

## **ADOPTION OF DIGITAL PAYMENTS IN COVID -19 – AN INDIAN OVERVIEW**

### **Abstract**

Digital revolution has changed the life of the people around the world. Nowadays we are living in the digital world. Government of India has introduced digital India campaign for the digitisation of India. India is the fastest growing smartphone market and the aim of Indian government is to increase digital transactions. Digital payment is one of the modes that increase digital transactions. Digital Payments has become extremely popular during Demonetisation era in 2016 which had been due to lack of circulation of cash but once the cash came into circulation the use of digital payments decreased but it again surged during Covid -19 pandemic from March 2019 to September 2021. Multiple products are introduced in digital payments like UPI , SMS based Payment, Credit card , debit cards, QR Code , BHIM RuPay. As per the RBI report mobile banking and internet banking increased by 99% and 18% respectively during the pandemic period. Now most of people in India are adopting digital payments but question of security also arises among the users. Government of India has set up the Digital Payment Vision 2025 to increase the digital payment. This chapter mainly focusses on the use of digital payment in india , its increase during demonetisation and Covid -19 pandemic, Multiple digital payment methods , Merits and Demerits of digital payments , cyber security , and future outlook of digital payment.

**Keywords:** Digital Payment, Covid -19 Pandemic , Demonetisation, Cyber security , Digital revolution, UPI , BHIM

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## I. INTRODUCTION

Due to covid 19, a pandemic outbreak lockdown was imposed across the world and the movement of people had been restricted. Covid 19 pandemic changed the lives and lifestyles of the people. Coronavirus outbreak contributed to achieving the objectives of digital India which were not achieved by demonetization in 2016. During Covid 19 digital payments were used for payments of groceries, cab fares, and electricity bills.

A platform, UPI (Unified Payments Interface) created by RBI in 2016. The value of transactions reached an all-time high during Covid 19 pandemic. In India, out of four customers, three customers make payments in cash. In November 2016, Modi Government invalidated high-value currency notes to curb corruption and Black Money which boosts Digital Payments as notes were not in circulation. But when the notes come into circulation use of digital payments started to decline which again surged during Covid 19 pandemic.

During the Covid 19 pandemic people who never used digital payment systems started paying online. People started ordering food and groceries online, purchasing milk, vegetables, and fruits paying bills online. As per the recent report of Capgemini Research Institute Since the outbreaks of the coronavirus, 75 % of Indians are using digital payments and increasing continuously at a rate of 78 %. As per the survey of Facebook and Boston Consulting Group, online payments rose in India since the nationwide lockdown due to Covid 19.

Prime Minister Narendra Modi-led government has seen the vision of Digital India and urged and encouraged the Indians to use the digital payments system.

India is the world's fastest-growing smartphone market. The aim of the Indian Government is to increase digital transactions. RBI set the target to increase digital transactions to about 15 % of GDP by 2021.

Digital payment is hassle-free and payment could be done in three seconds. Now the local vendors also enabled online payments on their phones.

Before outbreaks of Covid 19, pandemic digital payments were growing, but the pandemic thrust the digital payments. The nature of digital payments is contactless which enables Indians to practice social distancing by making payments digitally. Covid 19 pandemic forced small businesses to use digital payments. By the end of September 2021, there was a 500 % increase in merchants accepting digital modes of payments as compared to March 2019. During the year 2019 – 21, there was an increase of more than 1200 %.

**1. Products in the digital payments :** There are some key products innovated in digital payments in India are :

- **UPI (Unified Payment Interface) for Merchant Transactions:** The customer can make the payment instantly by scanning **QR Code**, which generates on a POS screen by using a mobile-based UPI app.

- **SMS-based payments:** Merchant send an SMS payment link to the customers to make payment for the services like buses, hotels, restaurants, salon reservations, and products. This payment service is less popular after the introduction of new modes of payment and smartphone and new modes
- **QR Code:** Quick Response code popularly known as QR Code. QR Codes can be scanned on screen as well as on paper. It is mostly used for the payment for fuel, groceries, food, travel, and other services.
- **Internet Payment gateway:** Merchants accept payments for food, and grocery through multiple payment channels via an e-commerce platform.
- **Credit or Debit card:** Customers make payments through credit, debit cards, or through a ‘ Tap and Pay’ feature on a mobile app by tapping on the POS terminal.

