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Digital Payment System in India – A Study on Issues and Challenges in Banking Sectors

Reshma
Research Scholar, Kuvempu University, Shimogga.
Email : reshmabsalian@gmail.com

Dr. H. N. Ramesh
Professor, Kuvempu University, Shimogga.
Email : hnrameshku@gmail.com

Abstract
India is a South Asian country with the second-highest population, and it also has one of the largest numbers of digital banking systems, instruments, and methods for transferring money. The government of India's Digital India initiative makes it simpler for residents of both urban and rural areas to obtain online services and internet connections. Digital payments are easy for Indians to use when using laptops or smartphones, and employing banking software improves cashless transactions. In India, digital payment methods are widely used by retirees, professionals, students, and employees from a range of industries. Because to digitalization, society is currently obtaining services at the fastest possible pace. People are more likely to shop, buy groceries, and buy food where digital methods are used. In India, more than 200 banks offer digital payment systems to consumers based on their needs. To encourage and support digital payments across the nation, the Indian government has put in place a variety of measures. In this study, various payment system types and how they are used are examined. In India, more than 200 banks offer digital payment services to the users. In this study, 16 banks were found to be actively expanding their digital payment system and utilising it on a daily basis. The results of the study indicate that the number of users and technological developments in the digital payment system are both increasing steadily.

Keywords: *Digital Payment, Cash less transactions, Growth in Payment systems.*

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I. INTRODUCTION

Digitalisation benefits to both the nation and its citizens, the digital payment system is a crucial component of India's payment system in the country's movement toward digitalization. Digital payments have given India the chance to educate and empower its populace, encourage their usage of it, and replace its outmoded banking system. The majority of banks in India offer the QR Coding system, which helps business owners gather and lend investments in a variety of sectors. The demonetization has caused digital payments to increase dramatically. The government's drive to employ Digital India, along with rising internet and mobile phone usage, has opened the door for a rapid development in the adoption of digital payment systems. This shift to digital payments strengthens the nation's economy because they are more transparent than traditional payment methods (1). India is one such emerging nation that is attempting to transition to a cashless economy from a cash-driven one. Consumers that use the digital payment system can make purchases without using cash by using devices like debit/credit cards, digital wallets, net banking, mobile payment applications, etc (2). The Indian government pushed digital payments after the announcement of demonetization on November 8, 2016. Future-proofing a cashless society was the major goal of the Digital Payments initiative. The ability to get the statement of transactions and transfers made by individuals to other parties grew increasingly challenging in India due to the growth of corruption and black money. (3)

II. LITERATURE REVIEW

V. Devadevan (2013) - A growing alternative avenue for offering banking services is mobile banking. India, the second-largest telecom market in the world, offers significant potential for the growth of mobile banking services. However, millions of individuals still do not like mobile banking. This study's primary goals are to pinpoint user attitudes around security concerns in mobile banking in India and analyse those issues.

Sujith T S, Julie C D (2017) - The modern world is now a digital one. India is working to adopt electronic payments. A payment system using an electronic network is known as an electronic payment system. In other words, an electronic payment is a way for a person to make an online purchase of products and services without having to visit a real store. Transfer of money and checks, regardless of place and time. India is currently in the process of demonetizing. This study will use the using the internet to control the e-business environment directly. This study sought to pinpoint the problems and Challenges of electronic payment systems are discussed, along with some suggestions for improvement. E-payment system offers various threats in addition to greater opportunities.

Piyush Kumar, Dr. Dhani Shanker Chaubey (2017) - This study extols the virtues of digital payment analysis following the demonetization of currency, as well as how these attributes affect a country's preference. After demonetization, how consumers view digital transactions has a significant impact on Indian culture and society.

