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Summer Internship Report

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Ahmedabad

MBA-FT 2020-22

"Level of acceptance of digital payments- transition from a cash-based economy to less cash economy"

May-July2021

TITLE PAGE

Particulars	Description
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Prepared for	Institute of Management, Nirma University
Submitted to	Professor Punit Saurabh

PREFACE

Any serious thinking on contemporary and emerging issue of modern business suggested that basic pillar through which the students of management can learn & understand the basic difference between theories & practical is "Practical Training". Through students can know how to apply their mind in real business world.

I have visited company in order to set the practical knowledge about which I studied in theory class, so that, as the student of management, I can know the picture of a company in the training age.

This report is prepared as per the syllabus & guidance given by my mentor. I have prepared this report so far as my knowledge is concerned, that is to say there is possibility of mistakes. This report is reflection or what is award came to know during my visit at the company.

ACKNOWLEDGEMENTS

Summer Internship provides a platform for learning, self-development, and building up of skills necessary for a postgraduate student. It also helps us to gain real-time exposure about the working of the real corporate world. I express my gratitude to Institute of Management, Nirma University for giving me this opportunity to complete my summer internship with the Reserve Bank of India. My experience of carrying out the summer internship study for two months in the Reserve Bank of India was a great opportunity to learn.

I am highly grateful to Mr. Sanjay Kumar Bhatt, my mentor from Reserve Bank of India, for his guidance throughout the period of the internship and for providing necessary help for the preparation of the report, and at last for helping me in making a proper professional format for the report.

I would also thank Mr. Amandeep Singh for his constant support and help during these two months by explaining to me the basics of the topic and providing guidance on what all concepts have to be included in the report and from where to get authentic data for the report.

I want to extend my gratitude to Prof. Punit Saurabh, my faculty mentor from the Institute of Management, Nirma University who was available and provided me with his guidance throughout the internship.

ABSTRACT

The financial sector in India is seeing a major change and is going through an overhaul. The objective of this study is to understand the acceptance of a transition towards a less cash economy in India and how well it is accepted by the people. India currently, is a cash-based society and a conscious shift towards a less cash economy should not only include the efforts of the Government, but it should be an effort by individuals and enterprises at large. The payment system is over going a major overhaul and changes have been observed in recent years due to advancements in technology and innovations. The Digital revolution has taken the world by storm and digital transactions have emerged as a winner in the digital world. Digital technology will be at the forefront of major changes in the banking system in both the product side and the services side- be it in retail, education, banking, or health. Digital systems must be developed for the underserved people who have not been included in the banking system as of now so that they can access the services and lead a better life. Consumers now have a plethora of options to transact at the comfort of their homes. They have several payment options to choose from to complete the transaction. Cash has always and will continue to be a large part of transactions being done in India, but it is slowly reassuring those non-cash payments, especially those using electronic or digital modes are rapidly increasing. According to the report of Razorpay’s 'The Era of Rising Fintech', the country has witnessed a massive growth of 383 percent in digital payment transactions between FY'18 and FY'19. According to data released by National Payments Corporation of India (NPCI), after the nationwide lockdown was announced in March and fear of spreading coronavirus through cash transactions, digital transactions soared to 2.18 lakh crore in May 2020 alone. According to Boston Consulting Group (BCG) Report, the non-cash contributions for payment transactions are estimated to increase from 22% to 40% by 2020 and 59% by 2025. The banking system which has always been associated with credit facilities for the people is seeing a decline in credit growth. To bridge the gap, many non-banking players, NBFC's, microfinance institutes have extended credit facilities to unbanked people. These non-banking institutes have brought about a major change in which credit facility is disbursed among people in the form of micro-loans, flow-based lending, and group-based lending. Digital solutions are being demanded worldwide by consumers and in the days to come, credit facilities will also become part of the digital wave. FinTech’s will face a challenge to include all especially the underserved people to avail the credit facilities, but this will be a great opportunity for them to provide innovative digital solutions and bridge the gap

that has been created by financially including every person so that the Indian economy can see tremendous growth. Technology is a must for digital financial inclusion of all and will create many opportunities, but it also risks widening the gap if inclusion doesn't happen. We need to keep three points to include everyone in the digital wave and bridge the gap:

a) Improve access and affordability
b) Build infrastructure in rural areas
c) Educate people on how to use technology.

According to Ari Sarker of MasterCard, "In a bold new world emerging from disruption by the pandemic, digital payments will be a key pillar on which a self-reliant India will stand". The primary study was conducted through a questionnaire to gauge the level of acceptance of digital payments. The data collected from 150 respondents stated that still a majority of people resist digital payment methods as a mode of transaction and prefer the traditional cash-based transaction method. The results of the survey are shown in data presentation section.

Contents

PART-A

INDUSTRY OVERVIEW

INTRODUCTION

The financial services in India are witnessing a rapid expansion of a diversified financial sector, both in terms of the strong growth of existing financial services firms and the entry of new companies into the industry. Financial services in India are made up of commercial banks, insurance companies, non-banking financial corporations, cooperatives, pension funds, mutual funds and other smaller financial institutions.

The banking regulator has recently allowed new entities to be formed, such as payment banks, thereby adding to the form of entities operating in the sector. However, the sector of financial services in India is primarily the banking sector, and non-banking financial companies, with commercial banks responsible for more than 64% of the total assets held by the financial system.

Several reforms have been initiated by the Government of India to liberalise, control and develop this sector. Different steps have been taken by the Government and the Reserve Bank of India (RBI) to promote easy access to Micro, Small and Medium Enterprise (MSME) finance. These initiatives of government backed financial management and financial services in India include the introduction of the MSME Credit Guarantee Fund Scheme, the issuance of guidelines to banks on collateral criteria, and the establishment of a Production and Refinance Agency for Micro Units (MUDRA).

MARKET SIZE

The AUM of the Mutual Fund industry rose from Rs 10.96 trillion in October 2014 (US$ 156.82 billion) to Rs 23.93 trillion in April 2020 (US$ 339.55 billion). Inflows into Indian mutual fund schemes reached Rs 82,453 crore (US$ 11.70 billion) in 2019 through the Systematic Investment Plan (SIP) path. At the end of December 2019, equity mutual funds posted a net inflow of Rs 8,04 trillion (US$ 114,06 billion).

When discussing the financial services in India, the insurance sector is another critical part of the industry. The insurance and financial management sector have grown at a rapid rate. In FY20, the gross premium for life insurance firms for the first year reached Rs 2,59 lakh crore

(US$ 36,73 billion). Along with the secondary market, the market for Initial Public Offers (IPOs) has also witnessed rapid expansion. In 2019, US$ 2.5 billion was raised across 17 IPOs.

INVESTMENTS/DEVELOPMENTS

In August 2020, PAG agreed to acquire 51 percent of Edelweiss Financial Services' wealth management and capital markets business for Rs 2,244 crore (US$ 305.2 million). The People's Bank of China made an equity investment in Bajaj Finance in September 2020 to acquire less than 1 percent.

In March 2020, the volume of Unified Payments Interface (UPI) transactions, after a wealth management assessment, was estimated at Rs 2.06 lakh crore (US$ 29.22 billion), with 1.25 billion transactions reported. ClearTax, an online tax filing platform, acquired Karvy Data Management Services' GST software and services business for an undisclosed sum in March 2020. Axis Bank purchased a further 29 percent interest in Max Life Insurance in April 2020.

Derivative segment turnover in FY20 crossed Rs 3,453.9 lakh crore (US$ 49.41 trillion) and stood at US$ 5.09 trillion in FY21 (until May 2020). A five-year high of Rs 101,122 crore (US$ 14.47 billion) was affected by FPI investment in Indian equities in 2019. In the first ten months of 2019, Merger and Acquisition (M&A) worth US$ 25.162 billion was reported.

Total private equity (PE)/venture capital (VC) investment value grew 44 percent in value terms over the past three years to hit US$ 48 billion in 2019. In October 2019, for an aggregate cash valuation of Rs 225 crore (US$ 32.19 million), ICICI Lombard General Insurance Company acquired Unbox Technologies. As of March 31, 2019, there were 9,659 non-banking financial companies (NBFCs) registered with the Reserve Bank.

GOVERNMENT INITIATIVES

In November 2019, Rs 10,000 crore was allocated by the Government to set up AIFs as an aiding financial services in India, to revive stalled housing projects. Rs 350 crore (US$ 50.07 million) was allocated under the Interest Subvention Scheme for MSMEs under the Union Budget 2019 20 for a 2 percent interest subsidy on new or incremental loans for all GST registered MSMEs under the Union Budget 2019 20.

The Securities and Exchange Board of India (SEBI) proposed direct overseas listings and other regulatory reforms for Indian companies in December 2018. On 26 October 2018, the Bombay Stock Exchange (BSE) launched weekly futures and options contracts on the Sensex 50 index.

In September 2018, SEBI sought recommendations to reinforce rules of Indian financial services that would boost the overall governance standards of the sector (wealth management, financial management and financial services in India) for issuers, intermediaries or infrastructure providers. India Post Payments Bank (IPPB) was launched by the Government of India to provide one branch for each district, which will help improve rural penetration.

FUTURE OUTLOOK

By 2028, India is expected to be the fourth largest global private wealth sector. On the back of strong banking and insurance industries, India is today one of the most dynamic global economies and a leading player in delivering financial services in India and abroad alike. With many companies announcing financial management plans to increase their stakes in joint ventures with Indian companies, the relaxation of foreign investment rules has received a positive response from the insurance sector of the financial services in India. Top Indian Financial Services Institutions, Such as The Indian Mutual Funds Association (AMFI) is targeting nearly five-fold AUM growth to Rs 95 lakh crore (US$ 1.47 trillion) and more than three-fold growth of 130 million investor accounts by 2025. India's mobile wallet industry, too, is expected to expand to reach US$ 4.4 billion by 2022 at a Compound Annual Growth Rate (CAGR) of 150%, while mobile wallet transactions will reach Rs 32 trillion (US$ 492.6 billion) during the same time.

Source: https://www.trcconsulting.org/blog/financial-services-in-india-overview-and-current-landscape

OVERVIEW OF THE COMPANY- RESERVE BANK OF INDIA

Name of the Company	Reserve Bank of India
Central Board of Directors	Shri Shaktikanta Das (Governor) Shri Mahesh Kumar Jain (Deputy Governor) Dr. M.D. Patra (Deputy Governor) Shri M. Rajeshwar Rao (Deputy Governor) Shri T. Rabi Shankar (Deputy Governor)
Year of Establishment	1934
Central Office	New Central Office Building, Shahid Bhagat Singh Rd, Fort, Mumbai, Maharashtra 400001
Branch Office	Near Gandhi Bridge, Income Tax Circle, Ashram Road, Ahmedabad – 380014
Nature of Business	Banking and Regulatory
Website	https://www.rbi.org.in/

The **Reserve Bank of India (RBI)** is India's central bank and regulatory body under the jurisdiction of Ministry of Finance, Government of India. It is responsible for the issue and supply of the Indian rupee and the regulation of the Indian banking system. It also manages the country's main payment systems and works to promote its economic development. The overall direction of the RBI lies with the 21-member central board of directors, composed of: the governor; four deputy governors; two finance ministry representatives (usually the Economic Affairs Secretary and the Financial Services Secretary); ten government-nominated directors; and four directors who represent local boards for Mumbai, Kolkata, Chennai, and Delhi.

It is a member bank of the Asian Clearing Union. The bank is also active in promoting financial inclusion policy and is a leading member of the Alliance for Financial Inclusion (AFI). The bank is often referred to by the name 'Mint Street'.

The RBI has four regional representations: North in New Delhi, South in Chennai, East in Kolkata and West in Mumbai. It has two training colleges for its officers, viz. Reserve Bank Staff College, Chennai and College of Agricultural Banking, Pune. There are three autonomous institutions run by RBI namely National Institute of Bank Management (NIBM), Indira Gandhi Institute of Development Research (IGIDR), Institute for Development and Research in Banking Technology (IDRBT).

FUNCTIONS OF RBI

Monetary Authority:

• Formulates and implements and monitors the monetary policy.

• Objective: maintaining price stability while keeping in mind the objective of growth.

Regulator and supervisor of the financial system:

• Prescribes broad parameters of banking operations within which the country's banking and financial system functions.

• Objective: maintain public confidence in the system, protect depositors' interest and provide cost-effective banking services to the public.

Manager of Foreign Exchange:

• Manages the Foreign Exchange Management Act, 1999

• Objective: to facilitate external trade and payment and promote orderly development and maintenance of foreign exchange market in India.

Issuer of currency:

• Issues and exchanges or destroys currency and coins not fit for circulation.

• Objective: to give the public adequate quantity of supplies of currency notes and coins and in good quality.

Developmental role:

• Performs a wide range of promotional functions to support national objectives.

Regulator and Supervisor of Payment and Settlement Systems:

• Introduces and upgrades safe and efficient modes of payment systems in the country to meet the requirements of the public at large.

- Objective: maintain public confidence in payment and settlement system

Related Functions:

- Banker to the Government: performs merchant banking function for the central and the state governments; also acts as their banker.

- Banker to banks: maintains banking accounts of all scheduled banks.

PART-B

PROJECT WORK

INTRODUCTION

Digital payments refer to the use of digital mode of transaction avenues to perform financial transactions. The digital revolution led by major IT firms has shook the world strongly and brought a new revolution in the 21st century. Digital payments rode the wave and there was a metamorphic change in the payment and settlement systems and a wide range of options emerged in front of the consumers to choose from for their financial transactions. The heightened activity in the domain of digital payments can be attributed to the following factors:

a. The major revolution in digital technology emerged through the greater penetration of smartphones and internet on mobile that has completely revolutionized the digital payment space.
b. The entry of major Non-Banking Financial Companies (NBFC) that offers various credit services, payment services, and solutions has changed the scenario of digital banking.
c. Customers who have led to this revolution been greatly accepted have become more demanding in terms of receiving and performing transactions instantaneously with a single click. This has greatly led to digital transactions being accepted as a payment method.
d. Several changes in the regulatory framework by the Reserve Bank of India, India's Central Bank, and more transparency in the method of the transaction have led to digital payment methods being widely accepted by the customers.

Over the past few years, the Indian payment systems have witnessed a wide change in the way transactions are being performed. The pace of transition has been as per the global trends but with an additional time lag of few years. People in India are still hesitant to perform and use digital modes of payment systems for their daily transactions. Many factors lead to the reluctance amongst people from using digital modes of payment methods. Moreover, the ease of use of cash for transactions is one of the many reasons that hinder the growth of digital transactions.

INDIA'S DIGITAL SCENARIO

India's digital revolution has been on a rise thanks to the dynamic Telecom Sector which has been evolving day to day. The Indian Telecom Sector has fostered the socio-economic growth of the Indian Subcontinent as it laid its connectivity across towns and parts of rural India. As more and more parts of India got connected through a digital presence, many sectors like banking, education, health, e-commerce have flourished rapidly and have seen a meteoric rise due to greater connectivity amongst the people. The rise of India's growth towards being digitally active started post demonetization in 2016. Demonetization policy- which took away the legal tender character of certain specified high denomination currencies d from the Indian economy became the main strategic driver for the digital transformation. Post demonetization, India saw a significant rise in the digital payments with banks issuing over billion debit/credit cards, billions of transactions occurred through Unified Payment Interface (UPI), but still, a majority of people relied on cash-based transactions. As per a report from Harvard Business Review dated May 06, 2019, the current demand for cash considering the historic growth was $33 billion less cash than it would have been with demonetization. This clearly shows that the Indian digital ecosystem has evolved since then but still it needs to work a lot to make people rely less on cash-based transactions and switch to digital modes of payments for transactions.