With a vision to be the best payments network globally and a mission to touch every Indian with one or other payment services, NPCI, the powerhouse of payment systems in India is committed to driving digital India by serving all Indians. Established in 2008, under the patronage of the Reserve Bank of India and the Indian Banks Association, NPCI has embarked on a mission of touching every Indian through its varied range of digital payment products like UPI, BHIM, RuPay, NETC, AePS, BHIM Aadhaar, Bharat BillPay, NFS, NACH, CTS, IMPS and to facilitate safe and secure digital payments. These products help in: PRICE is an independent, not-for-profit research center, a ‘think tank’ and ‘facts tank’ engaged in building and disseminating seminal knowledge and insights about India’s Macro Consumer Economy and Citizen’s Environment, for use in formulating public Policy and in shaping business strategy. Person to Person money transfers. Person to Business, such as Kirana stores, petrol stations, recharges, e-commerce, and retail. Business to Business, such as Retailer to Supplier or Distributor. Business to Person as salaries, reimbursements, refunds, claims. Person to Government, such as tax, public transit, and public distribution services. utility. Government to Person, in the form of direct benefit transfer payments of various central and state government social security schemes.

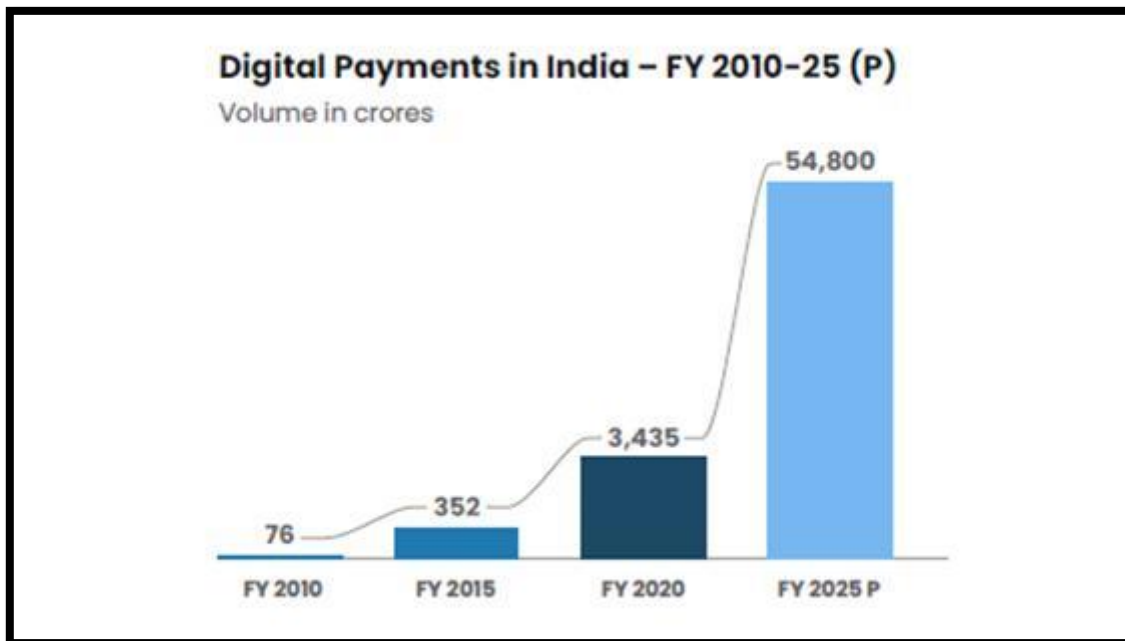
Prime Minister Shri Narendra Modi of India on 8th November 2016 announced that the two most essential section cash notes in India (500 rupee notes and 1000 rupee notes) won't remain legal. 86% of the money accessible for use was taken out by demonetization. The most adolescent mode is E-wallets among various strategies for digital payments. In advance digital payments, both sender and beneficiary use computerized modes to send and get money.

The Reserve Bank had announced the construction of a composite Reserve Bank of India – Digital Payments Index (RBI-DPI) in March 2018 as a base to capture the extent of digitization of payments across the country. The index for March 2022 stands at 349.30 against 304.06 for September 2021, which was announced on January 19, 2022.

The RBI-DPI index has demonstrated significant growth representing the rapid adoption and deepening of digital payments across the country in recent years.

**2. Adoption:** Corona virus quickened the pace of digital payments adoption. Not only in big cities but in small cities also merchants demand solution of contactless payment.