Ms. Rashi Singhal (2020) - The new "digital banking" paradigm offers significant advantages to both banks and their consumers, including simplicity of payment and 24/7 access to financial services, as well as increased productivity and profit. It is created by altering internal cycles and external interfaces utilising the condition-of-the-workmanship innovation framework. The days of standing in line at the bank in anticipation of getting a chance to withdraw cash or store money are long gone. Individuals may now visit the bank without having to wait in lengthy queues, which is to their advantage and spares them from worrying about their finances. Since digital payment was available in the past, people were hesitant to change their exchanging patterns, but after demonetization, they were forced to execute their exchanges via digital money since they had no other option. A significant rise in the use of digital payment is being fuelled by rising web usage, flexible entrance requirements, and government programmes like Digital India.

III. RESEARCH GAP:

Based on above literature review, all are discussed about digital payment system opportunities, challenges and its impact on users. But in this present study it has been analysed is issues and challenges and growth also identified bank wise inward and outward total transactions and number of customers are using digital payment. There are more than 200 banks are handling digital payment systems, in this study only 16 banks are highlighted for this research**.**

IV. OBJECTIVES:

1. To define many forms and applications of digital payments
2. To understand the Issues and Challenges of Digital payment system in banking sector
3. A growth of Digital Payment System in India
4. To know the most recent changes of digital payment system in India

V. RESEARCH METHODOLOGY

This paper is purely based on Secondary Data and all the data's related in this paper are collected from Books, Journals, Magazines, Google and various websites which made this study more understanding, special and effective. In addition, personal interviews with users of digital payment systems were conducted in order to get practical expertise.

VI. DIGITAL PAYMENT SYSTEM

Digital system is one of the cashless money transfer systems from one person to another person, which can be done easily and also is a fastest payment system. It is also called as Faceless, Paperless, Cashless transactions. During today's busy modern business world, the stake holders are using digital payment system in their daily lives by downloading various banking Applications in a Mobile Phone or Laptop.

DIFFERENT TYPES OF DIGITAL PAYMEMT SYSTEM

1. Banking Card (Debit Card / Credit Card)
2. USSD (Unstructured Supplementary Service Data)
3. UPI (United Payment Interface)
4. AEPS (Aadhaar enabled Payment System)
5. Digital wallets
6. Point-of-Sale Systems (PoS)
7. Mobile Banking
8. ATM (Automated Teller Machine)
9. Web-based banking

Banking Cards

In India, the banking card is one of the most popular forms of electronic payment. Debit cards, credit cards, pre-paid cards, and other card kinds are all included. Visa, MasterCard, and RuPay are the three most popular card payment methods in India. Due to their simplicity, user control, flexibility, and security, banking cards have emerged as one of the most popular payment options (6). Each bank offers a variety of cards, allowing consumers to select the best kind for their needs. When a payment is needed, customers can save all of their card information in the mobile applications and utilise it by entering a security code. Customers can use banking cards, which maintain transaction limitations, in accordance with their daily needs (7). After purchasing the banking card, the customer is required to keep a minimum balance in the account. Otherwise, the bank imposes a fine (8).

Unstructured Supplementary Service Data (USSD)

A revolutionary payment technology called Unstructured Supplementary Service Data (USSD) enables users to conduct mobile banking transactions using a basic mobile phone without an internet connection (6). By dialling *123#, a standard number used by all TSPs, banking customers can access this service (TSPs). Customers can call customer service by leaving a missed call if they want to know their bank balance. Rural places and areas with low internet connectivity can also access the service (7). Mobile applications, internet access, and other such things are not necessary for using this facility. Customers can use USSD in 12 different languages, but in order to use these services, they must first register with a bank account number and mobile phone number. Initiating fund transfers, making balance enquiries, getting bank statements, mini statement all these activities can be done through USSD (8).

AEPS (Aadhaar Enabled Payment System)

AEPS is capable of handling all banking tasks, such as balance queries, cash withdrawals, cash deposits, and Aadhaar to Aadhaar fund transfers. These transactions are all carried out through banking middlemen who use Aadhaar authentication (4). The Aadhaar card is now highly significant because it has all of the information about the specific person. Aadhaar link is crucial for opening a bank account and receiving financial aid from the government and other institutions. If the Aadhaar is registered with the bank where a person has a bank account, they can use this service. Through a central switching and clearing agency, AEPS started interbank transactions in a secure manner(5). A particular customer must compulsorily seed their bank account with their Aadhar number in order to use this service. These services are currently being offered by 118 banks.

