

A Study on Digital Payment System in India

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Abstract - The Digital payments are the money transactions that are carried out digitally with no physical exchange of currency. The Government of India has initiated flagship Programme called “Digital India” launched on 2nd July 2015 under the leadership of our Honorable Prime Minister Shri Narendra Modi, the Vision of the program is to transform India into a digitally empowered cashless economy. The main agenda is to create awareness among the consumers and merchants on various digital payments and apparently to transform Indian economy to “Paperless and Cashless” economy. In order to achieve this, promoting and mandating Digital Payments has been one of the highest priority of digital payment to all the citizens of the country in an easy, quick, affordable, convenient and secured manner. The main objective of the research paper is to understand the concept of digital payment system and to assess the scope of digital payment services in India. The study highlighted the importance of digital payment services in India.

Index Terms – Digital payments, Digital India, Cashless economy, Online transactions.

I.INTRODUCTION

The Government of India striving on strengthening the Digital Payment Infrastructure by creating awareness among the consumers for Digital Payments. The “Digidhan Mission” has been setup with dedicated building strategies and approaches to bring awareness among the people.

Major focus and emphasis given on Cashless economy post Demonetization implemented in India.

Vision of India is to transform India to “Cashless India”

The Government of India in collaboration with telecom Industry and telecom Industry launched toll-free helpline “Call 14444” on 5th Jan 2017 for all Digital Payment queries.

Top Countries stepping towards 100% Cashless Transactions

Sweden being the closest country to move to Cashless economy in the world with 85% of the country population has the access to the online banking facility and mere 2% of the country transactions happens on physical cash transaction.

In Belgium, 93% of total consumer transactions are made through Digital mode. 86% of the population got the access to Debit Card and Credit Card. Finance Minister has put a strict rule any cash payment happens above 3000 euro then there would be a fine of up to One lakh Euro, followed by Canada with 90% of the total consumer transactions happens is Cashless and 88% of the population access to Credit Card and Debit Card. The Central Bank of Canada is Bank of Canada takes care of Printing of currency. In the year 2013, Bank of Canada stopped making cents coins to encourage Digital transactions.

OBJECTIVES

1. To understand the concept of Digital Payments System and Cashless Transactions
2. To assess the importance of Digital Payment system in India
3. To analyse the scope of Digital payment services in future

RESEARCH METHODOLOGY

The Research Methodology is based on secondary data gathered from various research articles, Reports published by RBI and data available on Government websites on Digital Payment System has been studied and analysed.

Statement of the Problem:

In today's World Wide Web World, technology plays a very significant role. Most of the consumers and merchants, prefer online transactions as they are more convenient, easy to use and less cost effective. The Government of India took major initiatives to promote

Digital payments and to transform Indian economy into digitally empowered cashless country. The covid-19 crises has forced all the merchant establishments to accept payments in digital mode and all customers to opt for digital payments as it is safer and secured.

LITERATURE REVIEW

The Digital Payment modes in India:

1. BHIM: (Bharat Interface for Money) is a mobile app for easy and quick payment transactions using Unified Payment Interface (UPI)
2. BHIM Aadhar app: This app was launched by our Honourable Prime Minister on 14th Apr 2021 in which the customer can complete the transactions through biometric thumb impression, this will give liberty to any citizen of India to make a payment digitally without use of Plastic Card (Credit Card and Debit)
3. BHARAT QR Code: Payment is accepted through MasterCard, Visa, Amex and Rupay cards and BHIM-UPI. This was launched throughout India Digital payment acceptance infrastructure.
4. Cards: Government of India launched RuPay Debit Card to enable everyone to make digital payment. All account holders of PMJDY (Pradhan Mantri Jan-Dhan Yojana) can use RuPay card for Online Transaction and POS devices as well.
5. IMPS: Immediate Payment Services Enabled any one can sent money virtually at any time 24*7*365 Days. The transaction can be done through using Mobile, Aadhar Number & Bank Details with IFSC Code. This service can be accessed through Internet, Mobile & ATM.
6. USSD: Unstructured Supplementary Service Data one of the unique innovative payment services introduced by Government of India *99#. This was dedicated to Our Nation by Honourable Prime Minister of India Shri Mr. Narendra Modi. *99# Services was launched to provide banking services to every common man across the nation.

