

A prepaid card is a sort of payment instrument on to which users add money to make purchases. The type of card may not be linked to the bank account of the customer. However, a debit card issued by the bank is linked with the bank account of the customer. Almost all leading Banks offer prepaid cards.

- **Prepaid Payment Instrument (PPI)**

Prepaid Payment Instruments (PPIs) has emerged as a convenient auxiliary mode of cash transaction. Purchases of goods and services are facilitated with the help of PPI which stores the value in the instruments. Unlike mobile wallets two factor authentications is not required for PPI. It is suitable for non-tech savvy patrons. Example: smart/magnetic strip cards, mobile wallet.

- **Unstructured Supplementary Service Data (USSD)**

This is a state-of-art payment service. Mobile payments and transactions can be made without mobile data facility and without downloading any app. The basic objective of this type of digital payment service is to build an environment to deliver financial deepening and inclusion among the underserved sections, under-banked society and integrate all of them into typical banking service.

- **Aadhaar Enabled Payment System (AEPS)**

In case of AEPS, absolutely there is no need to physically visit a branch, provide debit or credit cards, or even make a signature on a document. Fund transfers are made with biometric authentication, using Aadhaar number which is linked to bank account.

- **Unified Payments Interface (UPI)**

UPI is a form of interoperable payment system through which any customer holding any bank account can send and receive money through a UPI-based app. UPI is a system that controls numerous bank accounts into a solo mobile application (of any participating bank), combining several banking features, unified fund routing & merchant payments under one veil. The major merit of UPI is that it allows users to transfer money without a bank account or IFSC.

- **Micro ATMs**

Business Correspondents use micro ATM device to deliver basic banking service which is connected to banks across the country. This platform will enable Business Correspondents to conduct instant transactions and enables function at low cost. This device will be based on a mobile phone connection and would be made available at every BC. The micro ATMs supports the basic transaction like Deposit, Withdrawal, Fund transfer and Balance enquiry.

- **Bharat QR Code**

It was developed by NPCI, as per the directions of RBI to promote digital transactions and it is interoperable. This actually allows the transfer of funds just by scanning the QR Code which reduces the work of swiping the cards.

- **Bharat Interface for Money (BHIM) App**

The BHIM app can be availed by anyone who has a mobile number, debit card and a valid bank account. Money can be sent to various bank accounts, virtual addresses or to an Aadhaar number. There are also many banks that have alliance with the NPCI and BHIM to allow customers to use this interface.

- **Bharat Bill Payment System (BBPS)**

In India the retail payment transactions that is bill payment is a major aspect. The BBPS offers interoperable and accessible bill payment services to the patrons. BBPS is an integrated system that allows patrons to make multiple payments in a single network and also issues the payment/transaction confirmation slip instantly. Example: Using Bank sites, Amazon site and many other sites/apps, people can pay their landline/broadband/mobile bills, electricity bills, gas bills, water bill, and DTH bill payments.

Importance of Digital Payments

- Transparency & accountability since there is a record for each and every transaction.

- Digital transaction moderates the cost of producing coins and printing currency notes.
- There is a track over the transactions performed digitally, which in-turn reduces corruption and redtapism.
- Cash are being deposited in the banks so there is no chance for unaccounted money or tax evasion. Hence, leads to proper taxation.
- It has minimized the performance of illegal financial activities like Hawala transfers since less availability of hard cash in hand.
- It's easy to identify how much and where the amount was spent by tracking of expenses.

Merits of Digital Payments

- Handy & Hassle-free payments can be made by just a click.
- Pay or send or even receive money from anywhere and at any time.
- Digital payments encourage users by giving discounts, rewards, cash-back offers.
- One stop solution for paying retail bills.
- There is a proof and record of all digital transactions.
- Helps to keep black money under control as every transaction is being recorded.
- Cost-effective and less transaction fee.
- Low risk if used in a smarter way.

Demerits of Digital Payments

- Strenuous for illiterates
- There is a risk of data being stolen, lack of reliability.
- It becomes easy for hackers to trace our personal information from the bank server or mobile wallet which is being used by us.
- Difficult for a non-technical persons
- As most of the digital payment modes are based on mobile phone, internet and cards, without gadgets payments are not possible.
- Since we don't carry physical cash it leads to overspending as there is no control on our expenses.

Digital payments are gradually gaining popularity in India and there are ample of apps that are being launched in this sector. It has become a hassle-free and secure way to make payments. Every coin has two sides so as the digital payments. Despite many advantages, digital payments have few drawbacks as well; it all depends on the user to get the best out of the available resources without facing any issues.

Opportunities of Digital Payments in India

Some of the major opportunities that support the digital payment systems in India are as follows:

- **Intensifying Usage of Internet:** In the recent days the usage of internet is penetrating due to the affordable data packages offered by telecom companies. And banks are also improving their Information and Communication Technology infrastructure to meet the competition and also to provide modern and innovative banking services at a reasonable price to enhance the experience and satisfaction of customers.
- **Incentivizing Consumers:** Incentives and rewards were proposed by the Government to attract people for making digital payment. The central bank is also encouraging digital transaction by reducing the transaction cost. Patrons are provided with cash-back offers, rewards, and discounts for making digital payments which motivated and encouraged them to make digital transactions.
- **Government Initiatives:** Initiatives such as demonetization, Pradhan Mantri Jan Dhan Yojna, led to the development of economy by way of financial inclusion. Even the unbanked people started opening bank accounts. All the payments to Government such as taxes (both direct and indirect taxes), duties, even fines are also collected by digital mode.
- **Increasing Smart Phones Penetration:** In the recent past smartphones has become one of the essential parts of one's life. Smartphones are now available at low cost and especially the mobile data services are also accessible at a minimum cost which influences people to use smartphones. With the help of smartphones and their apps people are able to make digital payments. Near Field Communication (NFC) transactions, the debit/credit card details are stored in mobile wallets and payments can be made for online purchases and scanning of QR Code can also be done to make payments with the help of smartphones. Both value and volume of mobile payments are growing significantly. Even the banks have developed their applications besides websites to facilitate easy and quick transactions using smartphones.
- **Increasing Urbanization:** Urbanization results in the digital transaction proliferation. The people of urban society have sound educational qualification, their level of income is high, and they have modern life style. All these will make them to go in for digital payments.
- **Raising Trends of E-Commerce:** People are fond of online shopping these days. They are influenced by the features of online shopping such as anytime, anywhere shopping, convenience of payment, numerous varieties of products, choice, saves time and energy, and delivery at the door step. Hence,