UPI (Unified Payment Interface)

A person with a bank account can use an app to transfer money to any other bank account using UPI, the most recent digital payment standard. Every day of the year, every hour of the day, payments are made via UPI (17). Payments may be made using a Virtual Payment Address (VPA). To use UPI services, a person must have a bank account and a cell phone number connected to that account (4). Particularly in metropolitan regions, UPI has grown tremendously in popularity. It integrates various bank accounts (from any partner banks) into a single mobile application, enabling a variety of banking functions, smooth fund routing, and merchant payments all under one roof. 224 banks are operating on the UPI at the moment (5). A consumer must register their mobile device with an internet connection and an MPIN in order to use UPI transactions. However, there are transaction restrictions imposed by the bank, which limit the amount that can be transferred from one account to another to a maximum of Rs. 1 lakh(17).

Digital Wallets

Another well-liked payment method is using a digital wallet. This system, commonly referred to as a "mobile wallet" or "e-wallet," is a type of virtual wallet that enables you to send money online to the wallet and connects your debit card and/or credit card information on a mobile device to your mobile wallet app. Paytm, Mobikwik, PhonePe e-wallet, Pockets Digital wallet App by ICICI Bank, PayZapp e.wallet App by HDFC Bank, Amazon Pay Mobile Wallet, Free charge Mobile wallet, etc. are a few of the most well-known mobile wallets. Use of this technology is possible through a smartwatch, tablet, or smartphone (4).

Point of Sale Terminals

In order to accept debit and credit card payments for purchases, POS terminals are installed in shops and stores. There are different kinds of point-of-sale systems, including mobile POS and physical POS. The mobile POS eliminates the requirement to maintain a physical device (4). In a POS, transactions are completed. So a POS could be anywhere, such as a city, market, or shopping centre. On a smaller scale, however, it is seen as a location where a customer completes the transaction, similar to a mall checkout counter. Contactless POS devices and banking cards, which may debit amounts up to Rs 2,000 instantly and without requiring a PIN, are

launched to increase the POS's security and touch lessness. A consumer must have a contactless card and register it for contactless payments in order to use the function (5)

Mobile Banking

Banks introduced mobile banking through their smartphone apps to increase the number of digital transactions. As UPI and mobile wallets were introduced, the scope of mobile banking greatly increased. (4). The majority of banks have mobile apps that are available for download from stores like the Microsoft Store, Google Play Store, and App Store. Users can utilise a smartphone or tablet to carry out various financial activities remotely. For Mobile Banking, a customer must register with the bank. Transaction limits are equivalent to those of Internet Banking (5). In recent times, mobile banking has become widely used throughout India.

ATM (Automated Teller Machine)

One of the banking systems for transferring money from one bank to another is the automated teller machine. A Business Correspondent, who can be a grocery store owner, utilises a banking device that allows you to transfer money using your bank account that is linked to your Aadhar by authenticating with your fingerprint or PIN number. All around the country, ATMs are connected to banks. Only the consumer should be aware of the card's identity authentication. Additionally, balance inquiries, cash withdrawals, mini statements, etc. are done using ATMs (4). Customers can transfer money from one bank to another bank using their ATM card number and other information.

Internet Banking

The practise of doing financial transactions using a smartphone, laptop, or desktop with a live internet connection while at home is known as internet banking. All of the major transaction types can be completed via internet banking. Because internet banking services are available 24/7 throughout the year, it is a popular option for carrying out digital transactions (4). Customers can conduct transactions and engage in other financial activities online using Internet Banking or Online Banking on a bank's website. All banking transactions that can be completed online can be completed by a consumer using internet banking. The customer must sign up for internet banking with the bank where they have a savings account (5). National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS), Immediate Payment Services (IMPS), and other services are available through Internet banking. own transactional restrictions. Customers may also use Internet Banking to access services such as loan applications, debit/credit card renewals, new chequebooks, monthly ECS (Electronic Clearing System), etc (17).

