CHALLENGES IN DIGITAL PAYMENT ADOPTION IN INDIA

Hemant Trivedi[*]
Dr. Shashi Sanchiher[**]

ABSTRACT

Mobile payments are a convenient way to pay for goods and services using a mobile device. These payments can be made using a variety of wireless communication technologies. Mobile payments can be used for numerous purposes like in retail stores, restaurants, and transportation. They can also be used to make online payments. The benefits of mobile payments are convenience, security, andflexibility, etc. Digital payments have become increasingly popular in India in recent years. However, there are still a number of challenges that need to be addressed in order to achieve widespread adoption. The objective of this paper was to identify various challenges that are acting as barriers in the widespread adoption of digital payments. To prepare this paper the information from secondary sources was taken and then evaluated and analyzed. On the basis of this study, various reasons came out due to which the rate of adoption of digital payment is low. These reasons are – low digital literacy in India, especially in rural India. Lack of proper infrastructure like the supply of electricity in remotest area, poor connectivity, low quality of internet. Language problems because most of the communications are done in the English language. Online fraud, cyber-crime, lack of willingness to digital payment adoption due to the proper maintenance of records of transactions, and fear of tax liabilities. Lack of stringent laws for disputes in digital payments etc. these factors in combination works are barriers to digital payment adoption in India.India has made significant technological advancements in the field of digital payments, but the future of these transactions depends on further refining a safe and secure user experience. Despite these challenges, there are a number of reasons to be optimistic about the future of digital payments in India. The government is supportive of digital payments, and there is a growing number of businesses that accept them. As more people become aware of the benefits of digital payments, and as the infrastructure improves, it is likely that digital payments will become even more popular in India in the years to come.

Keywords: *Digital, Payments, Adoption, Internet, Mobile.*

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Introduction

With the development of civilization, money came in many forms. We have come a long way from minting coins in the 6th Century BC by Mahajanpadas, The Republic Kingdom of ancient India (Goyal S., 2017), to making payments in digital format using smartphones in modern times. After setting up of the Reserve Bank of India in 1935, it has given authority to print currency notes called "Rupya". The word "Rupaya originated for Sanskrit word Rupee which means shaped, stamped, impressed or coin **(History of Money and Payment, Square).**

Back in 1950s first ever cashless payments took place in the world. Credit cards were a revolution in the history of payments that initiated a cashless mode of payment. Credit cards came into existence in the 20th century. The first ever credit card payment took place in 1958 when a general-purpose credit card was issued by Bank of America **(Gadhi, 2020)**. In 1979 Michal Aldrich introduced a technology that allowed consumers to make direct purchases over the phone and electronic medium which opened the path for traders as well as customers to transfer their money electronically. Digital payment systems came into existence after the development of the internet. In the 1990s with the development of the internet, online shopping also started. People started buying things online.

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[*]   Research Scholar, Department of Economics, Mohanlal Sukhadia University, Udaipur, Rajasthan, India.
[**]   Principal (Retd.), Government Meera Girls College, Udaipur, Rajasthan, India

With the advancement of technology, the payment ecosystem has undergone tremendous changes. The digital payment system is the most innovative and cost-effective payment system. It is significantly affecting our daily life, and how we society) behave, how businesses operate, and how the whole economy works. The COVID-19 pandemic further accelerated its growth. In India, the episode of demonetization gave it a tremendous boost, although after some time cash again returned but it gave an irreversible boost to digital payments. The development of information and communication technology (ICT) has led to the creation of new payment instruments and innovations in existing ones. Earlier cheque and cheque clearing systems, MICR were the main payment instruments then came CTS (Cheque truncation systems) which restricted the physical movement of cheques and used images of cheques for payment processing.