Digital Revolution in India over the last two decades has a big contribution to the adoption of digital payments in India. Digital Payment Adoption Study was conducted for in-depth adoption assessment and segment-wise maturity analysis by NASSCOM and presented as India Digital Payments -2020 Country Adoption Report - It was the first type of report in the World Digital Payments Adoption Maturity Index.



Advancement of technology and innovation in payments ecosystem, the question of security also arose. RBI increased its focus on safety and security of the payment system. RBI ( Reserve Bank of India) promotes innovation in financial sectors by leveraging technology for sustainable Information and Communication Technology ( ICT ) infrastructure with a focus on security, cost efficiency, reliability, and integrity. Digitally empowered household members substituting for bank Mitras to enable digital payment adoption.

The adoption of digital payments depends on some factors like the lifestyle of people. comfortability in using digital payments. As per the RBI report, the users of mobile banking and internet banking have increased by 99 % and 18 % respectively from March 2019 to September 2021.

**3. India and Singapore to Link their Fast Payment Systems - UPI and PayNow:** The RBI ( Reserve Bank of India) and MAS (Monetary Authority of Singapore) announced a project to link their fast payment systems, UPI and PayNow. This linkage was done by NPCI International Payments Limited ( A subsidiary of NPIC ) and Network for Electronic Transfer ( NETS of Singapore ) to facilitate the QR Code-based payments through UPI in Singapore. This linkage is an important milestone in the development of infrastructure for cross-border payments between India and Singapore. Users of two systems will be unable to remit without getting onboard to another system i.e. UPI users do not require to be a part of

the PayNow system to transfer funds to PayNow users in Singapore and vice versa. This linkage will foster cross-border interoperability of payments, trade, travel, and remittance flows between countries. It will contribute to fulfilling United Nations (UN) Sustainable Development Goals. This linkage will be operationalized in the second half of 2022. It will enable cheaper, faster payments and safe payments.

During 2021-22, payment transactions through credit cards increased by 27 % and 54.3 % in terms of volume and value respectively. Transaction through debit cards decreased by 1.9 % in terms of volume and increased by 10.4 % in terms of value. The number of Points of Sale (PoS) terminals increased by 28.6 %. The number of ATMs increased to 2.48 lacs during 2021-22 from 2.39 lacs during previous years.

**4. Household Choice of Digital Payments during COVID-19 Pandemic:** During the Covid 19 pandemic households' choice of digital payments increased as per the survey of the National Payments Corporation of India (NPCI,2020). As per the survey, approximately one-third of households did transactions digitally for the first time during covid 19 pandemic. Prior Covid 19 pandemic most households stopped using digital payments due to lack of internet access, fraud, and difficulty in use but they again started using digital payments due to pandemics.

Education of digital payments and general awareness have contributed in the adoption of digital payments, mainly at low levels. The key enablers are smartphones and Debit Card.

Digital Literacy and awareness boosted the use of smartphones for digital payments. Most of the users are of middle age and awareness also increased the use among the old age, thus the pandemic bridge the generation gap in digital payments. UPI and mobile Wallets are mostly used by younger and middle-aged populations for digital payments while old aged population use to prefers cards for digital payments.

The pandemic induced a 'switch to digital. The use of Digital payments increased due to more merchants on board, development of payment infrastructure, Reduction in fraud, ease to use, and trust of the customers. The behavioral Shift to digital payments is not temporary but permanent.

**5. Cyber security :** Digital crimes and frauds are topics of debate in future payment since its induction. To increase and retain users' confidence in digital payments it is important to control frauds that occur. Criminals create a new identity or stole identification by knitting real and fictitious information. This is called 'Synthetic identity. These 'Synthetic identities' exist only in the digital matrix. Today there are fraud detection models to prevent fraud but these models can not prevent fraud Artificial Intelligence is expected to become successful in payments fraud prevention. Digital payments systems like UPI, Mobile wallets are more vulnerable to cyber-attacks such as session hijacking, malware injection, and spoofing of identities.

**6. Digital Payments Vision 2019 -2021:** Efforts of the RBI ( Reserve Bank of India) continued to develop payment and settlement systems in the country to build a cashless society. RBI is also focused on improving the convenience of customers, increasing efficiency, and ensuring the security and safety of payment systems.

Reserve Bank of India's Payment and settlement system vision 2019 -2021.