	#2 in Population	#2 in number of mobile phone users	#2 in number of internet users in the world	#2 in number of smartphone users
2015	1250 Mn	1000 Mn	300 Mn	240 Mn
2020	1350 Mn	1200 Mn	650 Mn	520 Mn

*(**Source**s: eMarketer, Ericsson, UN Estimates, BCG Research)*

As the above stats indicate, the number of mobile phone users with internet connectivity in India has been on the rise for the past 5 years. In a growing market like India, it is the responsibility of both the regulators and the government to come up with a long-term view to develop and strengthen the digital payment networks. In India where the regulations are still changing daily, the regulators should work on incentivizing the use of non-cash based payment methods and also educate people on the cost of cash while on the other hand the government must build frameworks and policies to simplify the KYC procedures for the public, should regulate the payments policies so that they are user friendly and develops trust among the public and make sure that the digital payments are safe and user friendly so that more and more people transact using the digital modes of payments.

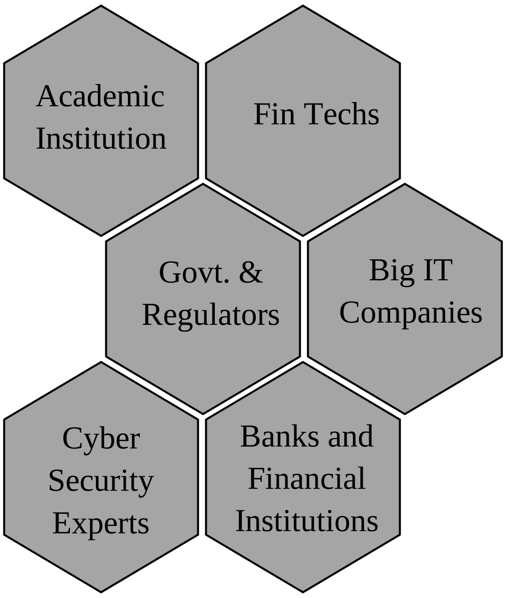

Figure 1 Stakeholders in the payment ecosystem

CASH MEASURES IN INDIA

Cash is one of the major instruments that are used by people to perform daily transactions in India. It is one of the easiest ways to perform a transaction and also gives an ease to handle and store to the people. Since there is no record for cash transactions it becomes difficult to track and measure the exact transaction volume performed through cash. For the purpose of study and to establish the fact that cash still holds the major share of transaction volumes in India, we will use the Currency in Circulation method to measure the cash-based transaction volume. For this study, I will be using the Currency in Circulation vs. GDP % and the ATM withdrawals that take place in the country to measure the cash that is circulated and measure the volume of transactions happening through cash.

Currency in Circulation vs. GDP %

Currency in circulation measures the volume of cash that the people hold and use for payments methods. The Currency in Circulation grew at a Compounded Annual Growth Rate

(CAGR) of 10.04% over the past 7 years i.e. the Financial year 2014-15 to the Financial Year 2020-21*.

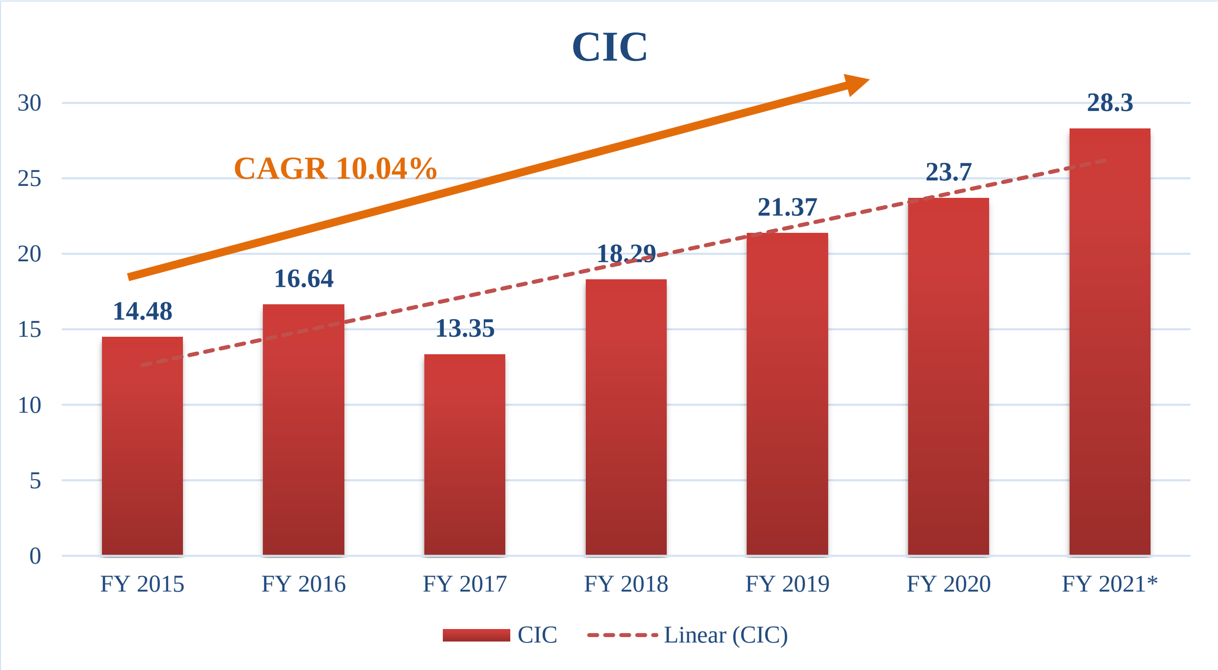

Figure 2 Cash in Circulation

*As of March 2021

Source: https://www.statista.com/statistics/1028099/india-currency-in-circulation-value/

From the above data, we can observe that the Currency in Circulation fell by 20% in the FY 2017 from 16.64 Lakh Crores Rupees in FY 2016 to 13.35 Lakh Crores Rupees in FY 2017. This fall was on account of the demonetization policy that was brought by GOI in November 2016 whereby high denomination currency of Rs 500 and Rs 1000 were taken away as the legal tender of currency by the government. But post demonetization, the CIC is back on track and grew by 110% from FY 2017 to FY 2021. The recent surge in currency in circulation can be attributed to the COVID-19 pandemic which has brought about catastrophic destruction in the livelihood of people. People are holding onto cash as a precautionary measure to the ongoing pandemic situation.

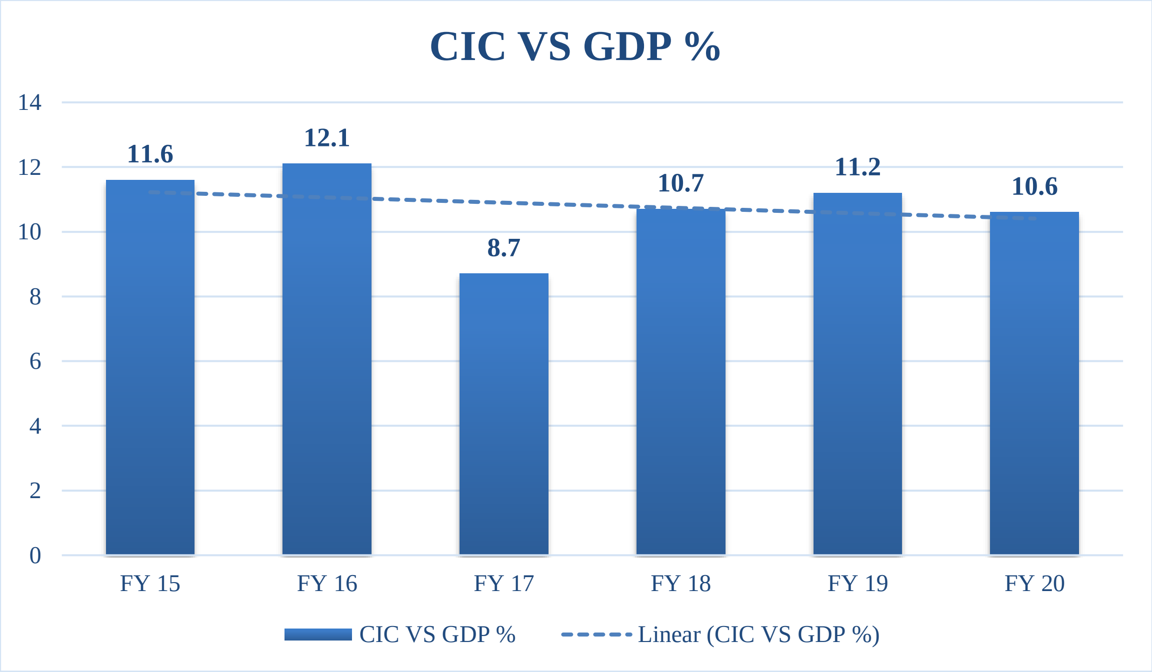

Figure 3 Cash in Circulation (CIC) vs. GDP%

Source: RBI Bulletin

It is assumed that higher the CIC vs. GDP % indicates that cash is the preferred mode of transaction for the payments. Based on this assumption, we can say that the CIC vs. GDP % ratio has been constant over the past 5-year period with only a sharp decline in the FY 2017 due to the demonetization policy. But it soon regained post demonetization and is at par level with the pre demonetization CIC vs. GDP % values. Despite the GDP levels falling due to demonetization policy and the COVID-19, the CIC vs. GDP% is still rising on account of safety money being stocked by people keeping in mind these unprecedented times. People have been hoarding cash from ATM's and in the year 2020, the currency with the public grew from 11.3% in February to 21% in June end of the very same year. There is still a lot to be done by the government and the regulators to increase the trust of the consumers towards digital modes of payments and to encourage them to transact digitally.

In the graph below, CIC vs. GDP% of various countries is depicted. We can clearly see that India has a higher CIC vs. GDP% when compared to other developing and developed markets across the world. The lower CIC vs. GDP% means that the economy is technologically, sociologically, and culturally dominant and that the cash-based transactions are lower in these economies. Whereas in countries like India, where CIC vs. GDP% is around 12.5%, the economy still relies on cash-based transactions and people are hesitant to move toward other means of payments methods like the digital modes of payment.

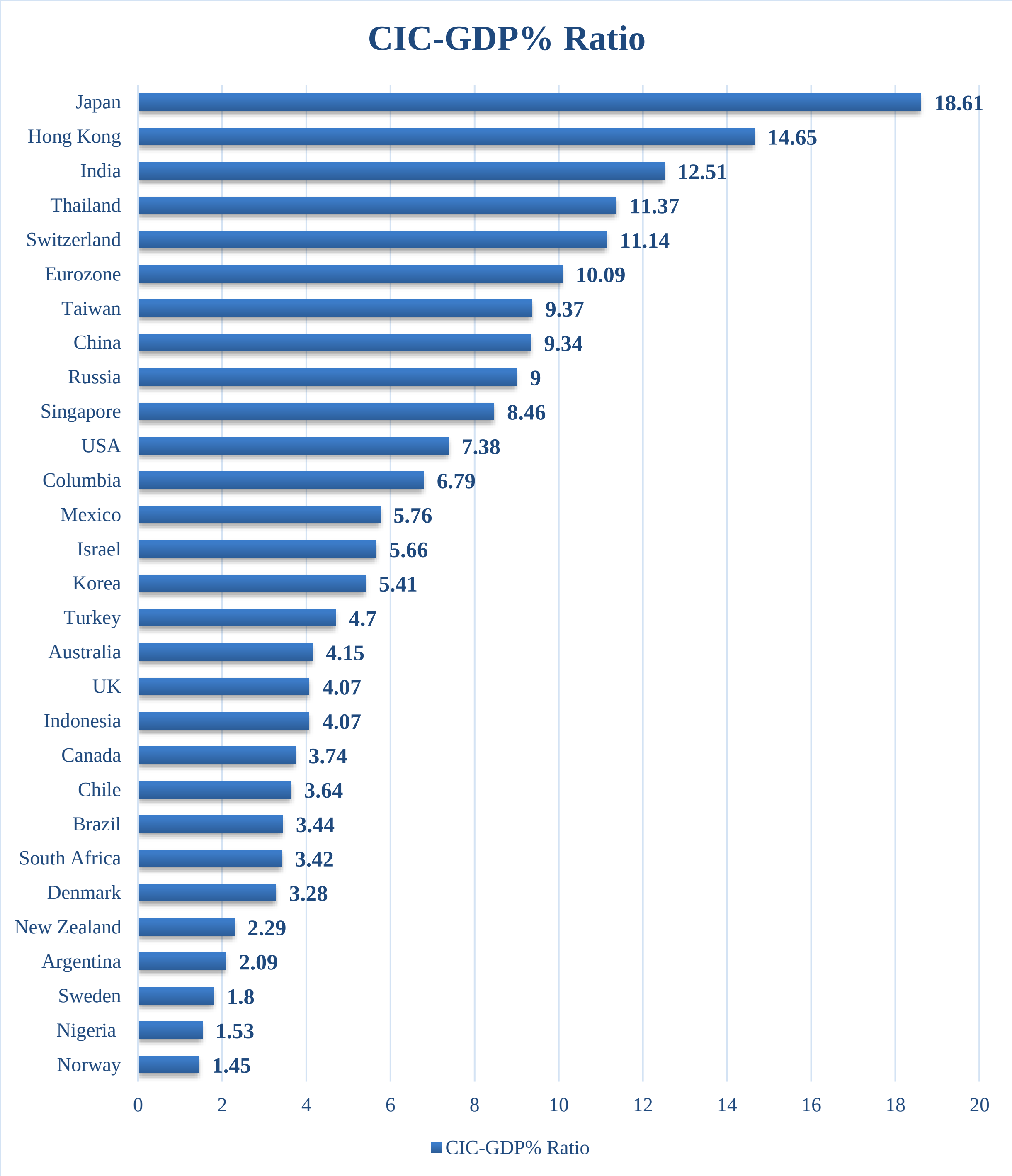

Figure 4 Cash in Circulation vs. GDP% Comparison of different countries

Source: The Curse of Cash (Data: July 2016)

Cash usage by Country

In this, we will project the cash usage* by emerging and mature markets. The data will compare cash usage in the FY 2010 and FY 2020.