Advantages of Digital Payment System / Cashless Transactions:

- Convenience: Digital payments systems are very convenient to every individuals and merchants.

Especially it saves time and no needs to carry physical cash.

- Tracking Spends: Every penny is transacted on Digital System is recorded and we can monitor all the transactions and even we can control on spending limits.
- Budget Discipline: Based on the past transactions we can very well plan our future spending. Every individual can control Budgets.
- Lower Risk: Lost of any electronic devise will not harm our financial system its 100% secured as we can block the applications for fraudulent transactions.
- Easy and Quick: Digital Payments Systems with so many options in very short time merchant can complete many more transactions compared with physical cash transaction.

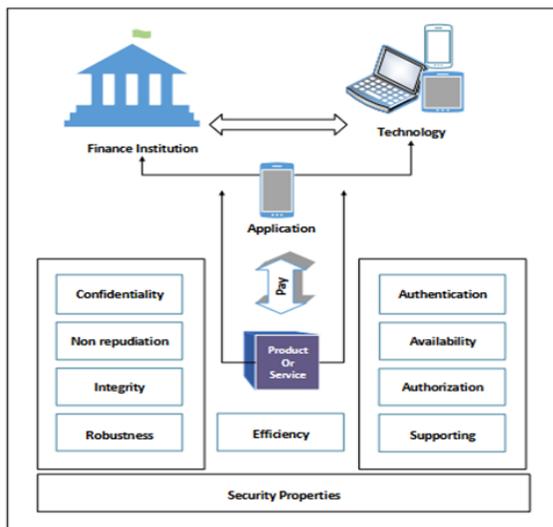
Barriers of Digital Payment System / Cashless Transactions:

- Cyber Risk and Threats: Exposed to cyber risk and threats as High Value Transactions will be carried out only through online mode
- Computer Illiteracy: Major percentage of population spread in rural areas with little knowledge/skills regarding computers. It is estimated on an average, only 12% of the Indian population has access to computers.
- Less awareness: The consumers living in villages and rural areas still prefer cash transactions as they have less awareness on Digital Payments.
- Mobile Internet Penetration Rate: Even today we face lot of problem in accessing Internet in remote places, all the Digital Payments Options launched in India going well in Metro Cities but in Rural Areas still facing the issue of Internet facility.
- Higher Risk of Identity theft: Data Security is one of the major problem in India with huge density of population and implementing awareness program is an issue.

The Government of India introduced Cyber Security for Digital Payments – CERT-In Advisory for Secure Mobile Banking in 2016. Indian Computer Emergency Response Team (CERT) under Ministry of Electronics and information Technology was started for Protecting Mobile and Cloud Data Security. It will take care of Authentication, Access Control, Encryption, Mobile

Device Management (MDM) and Mobile Application Management (MAM).

The security properties of electronic payments adopted



As per the latest analysis and forecast India will witness major increase in Digital Payments expecting to reach Rs 7000 lakhs Crore worth of transaction amount by FY25.

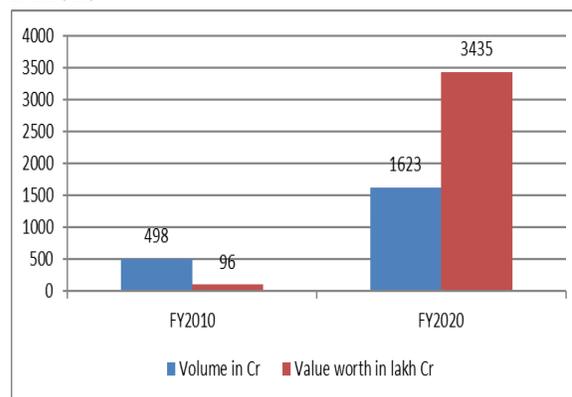
Birds eye view on Digital Payment System