VII. ISSUES IN A DIGITAL PAYMENT SYSTEM

Digital payment systems are expanding quickly in India, but some users are abusing the technology, rendering it useless and undermining trust in the digital systems. Following are the specifics:

Digital Hacking by the innovative network systems

In most of the in Digital Payment System, sometimes there is a chance of hacking and misusing by someone without knowing the right person. It's can be done through private network connections. If any type of Hacking happens there is a chance of losing money. In hacking there is a possibility of Stealing Alteration or deletion, corrections of entire data of a particular person.kknlv

Fraud Communication

Fraud is also one of the misusing systems in Digital Payment. It's also called intentionally making illegal aspects. It is difficult to say that, it is safe. But sometimes there is a chance of fraud by a person or an organisation. This is because without knowing how to send the money from one person to another, there is a chance of Fraud. To get a benefit from someone providing false statements this also effects the digital payment system.

Increasing the Transaction Cost

In a Digital Payment System there will be high transaction charges. If we want to transfer money via NEFT, RTGC and Online Transfer from one bank to another bank, there will be more transaction charges. This charge is fixed by the bank from least amount to large amount.

Security and Technical Issues

Security and Technical Issues are common issues in a digital payment system. Its works sometimes in a Urban area, the people of rural area are struggling for digital payment. If technical issues come on the way, there is a problem of security which occurs automatically and it makes problematic in a transaction.

A Lack of Faith

In a digital payment system, the parties involved in transactions don't know one another, making it difficult to have faith in financial matters. There is a likelihood of trust when dealing with someone in person. Fraud and

illicit business dealings between two parties may be found here. An example of when these kinds of issues will arise is during international or interstate transactions.

VIII. CHALLENGES IN A DIGITAL PAYMENT SYSTEM

Despite certain problems, one of the challenges facing the banking industry is the use of digital payment systems. Users value these kinds of challenges because they help them prevent problems. Issues and Challenges create chances to enhance India's digital payment system. Challenges includes:

Internet Connections: An Internet Service Provider (ISP) connection is one that enables one or more computers or other pieces of hardware to communicate with one another via the open Internet. To build a digital payment system in India, internet access with high speed and bandwidth is crucial. While it is already developed in metropolitan areas, rural areas have not seen as much development. Therefore, one of the main challenges in a digital system is the use of the internet and network connections. If internet facilities are available in a given place, digital systems can be used constantly.

Awareness Programme: Users must participate in an awareness programme or receive training in order to reduce risk in the digital payment system. The training covers topics including using a PIN number, upgrading software, cyber security concerns, staying vigilant against attacks, and dealing with fraudulent transactions, among other things. An information security awareness programme is a concerted effort to educate customers and workers about potential threats to personal and institutional information and information technology, as well as to equip them with the skills and knowledge they need to mitigate those threats.

IX. GROWTH OF DIGITAL PAYMENT SYSTEM

However, India is the second largest telecommunication market using country and also highest Mobile phone users are in the country. Even in the rural area also Mobile phones are commonly used. Digital Payment systems also grown rapidly. Mobile phone is one of the reliable instruments to utilise the financial services. In India on 22/11/2010, Digital Payment system has been introduced to the customers for easy and convenient transactions between one bank to another bank.

(a) As per Ministry of Electronics records and IT digital Payment transactions are increased year by year. During the year 2019 – 2020 the transaction was 4,572 crores, 2020-21 the transaction was 5,554 crores and 2021-22 the transaction was 8,840 crores.