I. **Emerging Markets**

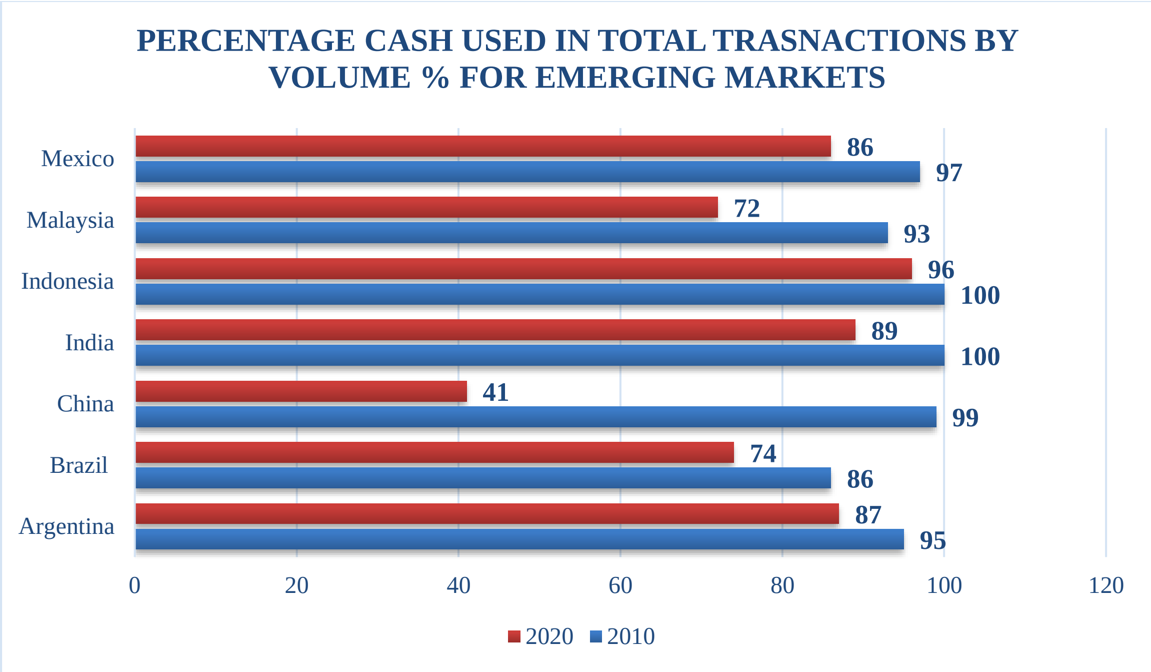

Figure 5 Percentage cash used in total transactions by volume % for Emerging Markets

*Percent of cash used in total transactions by volume, %

Source: McKinsey Global Payments Map

From the above graph, we can clearly see that amongst the emerging markets, India stands at higher positions in terms of cash-based transactions. The above graph establishes the fact that the cash-based payments method is still popular among the people and digital payments have still not been able to replace the traditional method and establish itself as a primary source of payment method.

II. **Developed Markets**

Developed markets like those of the United States, United Kingdom, Netherlands, Finland show that they have little dependency on cash-based payments systems for their transactions. These developed nations have adopted the digital payments at a faster pace and have complete regulatory control to safeguard their consumers from fraudulent transactions.

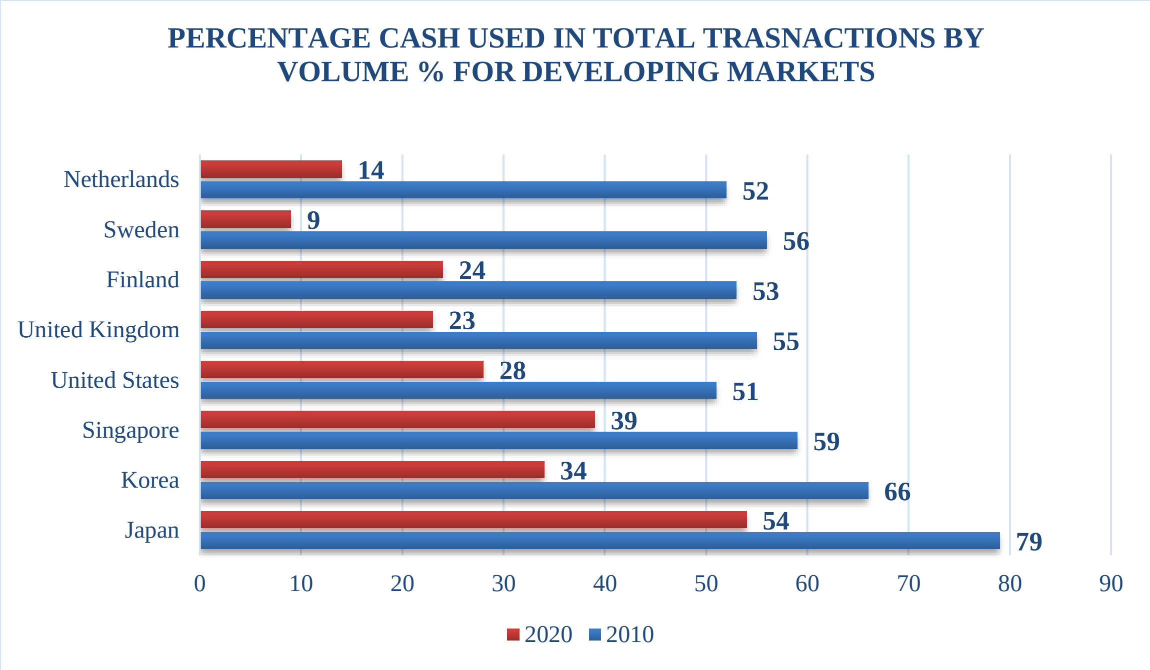

Figure 6 Percent of cash used in total transactions by volume, % Developing Markets

Source: McKinsey Global Payments Map

NATURE OF THE PROBLEM

The problem at hand for the project is the level of acceptance of digital payments in the country. As per the reports published by several consulting houses, India reports a net increase in the digital transactions in terms of volume and value. But is it really showing us the true picture as the acceptance level is still not that very high. To support this, I conducted a small survey contacting 150 respondents to fill out a questionnaire and the responses received indicated that more than 50% still prefer cash over digital modes of transaction. So we need to find out the reasons as to why the digital modes of payment are not the first preferred choice for payment.

OBJECTIVES OF THE STUDY

1. Understand the level of acceptance of digital payments.
2. Why is Rural India lacking in the adoption of digital mode of payments despite better internet penetration?
3. Do payment failures lead to back adoption of traditional methods of payment?
4. Do transaction charges impact the acceptance of digital payments as a mode of transaction?

UTILITY OF STUDY

The utility of the study is not limited to study the level of acceptance of digital payments but it will explore the shortcomings that make it difficult for people to adapt to digital mode of payment methods. Through this study, we will look to find answers to why people still rely on cash-based transactions and avoid or not use the digital methods for payments. This study will also help us give suggestions that could provide possible solutions to policymakers and the Reserve Bank of India to develop infrastructure and policies with the help of institutions to better facilitate people and make digital transactions more secure and reliable.

LITERATURE REVIEW

Niti Aayog and MasterCard in collaboration released a report titled "**Connected Commerce: Creating a Roadmap for a Digitally Inclusive Bharat**". The report identifies the key gaps and challenges in the accessibility of digital services and accelerating the financial inclusion digitally in India. It also provides recommendations to make the digital services being made available to the 1.3 billion people of India. The report highlights key issues and challenges with a prime focus on certain sectors such as the agriculture sector, small businesses (MSMEs), urban mobility, and cybersecurity. The key issues that are discussed in the report are:

1. Digital financial inclusion to be done at an accelerated pace for the underserved section of the society.
2. To make innovations and changes in technology and policies to foster continued growth in digital banking, create trust, and increase cybersecurity.
3. To unlock the potential of digitizing the Indian agriculture sector.
4. To study the important elements of the digital roadmap to make it easily accessible to the people of India.

The report also highlights how India should build resilient systems and changing business models in the post-covid era. It also tells how the new emerging Fintech players along with the conventional financial service providers will be the key in transforming the way digital transaction's function and also make digital modes of payment accessible and affordable for all.

Source: "Connected Commerce: Creating a Roadmap for a Digitally Inclusive Bharat" by Niti Aayog

The Vision 2021 document published by the Reserve Bank of India is based on the theme- "**Empowering Exceptional (E) Payment Experience**". The vision statement for the same reads that the main focus of the RBI is to provide and empower every citizen with a variety of e-payment services that are safe, secure, convenient, and affordable. The Vision document mainly focuses on building upon the already established network of digital infrastructure and strengthening it further to be able to provide safer, quicker, and affordable digital services to each and every citizen of India. To achieve its goal, the Vision document mainly focuses on 2 approaches that will enable access to citizens:

1. Providing customers with great experience

2. Building an ecosystem that will be able to provide exceptional customer experience.

To achieve the goals of providing access to every citizen, the Vision 2021 focuses on 4C's- Competition, Cost, Convenience, and Confidence. With many new Fintech players emerging in the digital payments space, regulatory frameworks must be established that enable a level playing field for all the players which will lead to providing the digital payment services at affordable costs to the customers. So, the 4C's together will enable the digital service providers to reach every corner of India and provide digital services to each and every citizen of India.

Boston Consulting Group (BCG) in association with Google published a report titled "**Digital Payments 2020**". The report compares the growth of the Indian Digital Payments in comparison with the Global Digital Payments. The Indian Digital Payments is rising on account of several shifts which have been observed recently out of which improvements in the technology, deeper penetration of internet services to rural parts of India, higher penetration of smartphones and availability of internet on mobile are the key enablers for the rapid growth of digital payments in the Indian scenario. The convenience and affordability of digital payments services coupled with increased discounts, deals, and offers make digital payment options a viable one for the customers. To cater to these demands, many new Fintech players emerged in the market that provides digital payment services at affordable prices and services that are safe and reliable.

Some of the trends that were observed by the BCG and Google are:

1. Technology will make digital payments simpler
2. The merchant acceptance network will grow 10X by the year 2020.
3. Modified UPI will be the game-changer in the digital payments space.
4. Consolidation of different services and providing customers with fewer payment solutions will lead to ubiquity.
5. FinTech's need to look beyond payments and offer wider financial services digitally to the customers.

All the reports that have been mentioned focus on the sole responsibility of making India Digitally Enabled and providing better access to digital payments to the customers.

METHODOLOGY

APPROACH

The study design is based on a qualitative approach. The whole study has been predominately carried out by the use of secondary sources which are available in the public domain. A short questionnaire was used as a primary source of data for collection of data to determine the level of acceptance of digital payments. The survey consisted of 150 respondents. The other data was extracted from data sources and analysis was done to study the acceptance level of digital payments and the transition of the economy from cash-based to less cash economy.

SOURCES OF DATA

Data for the project was collected through both primary and secondary sources of data. Primary data was collected through a questionnaire with a sample size of 150 respondents. The questionnaire was to judge the level of acceptance of digital payments in the society. The data collected from the primary source form the base of the project. The secondary sources of data used for the data collection were extracted from government websites like Reserve bank of India, Niti Aayog, and others as mentioned in resources. Also, various research articles from library resources like EBSCO were used to collect data. Articles from various newspapers like the Economic Times, Business Standard, Live Mint, etc were used to collect data.

METHOD OF DATA COLLECTION

The data was collected through responses from the primary source- questionnaire and also by reading and analysing the secondary sources of data that were available in the public domain.

SIZE OF SAMPLE AND METHOD OF SAMPLING

The sample size for the survey conducted through the questionnaire was 150 respondents. The questionnaire was floated among people belonging to various age groups to get data regarding the ease of access to digital modes of payments among various age groups. The method of sampling for the survey was the probability sampling method under which the sample was chosen randomly from different age groups. The secondary sources of data used the non-probability sampling method under which purposive sampling was done to choose the data sources through expertise that could give detailed knowledge and facts about the topic.

METHOD OF DATA ANALYSIS

As this is a purely qualitative study, the analysis of the data that was studied is represented as findings. This was done by properly observing, understanding, and analysing the data. Since the data was to be represented in its true form no editing has been done. The sources for the data have been mentioned under the Bibliography section.

PRESENTATION OF DATA

PRIMARY STUDY– SURVEY RESULTS

The primary objective of conducting the survey was to gauge the level of acceptance of digital modes of payments among the people. The survey focussed mainly on the user's awareness, usage patterns, risk perceptions, and the issues faced while using digital modes of transaction. The survey used the probability sampling method to choose the respondents for the survey. A sample size of 156 respondents from age groups greater than 10 years was chosen as the prime respondents to the survey from varied backgrounds.

Sample Size: 156 responses

Age:

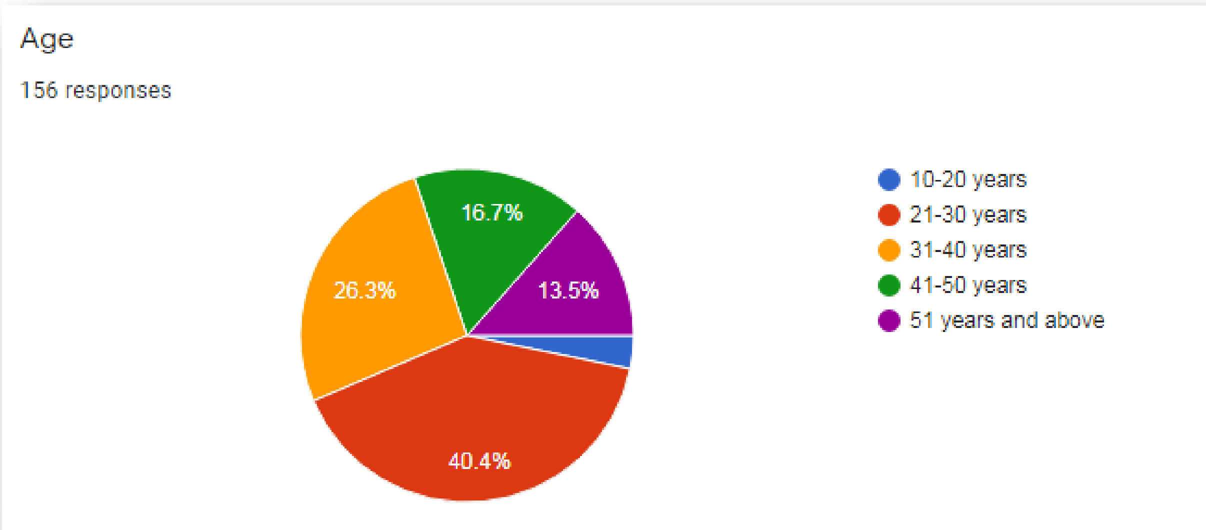

Figure 7 Age mapping of respondents

Of the 156 respondents that filled up the survey, 63 respondents (40.40%) were in the age group of 21-30 years of age. People in the age group 21-30 years are more inclined towards digital modes of payments due to their ease with access to internet facilities and familiarity with the online modes of transactions.

26.3% of the people in the age group 31-40 years, 16.7% in the age group 41-50 years, 13.5% in the age group 51 years and above, and the remaining 3.2% in the age group 10-20 years

Do you use digital modes of transaction for payment?

The first question asked to the respondents was whether they used digital modes of payment for their transactions. Of the 156 responses received, 76 people (48.7%) responded positively to the question i.e. they were using some or the other means of digital method of payment to do their transactions. The remaining 51.3 % of the people didn't use any mode of digital payments for their transactions. This clearly shows that there is a lack of penetration of digital transactions due to fear of fraud and unauthorized payments and also a lack of knowledge and awareness among people.