Despite the efficiency of the Magnetic Ink Character Recognition (MICR) system, it posed challenges in bulk and repetitive payments, such as the payment of dividends. As a result, Electronic Clearing Services (ECS) was introduced in the 1990s to facilitate one-to-many payments, such as utility payments. ECS has also undergone many changes, from local to regional to national levels. Further efficiencies have been achieved with the operationalization of the National Automated Clearing House (NACH). Digital payment is not a single type of payment, but rather a term used to describe any payment that is made electronically. This can include payments made over the Internet, through mobile phones, or through point-of-sale (PoS) systems. Digital payments offer a number of advantages over traditional cash payments, including convenience, security, and speed. As a result, they are becoming increasingly popular around the world. Different types of digital payments systems exist presently in India– Banking Cards, Pre-Paid Card, Unstructured Supplementary Service Data (USSD), Point of Sale (PoS), Mobile PoS, Aadhaar Enable Payment Service (AePS), BHIM Aadhaar Pay, NET Banking, National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS), Electronic Clearing System (ECS), Immediate Payment Service (IMPS), Unified Payment Interface (UPI), Mobile Banking, Mobile Wallets,Micro ATMs, NCMC (National Common Mobility Card) etc.

The Problem

After the demonetization of high-value currency notes in India in 2016, cash again increased in circulation and presently it is the most preferred mode of monetary transactions. Despites the government's efforts to shift from physical currency to digital currency people still believe in cash. According to a statement of the current finance minister of India Nirmala Sitaraman in "Lok Sabha", in March 2014 the currency notes in circulation were 13 lakh crores, and in March 2022 it increased to 31.33 lakh crores (economic times, Mar 13, 2023). The ratio of currency in circulation to the GDP was 13.7% on March 25, 2022. Earlier this ratio was 11.6% in March 2014. According to thehindubusinessline.com (July 29, 2019) cash in circulation is increased again after the demonetization of high-value currency notes and experts think that it will remain to be preferred mode of payment because of its convenience and large informal sector in India. Although demonetization pumped life into the digital payment market in India, in India not all consumers were ready to give up cash for a credit card or debit card, or mobile wallet options like UPI paypal, etc. (Ritesh Pai, 2018).
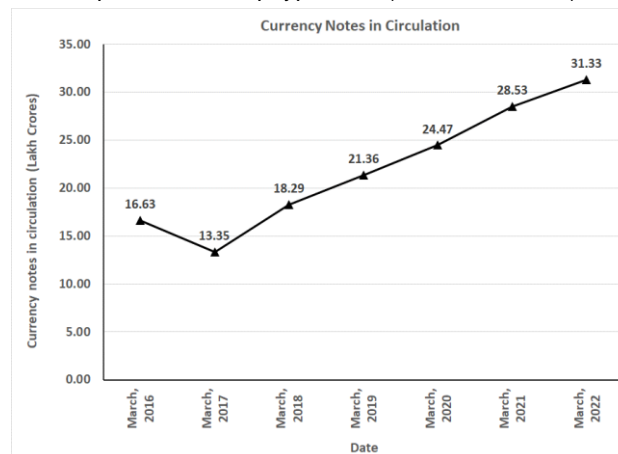

Fig. 1: Currency notes in circulation in India

Data source: The Economic Times (March 13, 2023)

As Ligon E. et al. (2019) noted digital payment technologies like internet baking, mobile payments, use of cards (debit and credit) are growing at a faster rate in developing world and are a means of financial inclusion in these countries but despite significant efforts to promote digital payments the rate of adoption is at a moderate level in low-income countries. Particularly in India, the rate of adoption is also slow despite significant promotions for digital payment adoption.

Objectives of the Study

The payment ecosystem has undergone a transformation thanks to technological advancements in the payments industry. Payment ecosystems, which have emerged as the most advanced and economical technologies, are going through a transitional phase on a global scale (Abdullah and Khan, 2021). There is no doubt that digital payments are fast and effective but its adoption rate is very low in India. More than 70 percent of the population in India resides in rural areas and above 90% of people in rural India have not undertaken any digital transaction (Chawal and Joshi, 2019). In urban India also many people are reluctant to adopt digital payments. There are lots of reasons or challenges due to which people hesitate to adopt digital payments and "Cash is still the King in India. Hence, seeing the above problem, this paper is designed with the following objective -

- The objectiveof this paperis to study the causes or challenges in digital payment adoption in India.

Methodology

The source of information for this paper is secondary. The sources included existing literature, research papers, reports, news, articles, blogs, etc. available on related subject matter. This paper is prepared by researching and analyzing information available in these secondary sources.