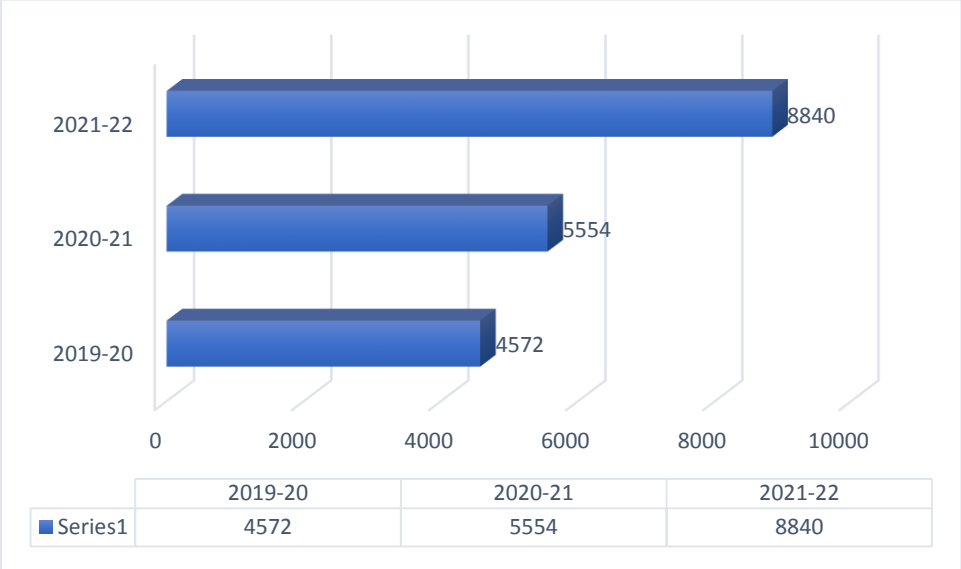


Fig 1: Shows the Growth of digital Payment system in India as per ministry of electronics and IT digital payment transaction.

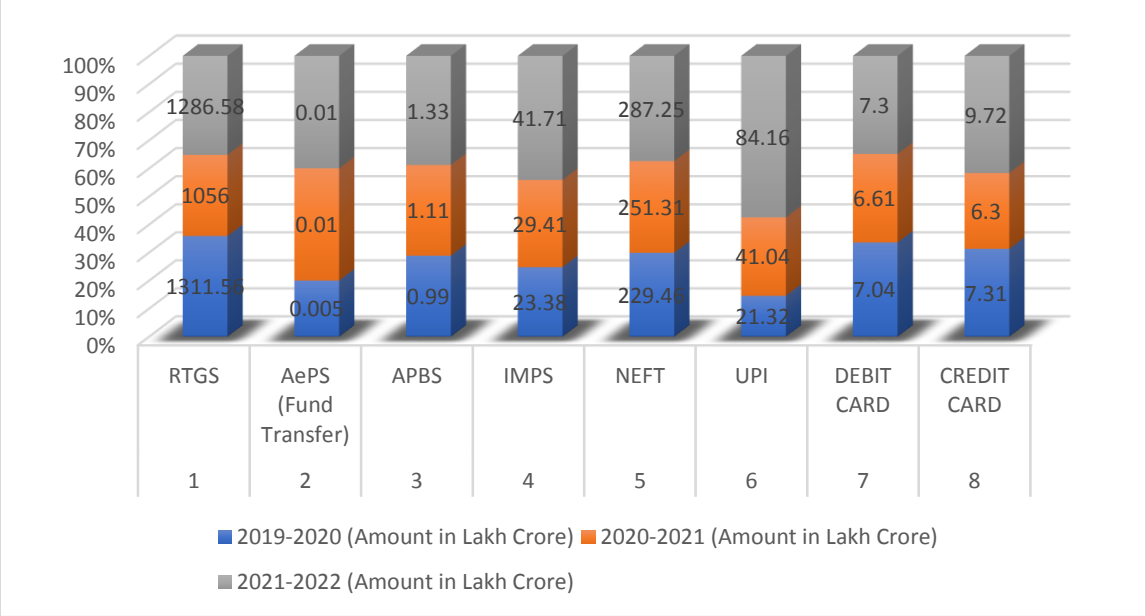
(b) As per Reserve Bank of India during the year from 2019 to 2022 the growth of digital payment system has been increased. The details of transactions are mentioned below:

Sl.NO.	Particulars	2019-2020 (Amount in Lakh Crore)	2020-2021 (Amount in Lakh Crore)	2021-2022 (Amount in Lakh Crore)
1.	RTGS	1311.56	1056.00	1286.58
2.	AePS (Fund Transfer)	0.005	0.01	0.01
3.	APBS	0.99	1.11	1.33
4.	IMPS	23.38	29.41	41.71
5.	NEFT	229.46	251.31	287.25
6.	UPI	21.32	41.04	84.16