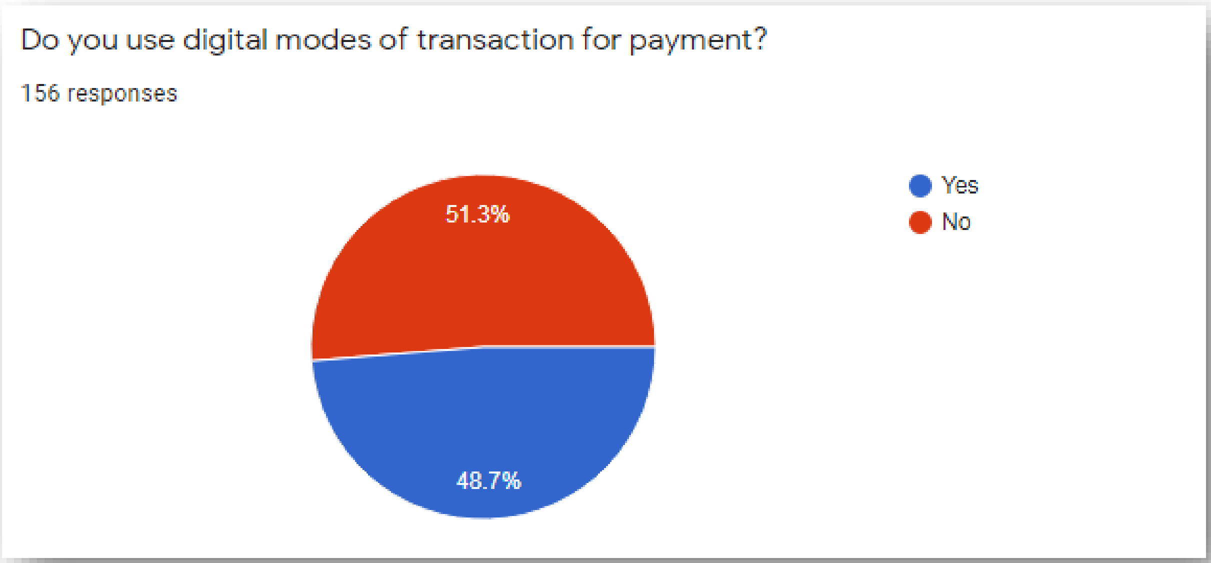

Figure 8 Percentage of people using/not using digital modes of transaction

What is the frequency of transactions using digital modes?

The respondents had to choose from the set frequency modes that had been defined. The responses as received have been depicted below.

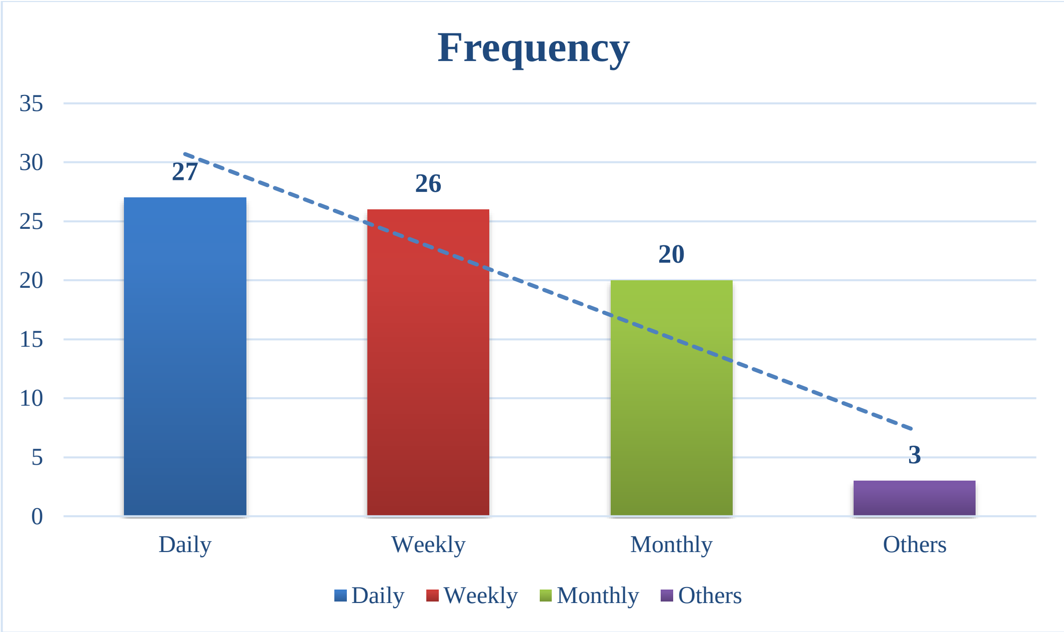

Figure 9 Frequency of usage of digital modes of payment

We can see that transactions majority of the respondents use digital modes of payments at least once a week and often daily. We can infer that digital modes of payments are used at least once a month by the majority of users.

How many transactions do you perform in a month using digital modes?

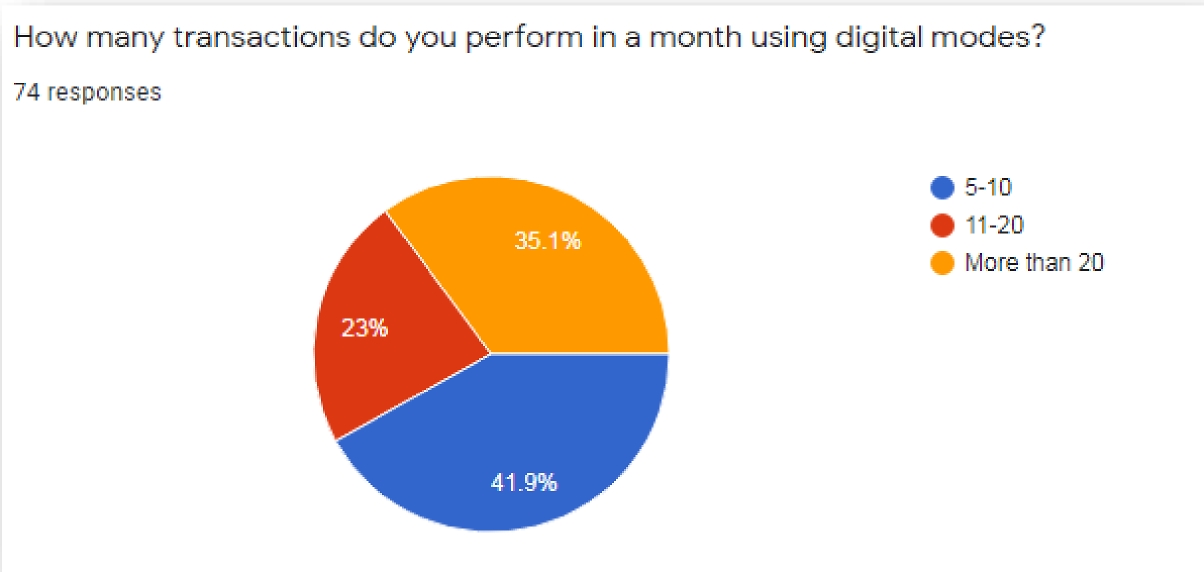

Figure 10 Number of transactions performed using digital modes

If we see the monthly transactions being performed by the respondents, we can see that on average people perform 15-20 transactions in a month using digital modes of payment methods.

What is the preferred mode of a digital transaction?

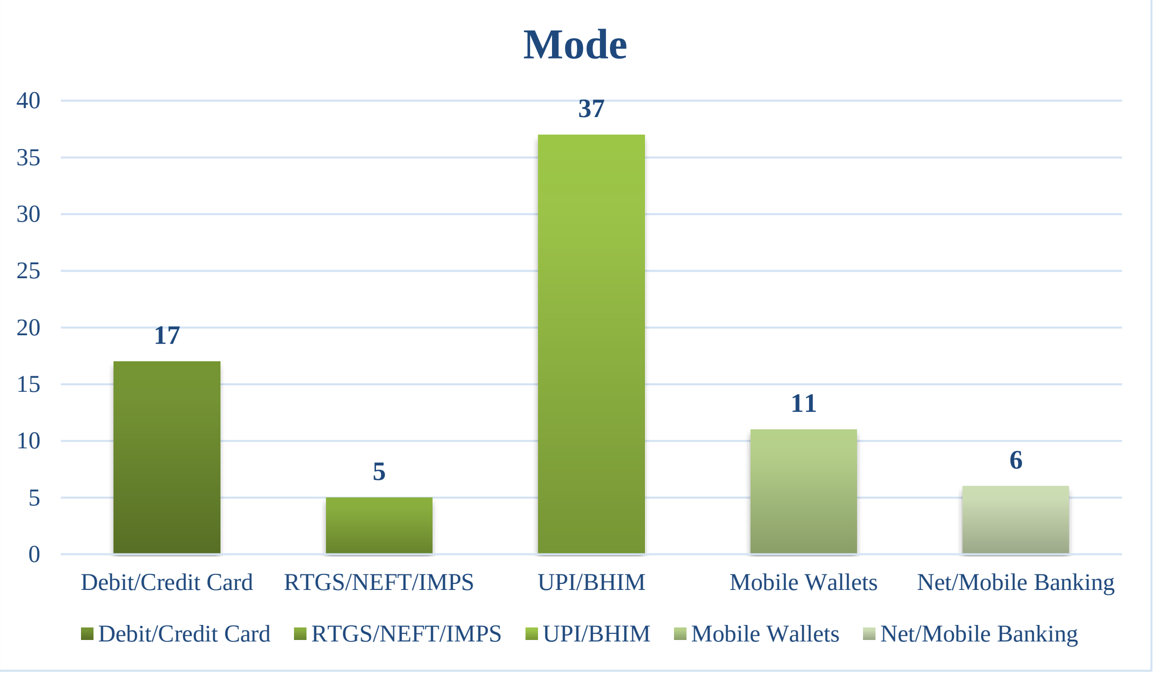

Figure 11 Mode of payment

The most preferred way of digital transaction for the majority of users is UPI/BHIM Wallet, followed by Debit/Credit Card transactions which are followed by Mobile Wallets, Net/Mobile Banking, and the RTGS/NEFT/IMPS.

Do you find digital transactions safe? Rate on a scale of 1-5 with 1 completely unsafe and 5 completely safe.

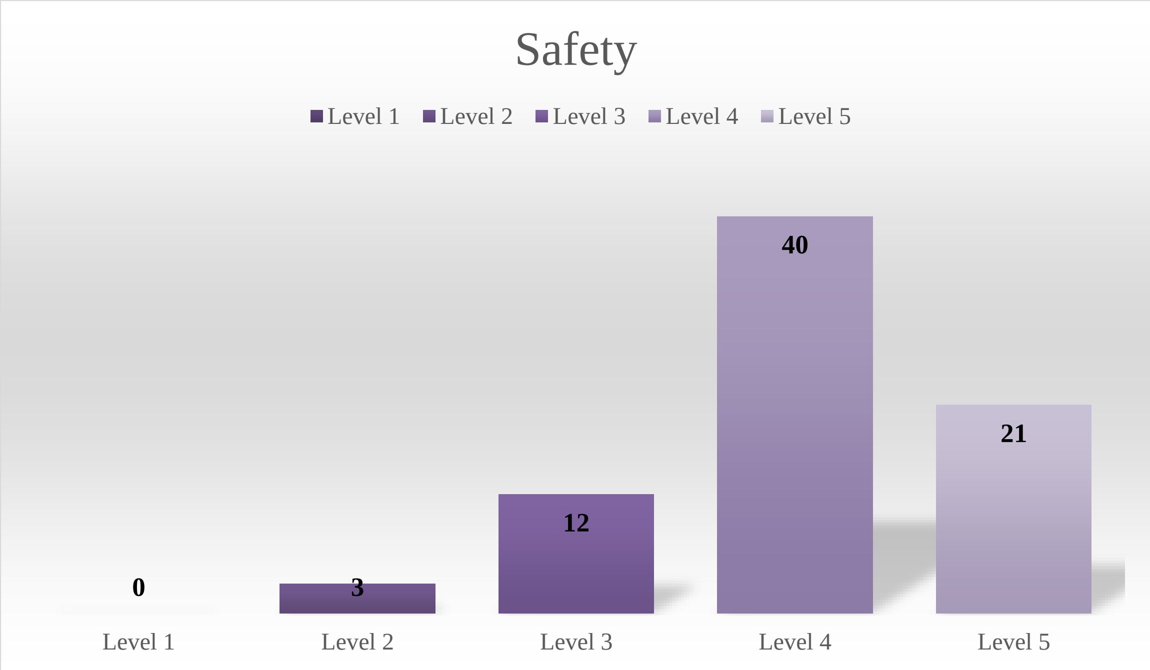

Figure 12 Safety rating mapping

The majority of the respondents were comfortable while transacting online. 40 people (52.6%) showed confidence in the safety associated with the digital modes of payments. They find digital transactions safer and more reliable to transact as compared to the traditional method of payment. Moreover, the ease of access offered by digital payments makes it the most reliable mode of payment among people.

Have you ever faced digital transaction failure?

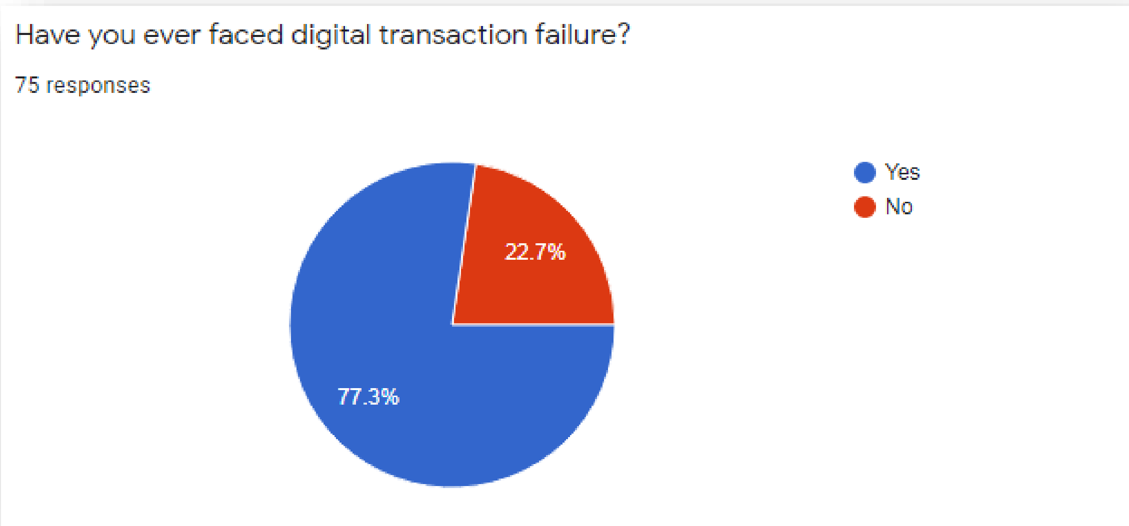

Figure 13 Percentage people who faced digital transaction failures

The majority of the respondents have at some point of time during digital transactions faced transaction failure. The transaction failure rate in India stands at 3% as of September 2020, in data released by NPCI. The data corresponds to 10 banks of the top 30 banks in India. To improve user experience and to work towards more digital acceptance by the people, we need to work on providing a better user experience so that people can continue using the service and don't fall back to traditional means of transaction.

SECONDARY DATA SOURCES

CASH WITHDRAWALS FROM ATM

One of the best measures to measure the cash transactions is the number of ATM withdrawals that happen using Credit/Debit cards at the ATM Machines. The cash withdrawals in terms of withdrawals from both credit/debit cards from the ATM have been increasing for the past 5 years. The sudden dip that we see in the FY 2019-20 and FY 2020-21 is on the account of the Covid-19 restriction that was imposed in the country. The country was under lockdown for most time of the year and people feared transacting at the ATM Machines fearing the spread of the coronavirus through the currency notes and also through ATM Terminal. The dip in the cash withdrawals during the FY 2019-20 and FY 2020-21 clearly indicates that other modes of transaction methods were used by people to do transactions.