Challenges in Digital Payment Adoption

Although much has been accomplished since the advent of digital payments in India, adoption is still steady and slow. Digital payments are becoming more popular as technology advances, but acceptance is stymied by problems including cybercrime, a lack of infrastructure, ignorance, adoption in tier 3 and tier 4 cities, transaction costs, connectivity challenges, etc.

85% of Indians lack access to the infrastructure needed to adopt the digital payment framework, which is mainly reliant on cell phones, claims apnapay.in (2019), a mobile PoS cloud firm. Therefore, the country urgently needs interoperable and comprehensive digital payment methods. Although many e-commerce platforms are moving towards accepting digital payments, consumers still like purchasing with cash. Cybersecurity in digital transactions is the cause of this. Consumers are reluctant to use digital payments due to a lack of technological literacy and the significant risk of cybersecurity. Creating a user experience that is simpler and more secure will be key to the success of digital payments. To make it more palatable, efforts should be done at the local level.

In his study, Shashank Kumar (2019) notes that while India has made significant advances in the area of digital payments, there are still several obstacles standing in the way of full digitization. These include (a) A lack of cooperation between banks and fintech organizations. There aren't enough incentives to encourage the use of digital payments, (b) smaller retailers need POS terminals together with more affordable payment choices, and (c).

Other significant obstacles to the expansion of digital payments include the relatively higher infrastructure costs, the low financial literacy of small business owners, the large propensity of households to save money in cash, and the disorganized monetary incentives.

Lack of Infrastructure

Infrastructure for digital payments is still missing in some places. This implies that those residents would not have access to digital payment choices, or that those options might be scarce or unreliable. Many rural areas in India do not have reliable internet access. This makes it difficult for people to learn about and use digital technologies. Rural areas often lack the basic infrastructure needed to support digital literacy, such as schools, libraries, and community centers with computers and internet access.

Poor Internet Connectivity

India is a big country with a diverse population, and not everyone there has access to the Internet. The inability of many rural communities to access the internet makes it challenging for residents to use digital payment services. Digital payments rely heavily on internet connectivity, yet residents in India's most rural areas are unable to use them because of intermittent connectivity problems.

Cash Dependency and Habit

Cash remains dominant in India despite government efforts to encourage digital payments. Cash is still preferred over digital payments, which some people may view as less reliable or safe. Cash is still used for many small transactions, and many individuals choose it because it is more convenient and familiar.

As it is said that "Old Habits Die Hard", people are using cash for a very long time and they have in it and feel secure about it. They think that by using cash, everything is in their control and they feel safe about it, and they do not want to change the existing system of transactions.

Rural Adoption

According to a Nielsen survey, there are 352 million internet users in rural India, which is 20% more than there are in urban India. However, the report noted that due to a lack of digital literacy, roughly 60% of rural Indians are not actively utilizing the Internet. According to the survey, connectivity issues are to blame for the low adoption rate because many rural areas in India lack the necessary internet speed. Major bottlenecks include a lack of reliable infrastructure and a steady supply of electricity. Rural areas often have fewer resources available to support digital literacy initiatives, such as funding, training, and technical support.

Lack of understanding also plays a role. Many decision-makers in rural areas do not understand the importance of digital literacy or how to support it. This can lead to a lack of investment in digital literacy programs and initiatives.

Language obstacles also exist because English is the primary language used for digital communication but indigenous languages are spoken and understood in rural areas of India. Additionally, the majority of residents of rural areas do not grasp the language used on digital platforms and for technology.

Lack of Willingness to Adopt Digital Payments

Although customers are increasingly using digital payments, many businesses still prefer cash payments. This is caused in part by the expense of receiving digital payments and the challenge of transaction reconciliation. According to a research paper by Ligon E. et al. (2019), despite significant efforts to encourage adoption, India's adoption rate in particular remains low. Using survey data from 1,003 Jaipur merchants, it is discovered that the low adoption rate is not a supply-side issue because the necessary infrastructure is available, the costs of the digital platforms are affordable, the merchants have access to bank accounts, smartphones, and, most importantly, the necessary literacy to use digital payments.

The authors came to the conclusion that the lack of adoption is a result of a demand-side issue after gathering adequate evidence. They discovered that because of tax liabilities brought on by mobile payment records, merchants do not want to accept payments or be paid digitally.