7.	DEBIT CARD	7.04	6.61	7.30
8.	CREDIT CARD	7.31	6.30	9.72

Source: Annual Report of Reserve Bank of India

Table 1: Shows the Growth of Digital Payment system in India from the year 2019 to 2022



Source: Annual Report of Reserve Bank of India

Fig 2: Shows the Growth of Digital Payment System in India from Past three years (2019 to 2022)

(C) The majority of people in India use digital platforms, and today everyone—Students, Employees, shopkeepers, and professionals—depends on them. Cashless transactions are encouraged by digital payment systems, which also keep a systematic record of all transactions. Total number of customers are actively participating in mobile banking.

Sl.No.	Name of the Bank	Since the past five months, the total number of customers in India have actively used the banking digital payment system.				
		September 2022	October 2022	November 2022	December 2022	January, 2023
1	Axis Bank	1297407	1286360	1198565	1064301	1138473
2	Bank of Baroda	490153	490953	485796	495784	506718
3	Bank of India	482467	475243	482467	482102	480629
4	Bank of Maharashtra	221507	222547	220082	289938	225393
5	Canara Bank	550438	482612	566167	761029	696547
6	Central Bank of India	259379	252996	248114	243530	239275
7	Federal Bank	251232	248359	245652	245735	247123
8	HDFC Bank	23930772	24250912	23653904	24627758	24958962
9	ICICI Bank	4454656	4471093	4446162	4519608	4620532
10	IDBI Bank	593370	583655	572494	572821	578349
11	Indian Bank	1242628	1237572	1229433	1232470	1196007
12	Indian Overseas Bank	372193	369801	364212	363968	365196
13	Karnataka Bank	30919	30750	30103	30001	30280
14	Punjab National Bank	627456	617478	601269	607694	619701
15	State Bank of India	33786468	34173595	34728770	35285807	35620580
16	UCO Bank	72936	82781	66144	70898	71989

Source: Annual Report of Reserve Bank of India

Table 2: Shows the total number of users of the digital payment systems of each bank.

X. Factoring supporting growth of Digital Payment System

Some critical aspects are contributing to the effective development of an Indian digital payment system. Its focus is on innovating technology and providing users with security. The details of supporting factors explained herewith:

Awareness and Utilisation: Consumer acceptance of digital payment methods has increased in recent years. The majority of consumers choose digital payment systems because they are more convenient. In India, rural areas, in addition to metropolitan areas, use digital payment systems to avoid cash transactions.

Favourable to cashless transactions: In India digital payment system increases the cashless transactions. It minimises multiple business risks at once, including employee theft of cash and robbery of cash. Furthermore, it lowers security expenses by removing cash from a bank.

Rules and Regulations: Retail industries, schools, and universities all have their own rules and regulations stating that cash is not accepted. They will be paid using NEFT, RTGS, Google Pay, Phone Pay, and QR code scanner. This will naturally promote the expansion of a country's digital payment system.

Enhanced Technology: The flow of new and developing technologies will further boost India's digital sector. In India, there are many types of digital payment systems that are linked to consumers' accounts and banks. It facilitates transactions and improves digital technologies.

Usage of Smartphone and Internet facilities: In India, smart phone and internet users have risen in the last three years. One of the tools that facilitates cashless transactions is smart phones. It promotes the expansion of digital payment systems while also increasing sales of internet connections and technologies.

XI. CONCLUSION

Finally, it is advised that cashless transactions be simple and flexible. Some people prefer offline payment systems because they are more convenient for them. Most professionals, employees, and students of various courses now use digital payment systems on a regular basis. A digital payment system that is full of security, safety, and has low maintenance costs is ideal. This also saves time. The digital payment system has grown rapidly during the previous three years in India. Although India's digital payment system has grown astronomically in recent years, there is still much that needs to be done to boost usage while maintaining security standards. There is a clear need to expand India's electronic payment infrastructure because the majority of transactions are still cash-based.

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