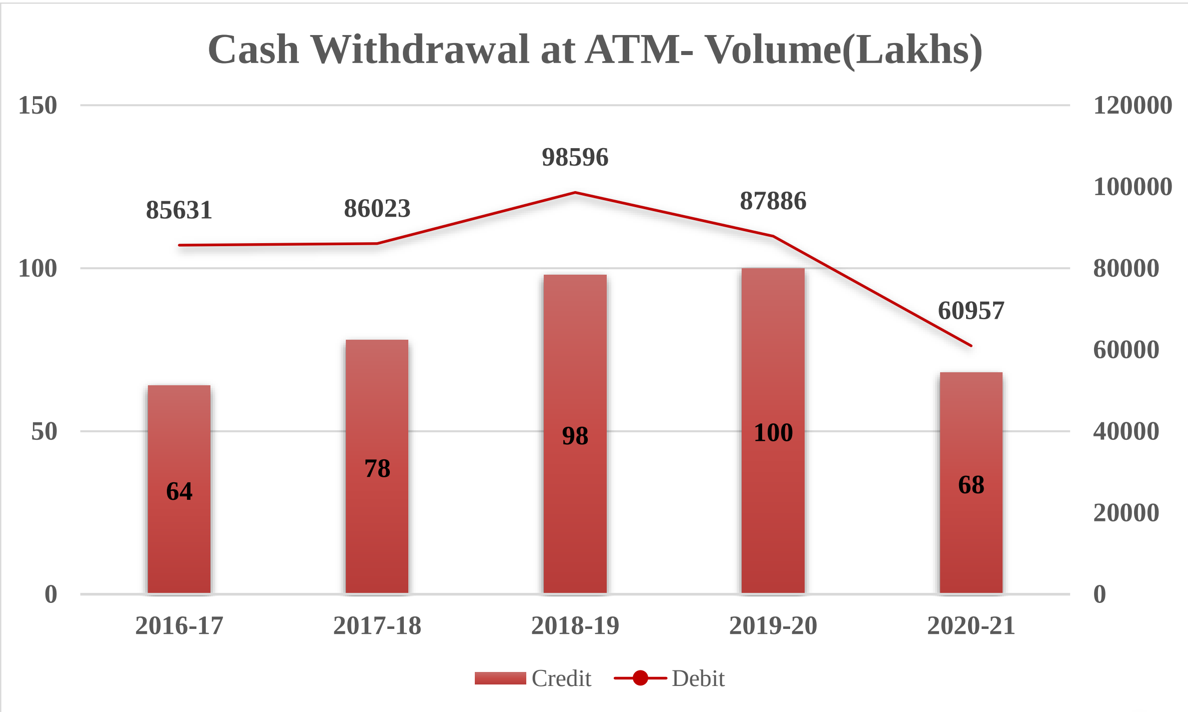

Figure 14 Cash withdrawal at ATM (Volume in Lakhs)

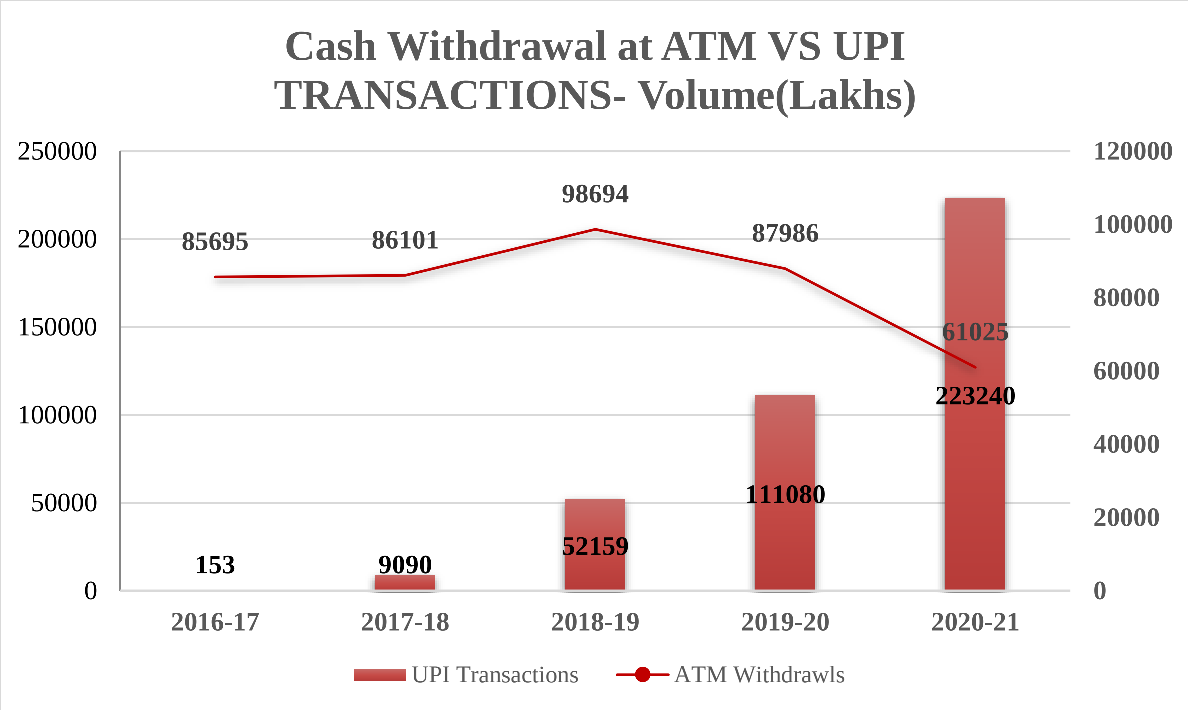

Figure 15 Cash withdrawal at ATM VS UPI Transactions

Source: RBI Bulletin

The above graph shows the comparison of Cash Withdrawals at an ATM using Debit and Credit cards VS UPI Transactions that have happened over the past 5 years. We can clearly see from the graph that with the introduction of UPI and UPI-based transactions by NPCI in 2016, there has been tremendous growth in the transaction volumes through the digital modes. The significant rise in the payments using the digital modes of transaction in the year 2019-20 and year 2020-21 can be mainly attributed to the onset of Covid-19 that halted the whole financial world and people were forced to sit inside their houses. Cash-based transactions declined due to no business conduct and people were left with no choice but to use digital modes of transaction for their daily needs. This in addition to heavy discounts and offers provided by service providers attracted customers to use UPI-based transaction methods. As per the report from The Hindu Business Line, in 2020 the transaction volume share in India stood at 15.6 percent and 22.9 percent for instant payments and other electronic payments respectively, while paper-based payments had a considerable share of 61.4 percent. As per the report published, it has been speculated that by 2024 the share of real-time payments volume in overall electronic transactions will exceed 50 percent. This will further touch 71.7 percent by 2025.

RURAL VS URBAN DIVIDE- A COMPARATIVE STUDY

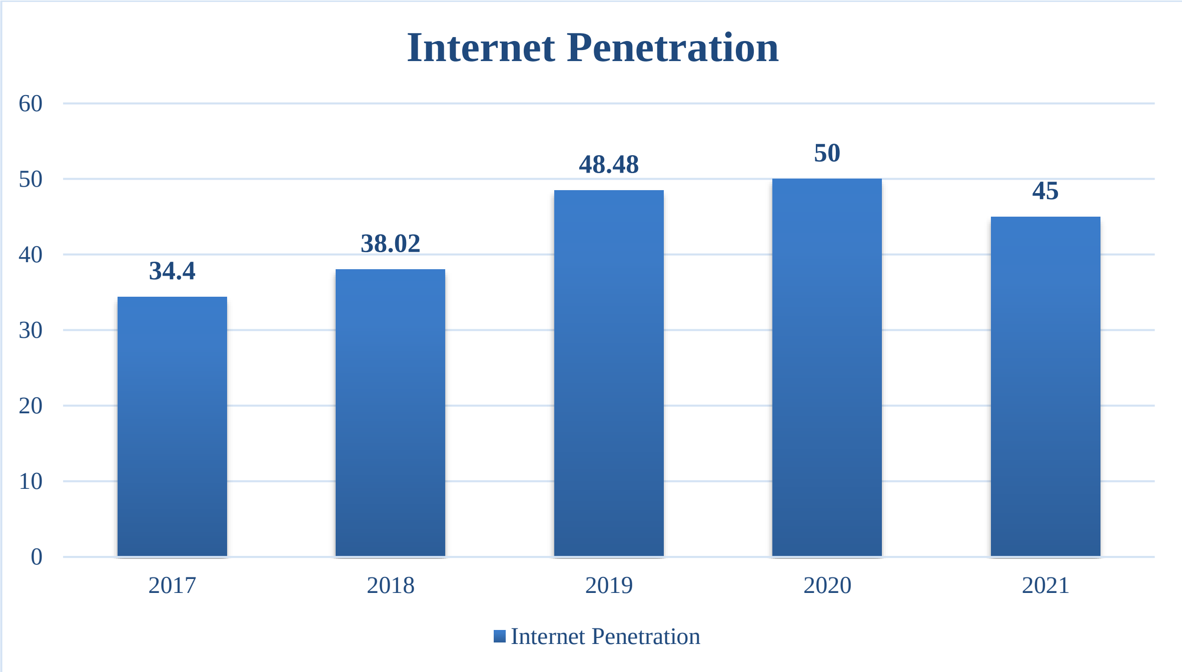

Figure 16 Internet Penetration in India

Source: TRAI Website

One of the main drivers for digital payments to be successful is the internet. Digital payments happen online using the internet as a medium to successfully drive the transaction from the payer's account to the payee's account. From the above graph, we can see that the internet penetration in India has been less than 50%. With more than 50% of people still without basic internet services, we cannot expand our user base for the digital transactions. The Digital India initiative by the Government of India aims at providing basic internet facilities and mobile connectivity in the remotest areas of India. With wider internet penetration and better connectivity, we can expand our user base for the digital modes of transactions and can achieve the targets of reaching 71.7% transaction volumes by 2025.

The extent of coverage of the schemes still lacks in the rural areas. There has always been a gap in terms of internet subscribers, education levels for both men and women in the rural areas as compared to urban areas. From the graphs below, we can clearly see the gap in the number of internet subscribers in both rural and urban areas. Though the number of subscribers has been rising with a CAGR of 23.06% in the rural areas and a CAGR of 11.60%, still rural areas lack in the adoption of digital payments. As per the report by the Internet and Mobile Association of India (IMAI), as of December 2019, only 16% of the people in rural areas access internet services for digital transactions as compared to 45% by the urban people. In terms of digital literacy also, India ranks 98 in the internet literacy index out of 120 nations. Poor digital infrastructure facilities and lack of digital literacy in rural areas lead to a huge gap and therefore people in the rural areas still rely on cash for their transactions. To bridge the wide gap between rural and urban India, we need to educate the people in the rural areas about the benefits of digital modes of payments and also implement schemes to teach the basics about the transactions methods, safety concerns associated with digital transactions and also how to perform digital transactions. Governments and financial institutions that are involved in providing such services must initiate development programs for the people in rural areas and must expand the user base in rural areas. Though the Indian economy cannot become completely cashless, but we can still move towards a less-cash economy and rely more on digital modes of payments and move away from cash-based transactions.

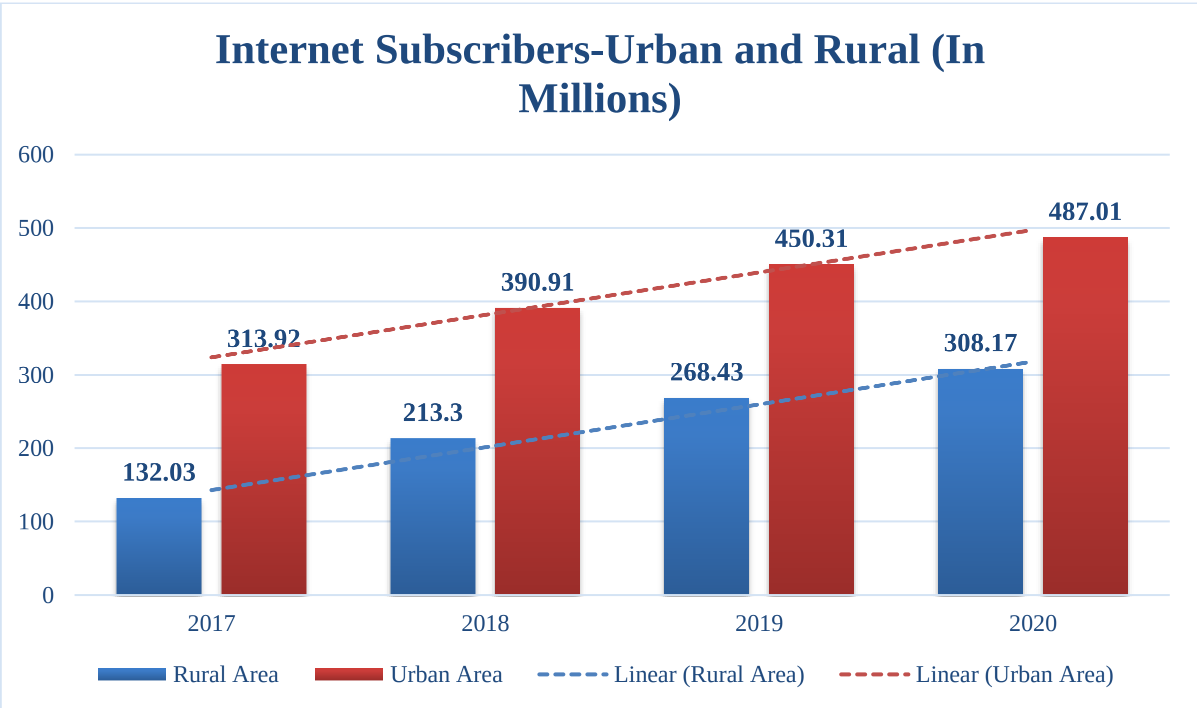

Figure 17 Internet Subscriber- Rural and Urban (In Millions)