S. No	Particulars	Banking Cards	Mobile Banking	Mobile Wallet	UPI	USSD	AEPS	Internet Banking			
								IMPS	RTGS	NEFT	
1	Time permit	24*7	24*7	24*7	24*7	24*7	Banking Hours	24*7	8:00AM to 4:30PM	8:00AM to 6:30PM	
2	Time to Complete Transaction	Immediate					Real-time	Immediate	Real Time	Same Day	
3	Transaction Limit	Based on Bank and Card Type	Rs 5,000 per day per customer	Rs 20,000/- Per month	Rs 1,00,000/- per transaction	Rs 5000/- per transaction	The Bank with Aadhar No is linked will set the limit	Upto Rs 2,00,000/-	Min Rs 2,00,000/- Max no limit	There is no Limit for Min and Max amount	
4	Information Required	PIN	MPIN	Login & MPIN	MPIN	MPIN/IFSC/Aadhar No/Account No	Aadhar No & Bank Name	Account No and IFSC Code			
5	Authentication	2 Level Authentication				Thumb impression		2 Level Authentication			
6	Beneficiary Registration	Not Required for any Beneficiary Registration for Transaction						Beneficiary Required for Transaction			
7	Technical Requirement	POS / Credit Card / Debit Card	Smart Feature Phone with Internet Connection			Smart Feature Phone	POS Device	Internet Connection			

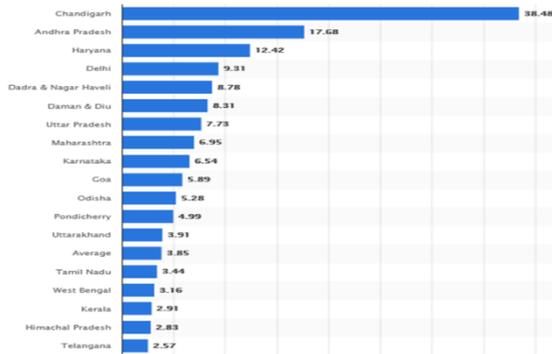
As per Indian Express article India has witnessed 43% yearly growth in Digital payments from 2010 till 2020 i.e. for 10 years.

In the financial year 2010, total volume of 498 crore transactions with total value worth of Rs 96 lakh crores was carried out. However in the financial year 2020, there is drastic increase in the volume to 1623 crore transactions with total value worth of Rs 3,435 lakh crores.

Digital Payment Comparison for FY2010 with FY2020



Number of Digital Payments Transactions per capita in India in 2021 State wise Descending Order

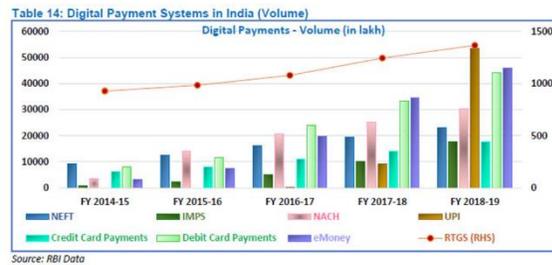


As per the RBI publication on Digital Payment trend in India, there is incremental growth in Digital Payment trend in India from 823 lakh crore in FY14-15 to 1638 lakh crore in FY18-19 with 199% jump in value of amount transaction through Digital Payment System.

Digital Payment Trend as per RBI Publication



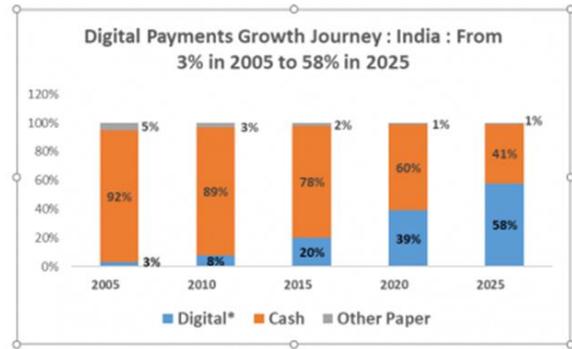
Digital Payment Trend as per RBI Publication



Future of Digital Payment System

In India it will take more and more time to move to cashless economy in India as due to huge density of population spread across Urban, Semi-Rural and remote rural areas with very less accessibility and knowledge of technology / digital systems. The tremendous efforts have been put by the Government of India in creating awareness among consumers and to improve the digital payment support function especially in Rural Areas with one of the wild spread option of RuPay. In India, still the consumers and merchants are not confident and feeling secured to

make digital payment due to cyber frauds, threats and errors.