In a nation like India, there is a belief that keeping track of every transaction could lead to problems, such as increased scrutiny or taxation. Some consumers favor the fact that cash leaves no digital trace (Kothari, 2018).

Trust

Another aspect that has a big impact on whether or not digital payments are used is trust. Due to security worries, many people are still hesitant to use digital payments. They worry that a breach of their financial and personal information could result in fraud or identity theft. In India, there have been instances of digital payment fraud, which has caused some users to exercise caution when utilizing these services. To increase user confidence, the government and digital payment service providers must solve these security issues.

As Kothari (2018) in an article said "Many people still don't trust electronic payments. Because they don't trust the Internet and the alleged security threats, some people don't yet feel secure using this. The perception that someone else has access to their bank accountstops them to use the new payment system". The effectiveness of e-payment and m-payment methods, according to Vizzarri, Vatalaro, and Vari (2013), depends mainly on their secure use and the end user's awareness of security risks in the m-payment area. The perceived risk significantly negatively impacted perceived trust and customer satisfaction, according to Hossain M. A. (2019). Perceived trust is the most important component in determining customer satisfaction, and it is a good indicator of future customer loyalty.

Security Reasons

Unauthorized payment connections, fraudulent UPI handles, and screen monitoring by fraudsters are a few of the potential concerns associated with UPI(Mistry, 2022). Mobile payments are susceptible to fraud, including unauthorized purchases and false returns. Both businesses and consumers may suffer financial losses as a result of this. Utilizing trustworthy payment processors and routinely keeping an eye out for suspicious activities are crucial for reducing this risk.

Users fear that while making online purchases, their mobile devices could be hijacked or attacked by a virus, losing their money. According to Linck K., Key P., and Wiedemann D. G. (2006), if Mobile Payment Service Providers (MPSPs) don't adhere to security requirements, their clients can stop using their payment method. However, it's imperative to know that security is not merely a desirable feature but also a must.

Digital Illiteracy

More information and awareness about digital payments are required. Some individuals might not understand how to use digital payment platforms or may not be aware of the advantages of doing so. Only 14.7% of India's population in computer literate and 20% of population use internet. according to NSO 2020 survey. According to a 2018 estimate by the "Digital Empowerment Foundation", around 90% of Indians are digitally illiterate. India is facing a digital revolution that could progress our country's economic success and growth, but we also run the risk of creating a new class of "digitally-poor" citizens. The inability to use and benefit from information and communications technology services due to access or lack of skills is known as digital poverty, a relatively recent notion.

Substandard Internet Quality

Due to high competition in telecom companies and giving price benefits to customers, there is no money left to the companies for improving internet network quality. A significant increase in Internet demand as a result of COVID-19 has put additional pressure on the network infrastructure. In contrast to normal online browsing, payment traffic has unique requirements such low latency, short response time, and the necessity to link together contemporary TCP/IP-based systems with old ISO systems. Latency is the time it takes for a signal to travel from one point to another. In the context of payment processing, latency can be a major issue because it can lead to delays in processing payments. Response time is the time it takes for a system to respond to a request. In the context of payment processing, response times need to be low in order to ensure that transactions are processed quickly and efficiently. Slow response times can lead to delays in processing payments, which can be frustrating for users. Many payment systems are still based on legacy ISO systems, which are not as efficient or secure as modern TCP/IP-based systems. This can create challenges when trying to connect these two types of systems together.

Cyber Frauds

As per a report (Lyra, 2021), 52% of people in India does not know how to protect themselves against cyber fraud and cyber-crime. India comes on second position after US as far as hacking is concerned. Although fraud on big scale is limited in India but overall security for online payment is in infancy in India. The reasons for frauds in online payments are due to insufficient investment in security technology and lack of awareness of people with respect to cyber frauds and cyber-crimes. Because of this people become victim of these frauds and it reduces trust in digital mode of payments. While the banking and fintech sectors are attempting to regulate this, hackers and cybercriminals are also improving their methods. In such an environment, technological utilization combined with more knowledge and tougher legislation can aid in avoiding the dangers of security issues.