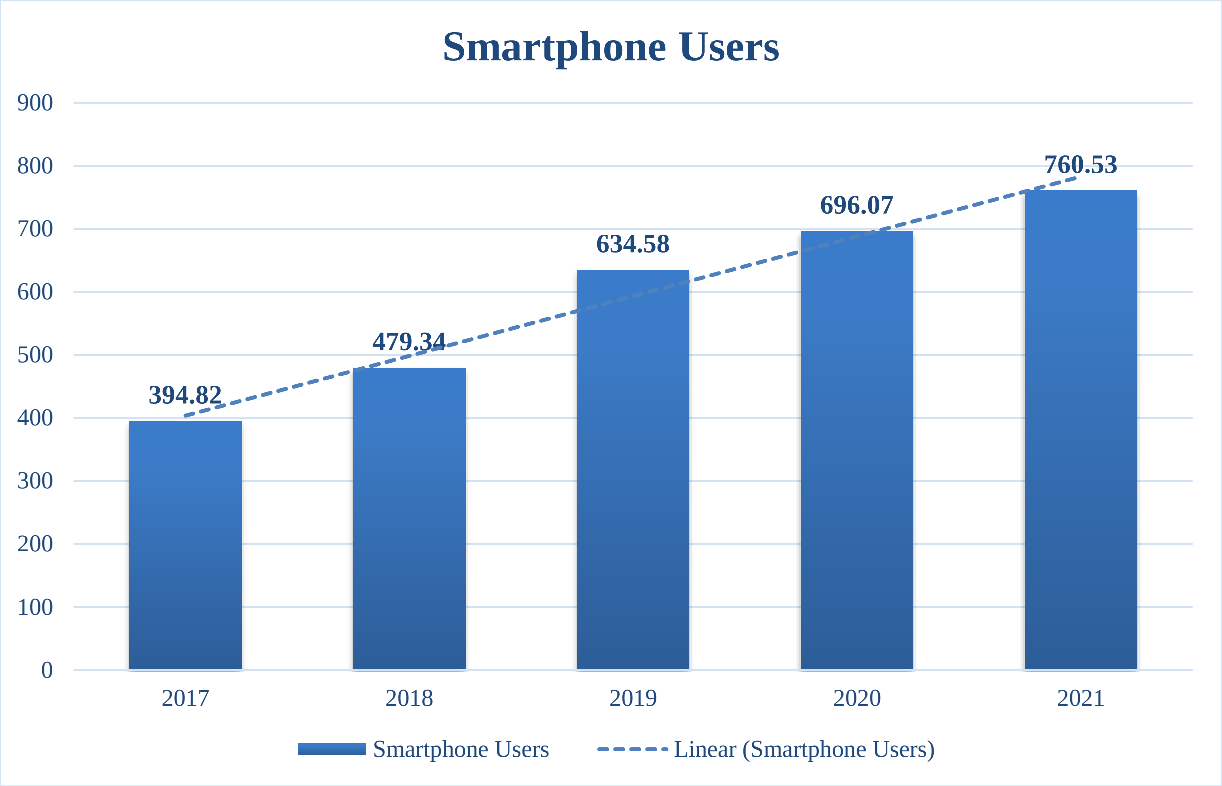

Figure 18 Smartphone Users in India

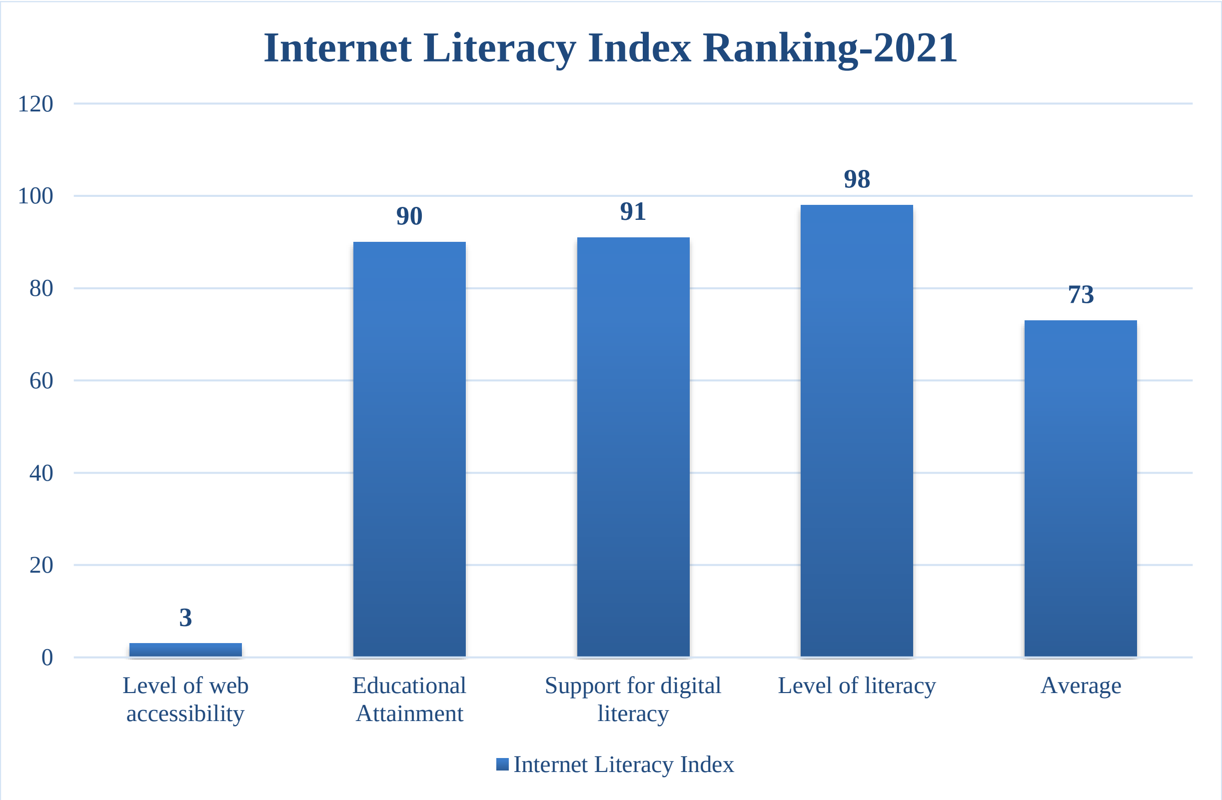

Figure 19 Internet Literacy Index Ranking - 2021

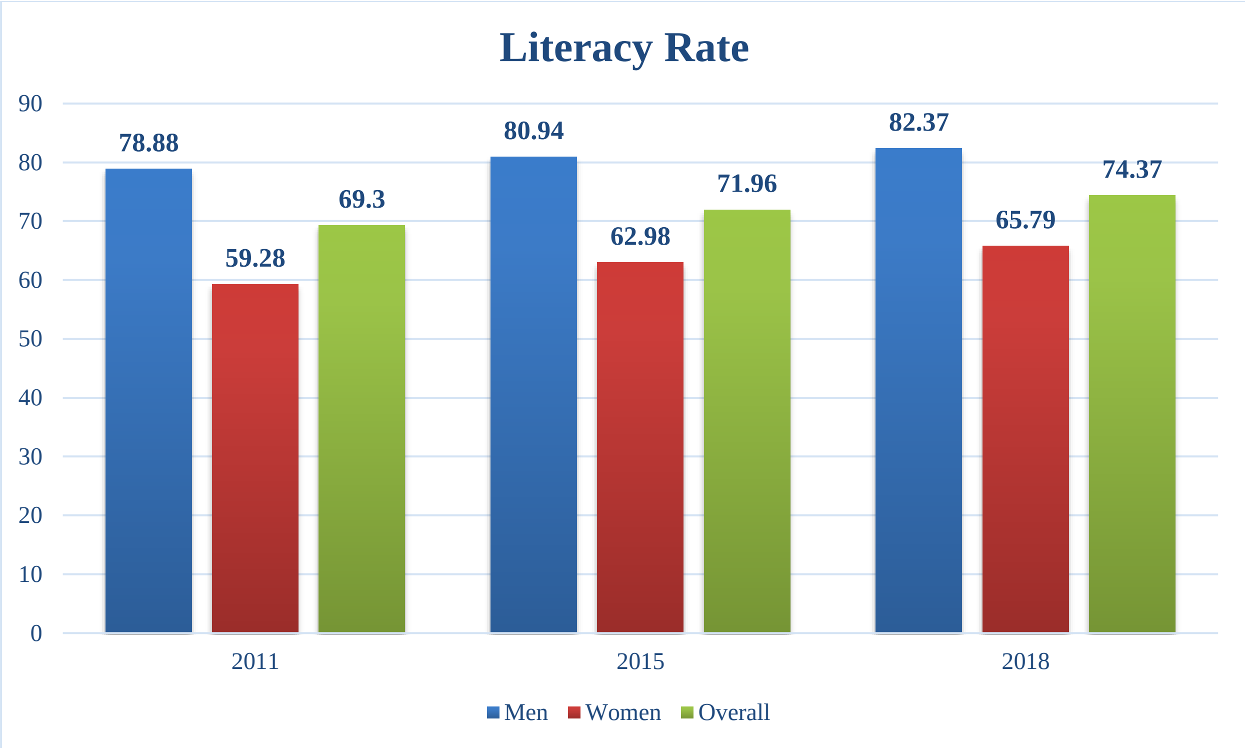

Figure 20 Literacy Rate in India

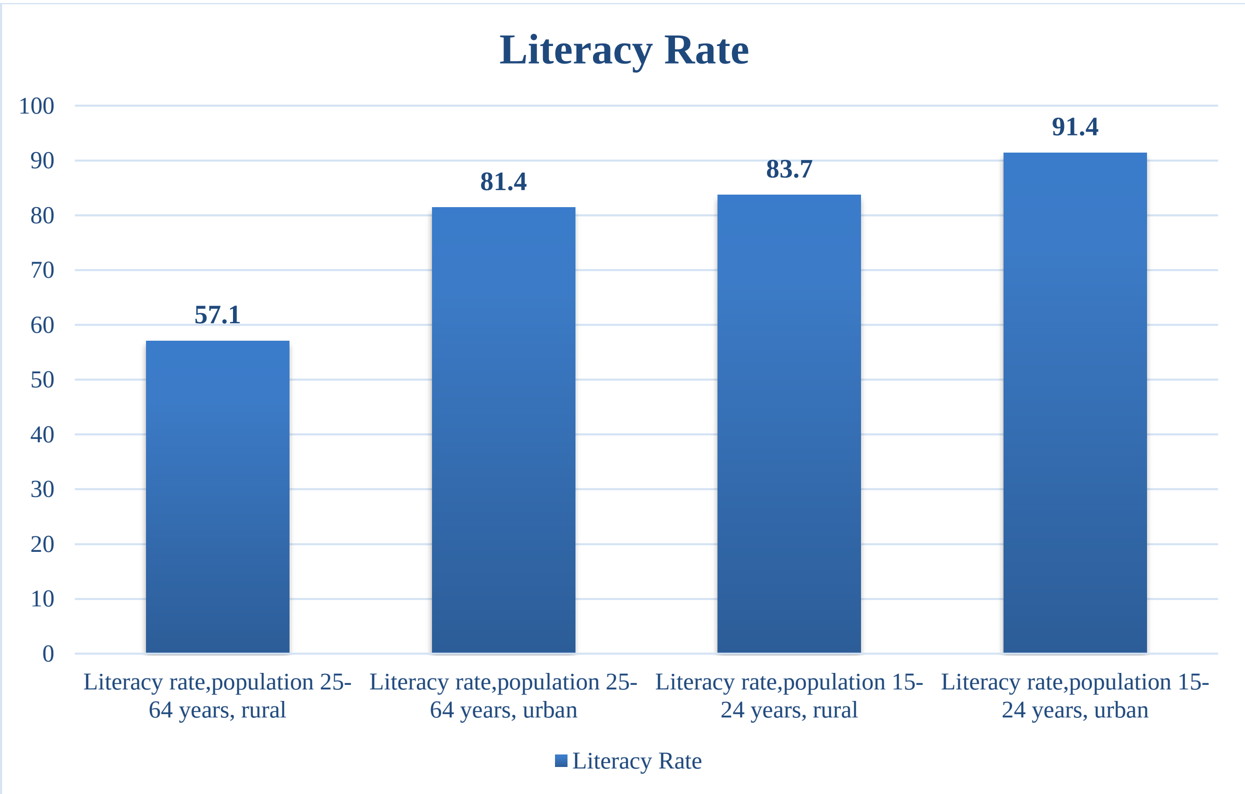

Figure 21 Literacy Rate- Rural-Urban Divide

DIGITAL ADOPTION IN INDIA- A STUDY BY NPCI

National Payments Corporation of India (NPCI) along with People Research on India's Consumer Economy (PRICE) conducted a survey covering 5314 households across 25 states of India. The survey was aimed to study the level of adoption of digital payments across different households belonging to different income groups. The households were divided into 3 income groups: (1) Lower Income Households, (2) Middle Income Households, (3) Higher Income Households.

Sample Households	Rural/Urban Split		Average Income of Household/Year
	Rural	Urban	
Bottom (40%)	80%	20%	Rs 1,10,000
Middle (40%)	60%	40%	Rs 1,80,000
Upper (20%)	45%	55%	Rs 3,60,000

Table 1 Household division according to income

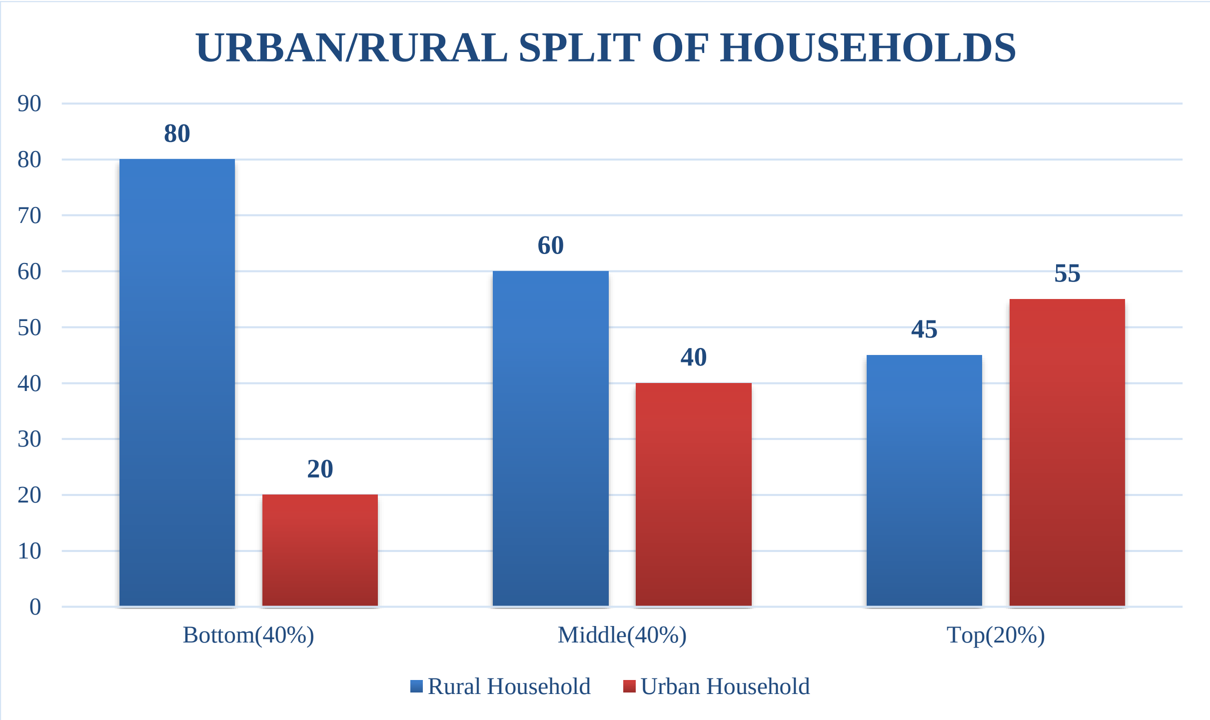

Figure 22 Urban/Rural Split of households

The survey results clearly show that the UPI-based transactions have gained traction and have been nurtured over time. People are slowly adapting to digital modes of payment methods but still, a lot of work needs to be done to further ease the access of digital payments. The survey suggests that overall, 59% of the total households surveyed have never used the digital methods of payments out of which the highest percentage i.e., 72%

belong to the bottom 40% of households clearly depicting that the reach of digital payments is still lacking in the rural areas. Poor infrastructure in terms of internet coverage, education levels, and internet literacy levels are the main barriers to the growth of digital payments. We also need to focus on 9% of the households who used digital modes of payments in the past but stopped using them. We need to address the issues that these people faced and restore their faith in the digital modes of payments. Some of the reasons that I got after surveying were that people faced transaction failures whereby money would get deducted and would take several days to refund back, bank server errors, and also poor internet speeds led them to switch back to cash-based transactions. Also, we can see that 14% of the households have never used it, but are willing to use it in the near future. Government and financial institutions providing services must come up with initiatives and schemes to extend the facilities to the remotest areas and also educate people on the benefits of digital payments. Also, they need to build confidence around the safety concerns which is of prime importance to increase the adoption of digital payments.