amplification of e-commerce is also increasingly contributing towards digital transactions.

- **Technological Innovation in Indian Banking:** Banking sector is continuously working towards development and growth of their services by innovative methods. Increasing online and mobile banking penetration are the reason for the growth of digital payments. The services like NEFT, RTGS, ECS, IMPS, facilitate people to transfer funds from one account to another account of any branch or bank. 365/24/7 services availability is a major boon to banking sector.
- **Limiting the Scope for Cash Payments:** The central bank has framed regulations to control the high value cash dealings, especially to encourage digital transactions so that there will be a record of each and every transaction which aids scrutiny of dealings.
- **Launch of More Digital Payment Solutions:** Reserve Bank of India and Government of India are encouraging the emergence of FinTech startups. They are licensing, regulating and governing the work of FinTech companies to venture into and develop new digital payment solutions to benefit the sender (consumer) and receiver (merchants). Besides smartphones, nowadays digital payments can also be performed on a feature phones.

Challenges of Digital Payments in India

Some of the major challenges that hinder the digital payment systems in India are as follows:

- **Cash Dependent Economy:** Majority of the Indians are dependent on cash based transactions. They feel more convenience and safety in handling cash dealing. Because more than half of the population are below poverty line, unbanked, unorganized economy. The people in village or deep interior parts of India are familiar & used to cash dealings. They are not aware of digital mode and lack the modern infrastructure. Some of the patrons are afraid of security and privacy issues to proceed with digital transactions.
- **Lack of Digital Literacy:** In India basically the literate population is only moderate, and in that only a meager population possesses digital literacy. Without digital knowledge there cannot be a transformation from cash to cashless economy.
- **Limited Access to Banks and Cards:** In most of the interior parts of India they do not have access to banks and cards as the bank branch are not available in certain parts of the country, because of which people in those area use only cash dealings.
- **Risk of Cyber Fraud and Privacy:** The cyber security is the major obstacle that affects the digital transactions. Cyber security issue is challenging the adoption of digital payments systems. The foremost concern in digital

transaction is the outflow of confidential information such as personal and financial data. Privacy of the users are being hacked due to the fragile regulations of Internet Protocol.

- **Slow Internet Speed:** The international networking connectivity and speed is very important for digital fund transfer. The major reason that hinders or interrupts the transaction is the lack of quality and authentic internet connectivity.

Suggestions to Improve Digital Payments System

Some of the suggestions to improve the services and enhance the usage and adoption of digital payment systems are listed below:

- The connectivity of internet should be accessible everywhere with adequate bandwidth and should be available at low cost.
- Government should strengthen the cyber security regulations and enhance the Information and Communication Technology to avoid fraudulent activities and to improve security. Immediate actions should be taken on the hackers and cyber frauds.
- Even in villages and remote areas, the mobile network should be made available.
- Awareness programme related to digital modes and usage of apps should be provided and Government must create trust and build confidence in the minds of people.
- Literacy with regard the digital transactions should be provided. People should be educated about the modern technology and innovations to access their bank accounts using digital modes.

Future of Digital Payments

Technology plays a vital role for mass adoption of digital payments. The right product has to gratify to the assorted needs of the customer. The payment methods have to be simple, fast, efficient, reliable and secure. Previously researches has evidenced that convenience is the major motivator for the customers to embrace digital payment system on the contrary to well-known belief of discounts and cash-back offers. The digital payments mode in India is still budding though it has seen significant activity in the yesteryears. There is an enormous opportunity. "The digital payment offerings of the future need to combine the simplicity and universality of cash with the security and convenience offered by digital payments," the Google-BCG report stated. India is experiencing a significant growth in digital payments. Digital transformation has stipulated an easy path to go for digital payments. This will certainly improve the quality and increase the quantity of digital transactions.

Conclusion

In the recent years in India, due to the innovation in information and communication technology and in digital landscape there is a magnificent transformation from conventional to convenience transaction. There is an increasing trend and positive growth in the Digital payment systems due to its influencing factors such as flexibility, convenience, efficiency, effectiveness, user-friendly, transparency, and leads to overall customer satisfaction. Digital payments are more convenient than cash payments. We need not carry cash with us all the time. Digital payments can be made in seconds just by a click. The balance is not an issue with digital payments when we can pay the exact amount digitally. By doing the transactions digitally, we can keep track and record of transactions. We all adore simplicity and ease. Hence, we can say that Digital payment is the future of fund transfer and it will dominate the arena of payment system in India.

Owing to the omnipresent use of internet-based shopping and banking, digital payment system grew fast. "Digital payments in India to reach \$1 trillion by 2023", the Credit Suisse report stated, but recently as per the RBI Report, digital transactions in India reached \$2 Trillion as of January 2018. This will amplify in the considerable rate in the near future. With technology development, many digital payments companies have been established to expand, enhance and enable secured digital payment transactions. The future of digital payments in India is optimistic.

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