The main focus was on :

- Facilitate Digital Penetration
- Consumer Awareness campaign on digital payments to achieve the goal of a cash-less society.
- Introduction of innovative payment options
- To ensure smooth operations which are disrupted by Covid 19 pandemic.

## 7. Digital Payments Vision 2025

- **Core theme :** E – Payments for Everyone, Everywhere , Everytime (4ES)
- **Vision:** Provide every user with safe , secure, fast , convenient, accessible and affordable e -payment option.

The payment system has been phenomenal for the last two years in India. The Payments Vision 2025 promises to elevate the payment systems further by providing accessible payment options anytime and anywhere. It has the objective to reinforce India's position as the world leader in the digital payments domain. The Payment Vision 2025 presented five goals of integrity, inclusion, innovation, Internationalisation, and institutionalization. Implementation of the framework of geo-tagging of payment acceptance infrastructure, Strengthening Cyber security and IT, Making NEFT compliant with global messaging standards, and Setting up enterprise computing, Data center, and cybersecurity training center is the major focus of Payments Vision 2025.

Changes in the behavior of the customers towards digital and touches modes of payments were partly due to the Covid 19 pandemic. Mobile Banking users increased by 50 % which includes first-time users also.

Promotion of digital payments required customer awareness, penetration of digital payments acceptance infrastructure across districts/states, review of PIDs scheme scope, etc. Internet of Things (IOT) based payments and UPI-like systems for cards should be explored.

Fast payment systems will improve trade and commerce and will reduce the cost and time for remittances. Higher adoption of digital payments has reduced the cost of the usage of cash or cash substitutes and will improve the transparency in transactions.

## 8. Advantages of Digital Payments

- Increases employment
- Reduce risks associated with carrying a large amount of cash, corruption, and robbery.
- Helps in transforming money with safety and security at a high pace.

## 9. Scope for Improvement in Digital Payments?

- People should be educated about the use of digital payments.

- Helpline should be started for learning and solving problems.
- Features should be safeguarded, which will help the users stay safe.
- Various programs and awareness campaigns should be started to aware the customers about the benefits of using Digital Payments.

**10. Future outlook:** The future of Digital Payment Systems in India is looking very bright and indispensable. The physical and digital infrastructure in India developed very well. It is forecasted that digital payments in India to reach \$ 10 trn by 2026 from \$3 trn as per the report with non-cash contributions constituting nearly 65% of all payments, wherein 2 out of 3 transactions will be digital in the next 5 years. The government has started a number of programs and awareness campaigns to educate and aware of the people in urban as well as remote areas. India is the largest mobile phone user market in the world. People are becoming techno savvy, want to do contactless transactions, and want to transfer money quickly which encourages people to adopt digital payment systems.

## II. CONCLUSION

The majority of people in India are now using digital payment systems. People are giving preference for digital payments over cash. Demonetisation in 2016 encouraged the people to adopt digital payments systems but it has got high impetus in Covid 19 pandemic. During Covid 19 pandemic the lower income group also started using Digital Payments, during this time 50% of users were first-time users of digital payments. Digital payment adoption is now entrenched very well across India. The gap between smartphone ownership and digital payments users is 36% as per the joint report of NPCI and PRICE. The physical and digital infrastructure is very well developed in India. The government has started a number of digital programs such as Digital India, Jan Dhan Yojana, PM Seva Nidhi scheme for street vendors, DBT, NETC FASTAG for tolling, etc.

There is a very strong customer momentum in favor of digital payments and a very well-developed ecosystem driving online banking. Total Digital payments have increased by 216% and 10 % in terms of volume and value respectively in March 2022 as compared to March 2019. The use of paper currency declined during 2019 -2022. UPI, IMPS, and PPI transactions have grown at a CAGR of 104%, 39%, and 13 % respectively during 2019-2022. Debit card transactions declined by a CAGR of 3.7 % due to covid 19 pandemic. Being a developing country and the fastest growing economy in the world, India's progress in digitization is very fast. The digital revolution in India has started in the last decades but it has got impetus during the regime of the Modi-led government. Modi has started various programs to make India a Digital India and moved to a leadership position. Though the role of demonetization was notable in the growth of digital payments Covid 19 pandemic contributed largely to rapid growth in digital payments. India's digital payments landscape has transformed dramatically over the past five years and it set to become a digital payments economy.

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