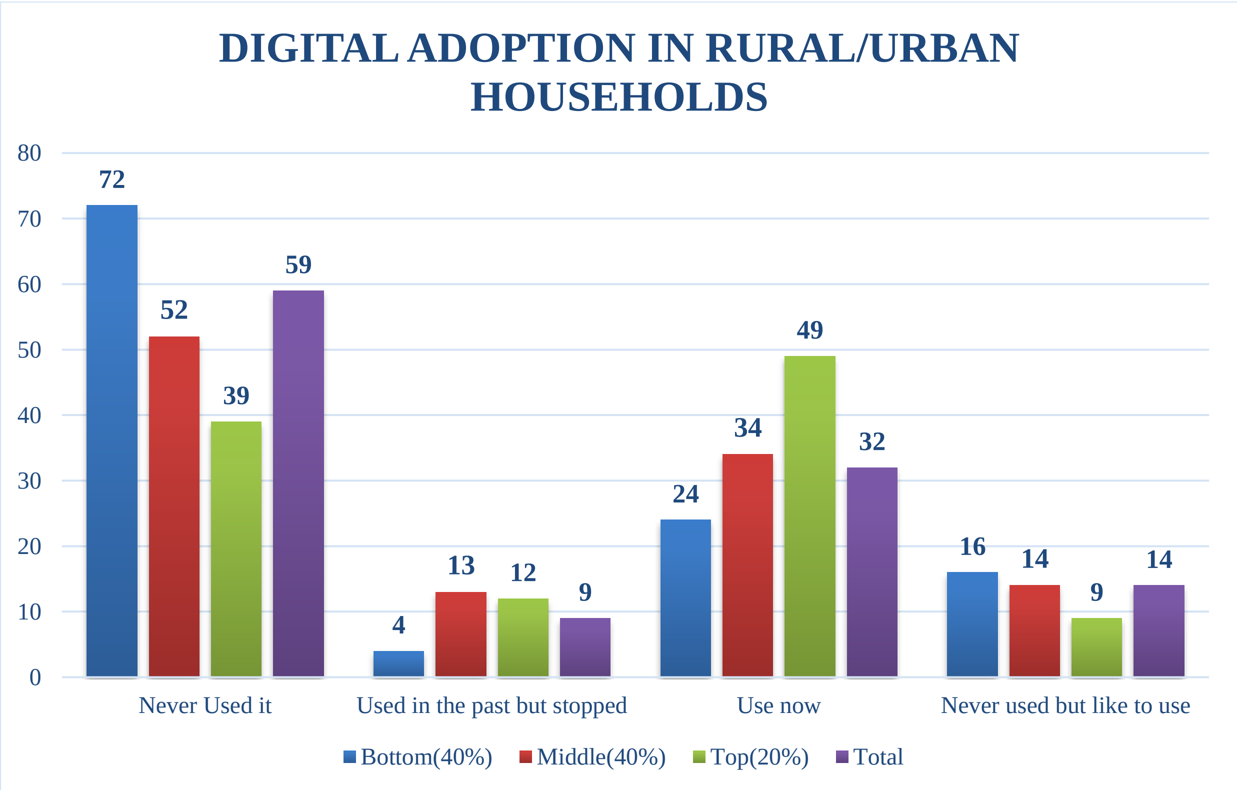

Figure 23 Digital Adoption in Rural/Urban Households

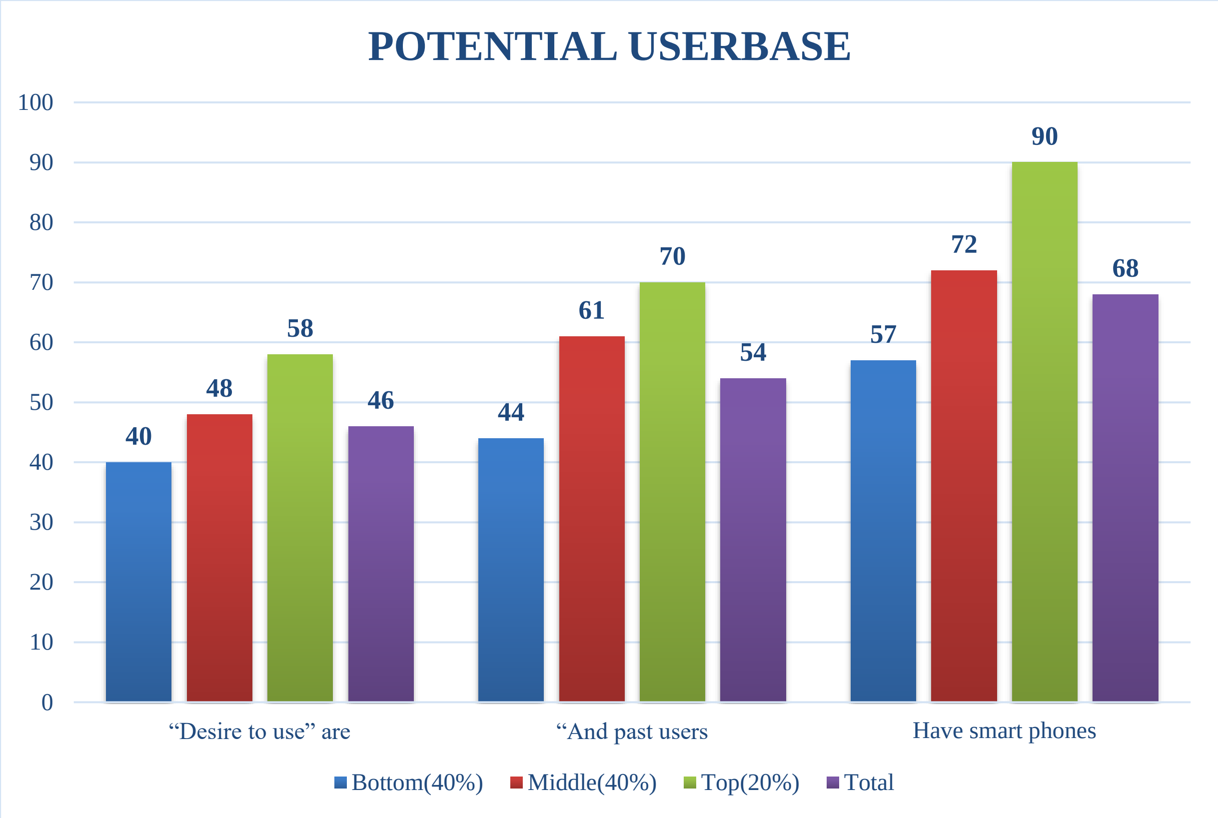

Figure 24 Potential User base

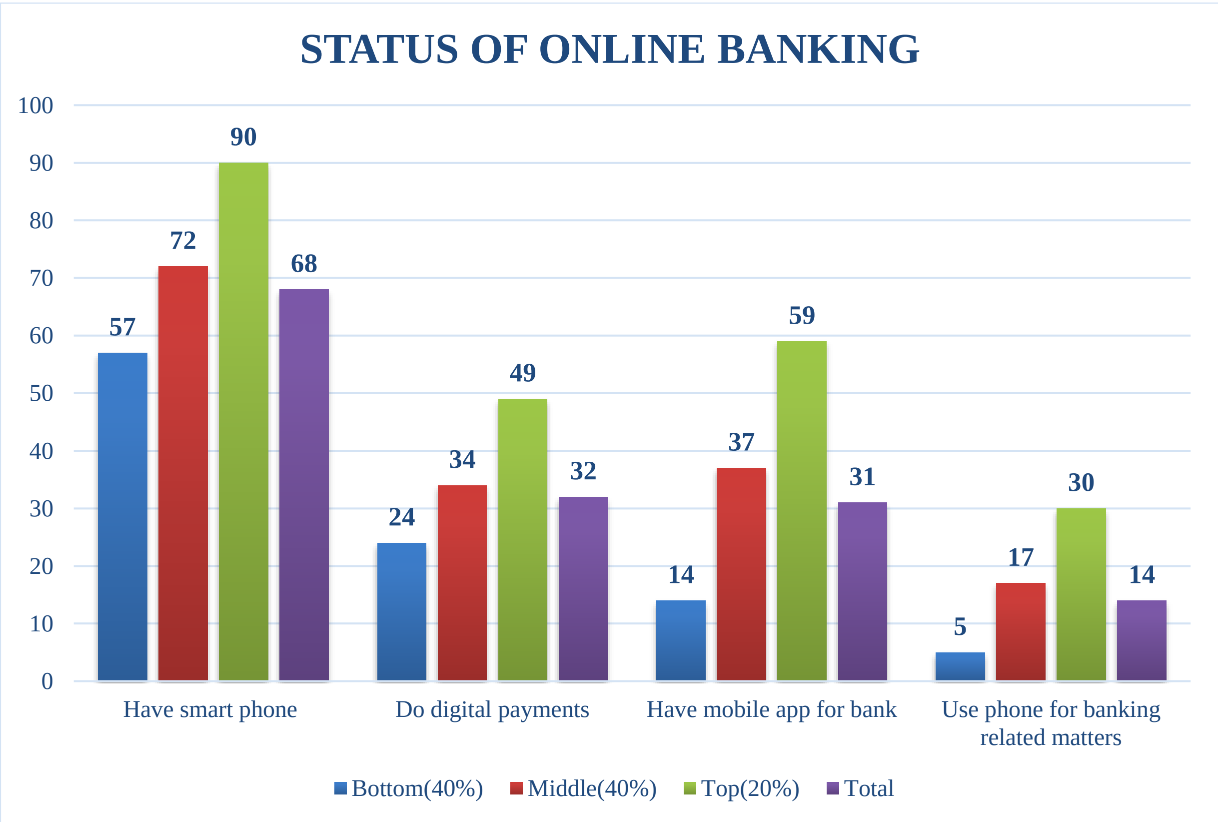

Figure 25 Status of online banking in India

The above two graphs depict the potential user base that can be made to switch from traditional payment methods to digital methods. As per the survey, 68% of the households have smartphone's which is one of the enablers of digital payments. Also, 31% of the households have mobile banking apps 46% of the households have expressed their desire to use digital modes of payments. With proper infrastructure and safety measures, we can promote digital payments in our country and move towards a less-cash economy.

IMPACT OF TRANSACTION FAILURES

To study the effect of transaction failures on the acceptance of digital payments as the means of transaction, we conducted a survey to know whether transaction failures lead to people switching back to cash-based payments. The results of the survey clearly depicted that transaction failures lead to behavioural change in the person and they tend to make a switch from digital modes of transaction to cash-based transaction methods.

SURVEY RESULTS

Have you ever faced digital transaction failure?

The survey was aimed at knowing the transaction failure rate and whether transaction failure leads to people switching to cash-based payment methods. The first question was to know whether the user has faced transaction failure or not. Out of 150 respondents, 76% of the respondents i.e., 114 users faced digital transactions at least once while transacting through digital modes of transaction. 24% of users said that they didn't face transaction failure and were satisfied using digital modes of transaction.

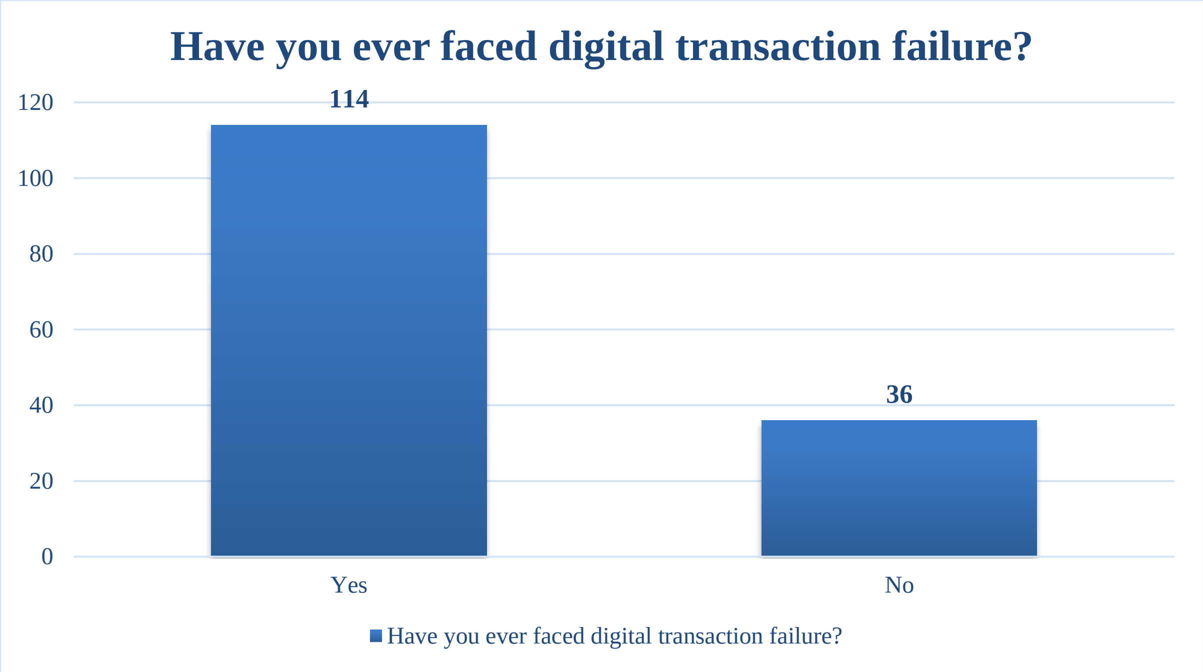

Figure 26 Number of people who either faced failure or not

What kind of failure did you experience?

As per the survey, the respondents were given a set of failure modes that would have encountered while transacting through the digital modes. The results clearly depicted that the failure mode in which the transaction occurred and money was deducted from the payer's account but the amount was not deposited in the payee's account. 36% of the users faced this issue and they had their money blocked in for a period of 7 days or more until the bank makes the refund. 26% of the users faced technical failure or bank server error respectively. 13% of the users faced other kinds of failures that could be technical or business failures.