Digital Payment Growth Trend for Every 5 Years

Decentralised Digital Currency (Crypto Currency)

The first crypto currency was introduced in the year 2009 with the name Bitcoin. This was the first attempt towards decentralisation of currency in the World. No Central Bank in the World can control the crypto currency. Unlike all traditional way of operating transactions like Barter System, Gold Coins, Paper Currency, Plastic Currency, bitcoins escape from any authority, there is no central of any country will control crypto value and financial intermediaries that validates all the transactions. This is the new invention of making transactions on Internet with faster across globe with virtual Zero Transaction charges even in cross country transactions. Bitcoin is one of the new technologies for electronic transactions that will no longer depend on third party trust basis and authority but on mathematics and cryptography. This will certainly replace all the Central Banks by the Bitcoin platform, technology is based on peer-to-peer (p2p) mapping and every transaction is stored in decentralised different servers. The action of validation, authentication and registration of the transactions is called “mining”

As per the bitcointalk.org, bitcoin is directly created by Satoshi Nakamoto, but there is nothing more about the history and background of the person and what motivated him to invent crypto currency.

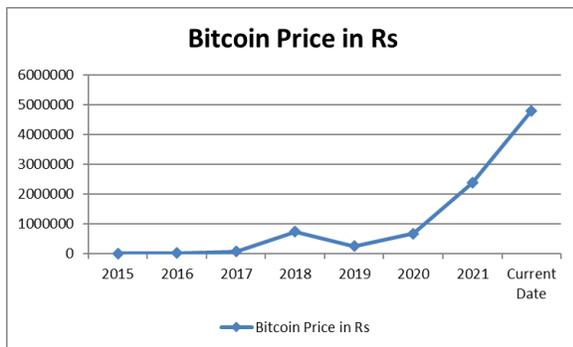
Bitcoin network present a solution to double-spending problem by facilitating with electronic payment system no longer based on trust “Implementing a mechanism of validation, confirmation and maintaining a universal ledger called “Blockchain” cash monetary system. In western countries majority of all the payments are accepted through crypto for any

denominations. Even people can convert the digital currency into physical cash as well, ATM machine is installed for cash withdrawal for all the crypto currency holders to give additional facility.

Indian government has not yet regulated crypto currency, However based on the court order allowing to trade crypto currency in India. The Government is planning to come up with our own crypto currency, definitely that's the future and revolution of 100% Digital Currency and this will take the economy to Cashless country.

Bitcoin Price trend in Indian Rs value

Date	Bitcoin Price in Rs
01-01-2015	15657
01-01-2016	26551
01-01-2017	69869
01-01-2018	735919
01-01-2019	248961
01-01-2020	673238
01-01-2021	2384234
10-11-2021	4790487



CONCLUSION

The Digital Payment in India has gained momentum since post Covid-19 crisis. The Government of India had been successful in driving digital payment and made the transition from offline to online transaction, very smooth and convenient. During pandemic our country witnessed an increase in digital payments. The National Payments Corporation of India NPCI encouraged and urged all the consumers and merchants services providers of critical services to shift to digital payment systems in order to stay safe and protected.

The Indian Government along with Reserve Bank of India, has created several awareness campaigns through social media emphasising the citizens of the country to switch to digital payment methods which are hassle-free and convenient. The Government of India has urged its citizens to opt for digital payments such as UPI, USSD, NEFT which are available 24*7 instead of cash payments. The customer can now make transactions even in odd hours through digital payment which was not possible earlier, through the use of advanced technology and emergency of smart phone, the digital payments system bound to delight the customers as its more secured and convenient and less cost effective.

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