Disputes of Merchants

Until Dec 2020, there was no real-time Online dispute resolution for UPI transactions. In the year 2021, NPCI and RBI have made it mandatory for all participating banks to have an Online dispute management system not only for UPI but also for Card transactions as well (Mistry, 2022). Due to the lack of an efficient dispute resolution procedure, many customers are reluctant to use digital payment methods (Salunke, 2022). Smaller merchants despite receiving SMS or receipt of payment confirmation doubt that they will not receive the payment the next day and do not deliver goods. The reason for this may be that either they lack awareness about the operation of digital payment and what is meaning of electronic confirmation, and the second reason is that difficult and prolonged conflict resolution procedures. Generally, the SMS or confirmation of payment receipt is in English, and most of the small merchants are unable to understand what is written in English.

Additionally, the information is typically technical in nature to manage legal issues, which makes it even harder for merchants to understand. Most participants, including banks and fintech, use phone calls or digital channels like WhatsApp and email for dispute resolution

Resolving payments disputes among small merchants has several issues like:

- Multiple parties involved: Due to the involvement of multiple parties in each of the transactions and having different perspectives on the dispute it becomes difficult to identify the root cause of the problem.

- The complexity of the dispute resolution process: The dispute resolution process is time-consuming, lengthy, and complex and this will be a major burden on small merchants.

- Awareness about rights: Small merchants may not be aware of their rights in case of payment disputes. As an example, they may not know that they are responsible for any losses incurred if the issuing and acquiring banks do not agree on a dispute. This can lead to merchants being unfairly penalized for disputes that are not their fault. These challenges make it difficult to adopt digital payment for small merchants.

Zero MDR

Players, particularly traditional public sector banks, have been disincentivized from updating their systems and implementing new tech platforms as a result of the waiver of MDR (Merchant Discount Rate) on UPI and RuPay (domestic brand of debit and credit cards launched by NPCI) transactions. This is because processing these transactions no longer generates any money for banks or payment processors. As a result, there has been a decline in the quality of service offered by these players. MDR is a fee that merchants pay to banks and payment processors for processing credit and debit card transactions.

The Indian government has recently launched PIDF (Payment Infrastructure Development Fund) to address this issue. PIDF will provide financial assistance to merchants adopting digital payments and banks deploying POS terminals and QR codes. This will help to improve the quality of digital payments infrastructure in the country and encourage more people to use digital payments.

Conclusion

Mobile payments are a convenient way to pay for goods and services using a mobile device. These payments can be made using a variety of wireless communication technologies, such as Near Field Communication (NFC), Bluetooth, and QR codes. Mobile payments can be used in a variety of settings, including retail stores, restaurants, and transportation. They can also be used to make online payments. Some of the benefits of mobile payments are convenience, security, flexibility, etc. Yet the adoption rate of digital payments is low in India More than 70 percent of the population in India resides in rural areas and above 90% of people in rural India have not undertaken any digital transaction. In urban India also many people are reluctant to adopt digital payments. and "Cash is still the King in India. Hence, seeing this problem, this paper was designed to identify challenges in digital payment adoption in India.

From the analysis and reviews of research papers, articles, news, etc. certain reasons came out which are posing challenges in digital payment adoption. A few of these reasons are – low digital literacy in India, especially in rural India. Lack of proper infrastructure like the supply of electricity in remotest area, poor connectivity, low quality of internet. Language problems because most of the communications are done in the English language. Online fraud, cyber-crime, lack of willingness to digital payment adoption due to the proper maintenance of records of transactions, and fear of tax liabilities. Lack of stringent laws for disputes in digital payments etc. these factors in combination works are barriers to digital payment adoption in India.

Although India has made significant technological advancements in the field of digital payments, but the future of these transactions depends on further refining a safe and secure user experience. There are still obstacles to be cleared. Government, digital payment companies, and other stakeholders will need to work together to address these issues in order to increase financial literacy, boost internet connectivity, and foster user trust.

Despite these challenges, there are a number of reasons to be optimistic about the future of digital payments in India. The government is supportive of digital payments, and there is a growing number of businesses that accept them. As more people become aware of the benefits of digital payments, and as the infrastructure improves, it is likely that digital payments will become even more popular in India in the years to come.

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