Transaction Failure Reasons:

1. Technical Failures
2. Risk Assessment Failures
3. Customer Failures

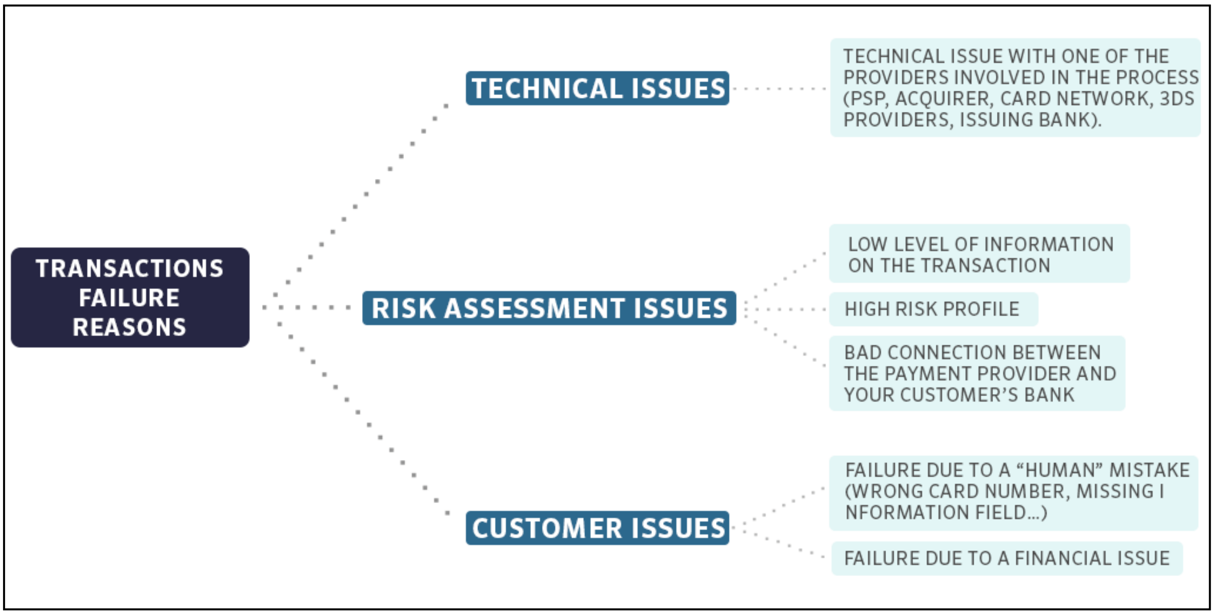

Figure 27 Transaction failure reasons

Image Source: https://www.processout.com/blog/why-transactions-fail/

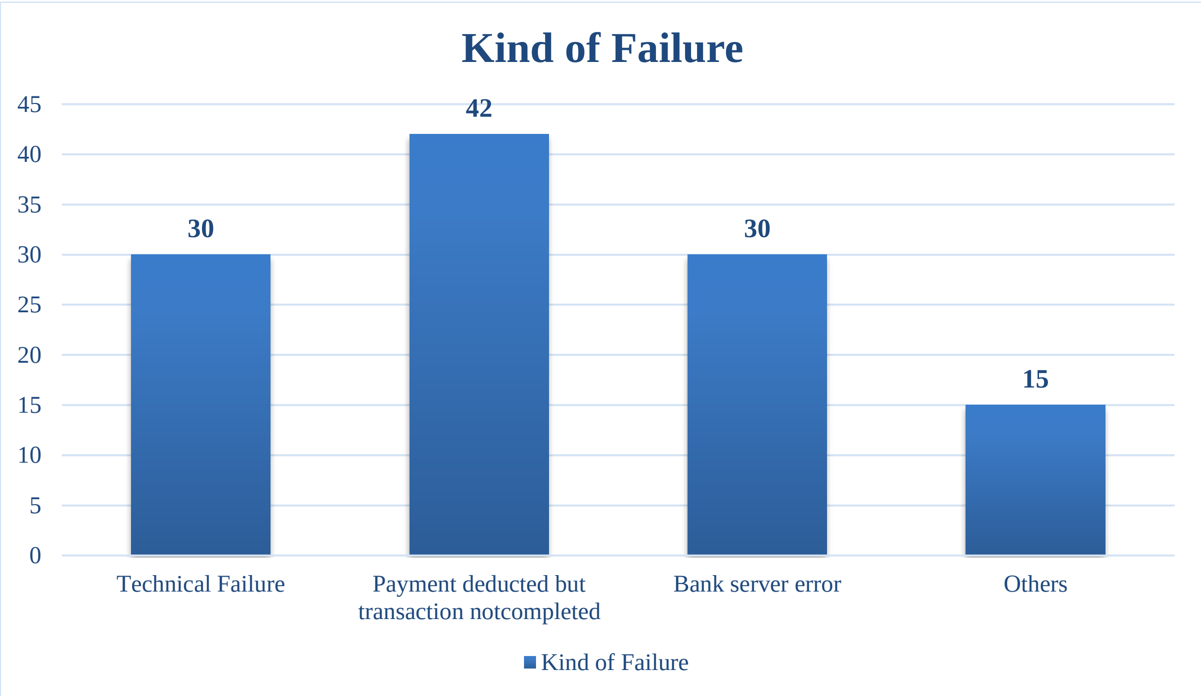

Figure 28 Kind of failure people faced

Did you face a problem with refund processing?

According to the survey results, 65% of the respondents faced problems while the banks processed the refunds. Users have to wait for 3-4 working days or even more to get their refunds processed. The refund process needs to be streamlined and immediate refunds should be processed so that people do not have to transact multiple times. 35% of the users were satisfied with the refund procedure but asked for further improvements.

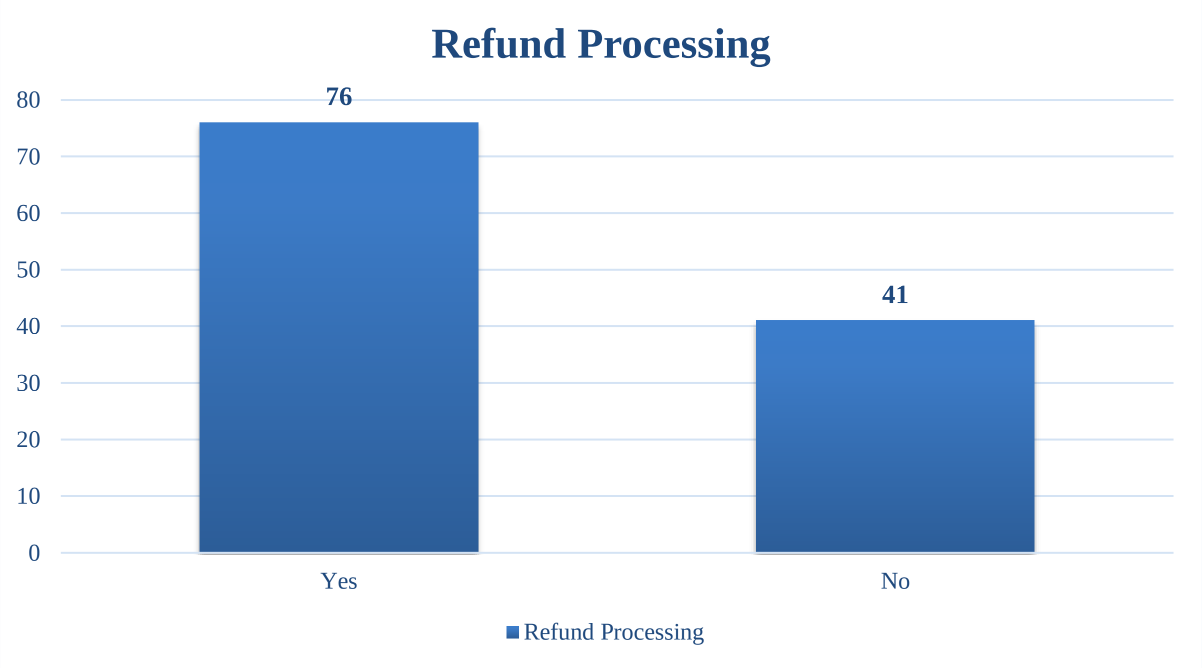

Figure 29 Refund Processing Mechanism

Was there any technical support to help you with refund processing? If yes, was the technical support helpful?

Technical support or the customer care numbers provided by the banks help users in assisting them with any kind of assistance they may require during the usage of services provided by the operator. Customer care representatives help users with ways to get their queries solved. Mostly every service provider provides the user with customer care numbers to help them with any technical support required during the transaction. 94% of the people agreed to have used technical support for the refund processing, out of which 65% of the users felt that the technical support was helpful. 21.8% of the users felt that sometimes the assistance was helpful sometimes not. 12.7% of the users felt that the assistance was not useful.

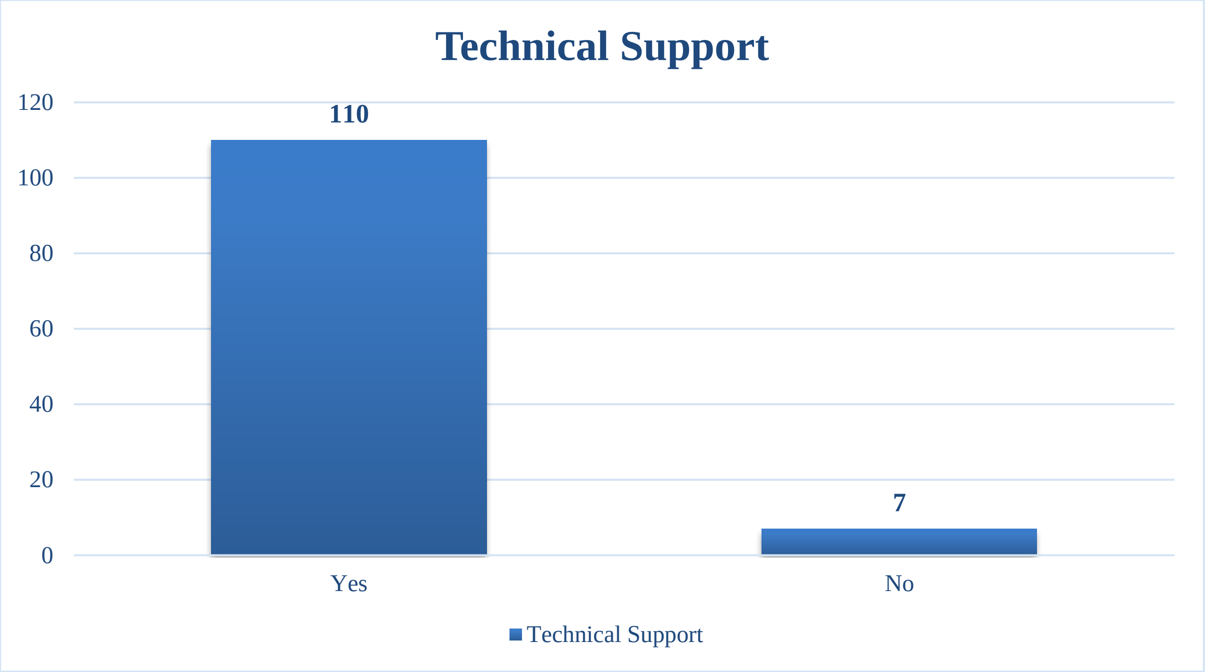

Figure 30 Number of people using technical support

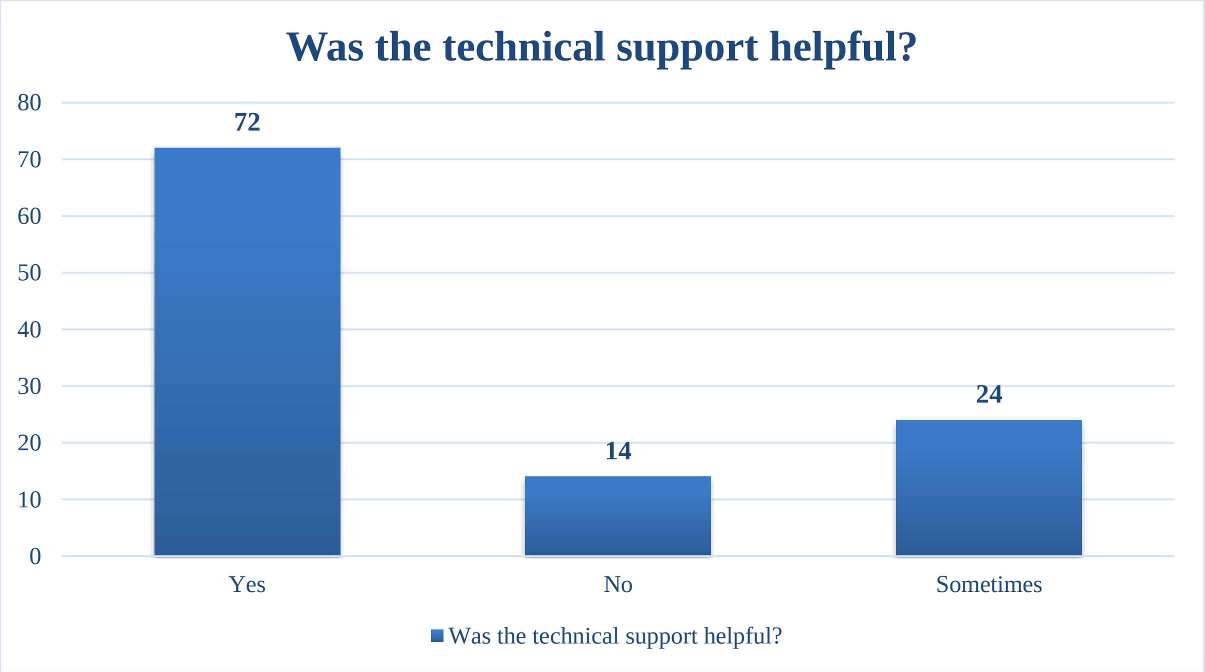

Figure 31 Number of people finding technical support helpful/not helpful

Did the transaction failure make you switch back to cash-based transactions?

Around 68% of the respondents responded that they would switch back to cash-based transactions due to the failure of transactions. Transaction failures tend to make customers lose trust and reliability in the digital modes of transactions. To better facilitate the users, the service providers must ensure error-free transactions and quick redressal of failures.

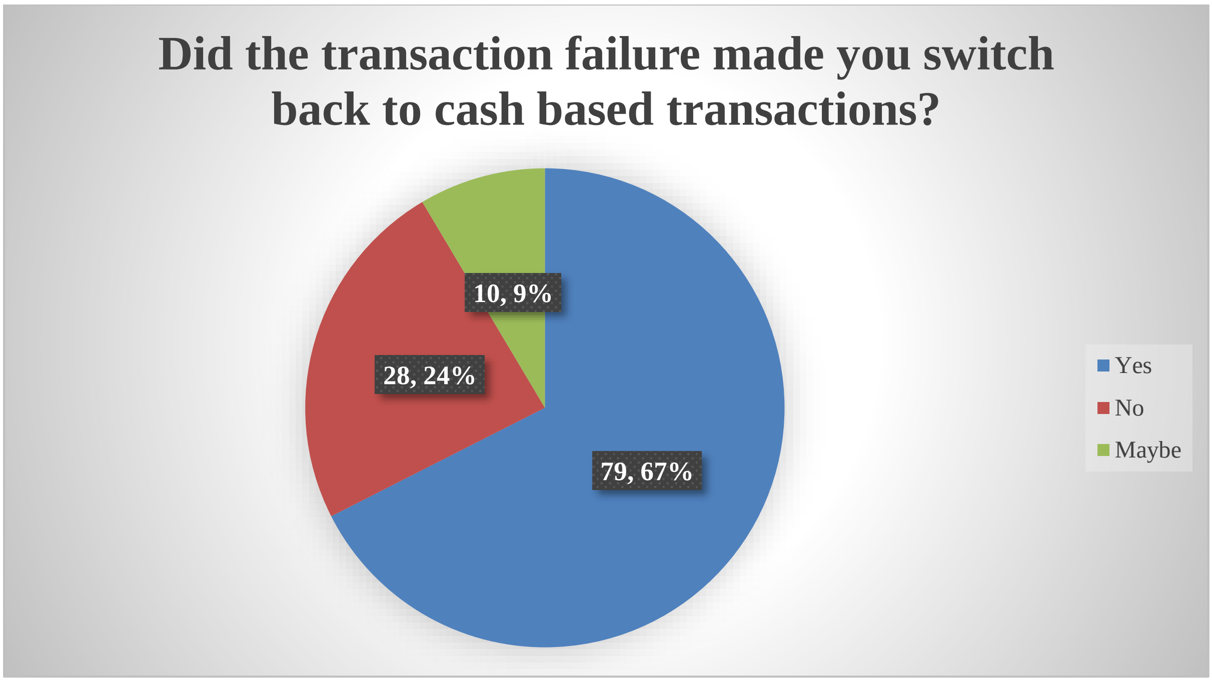

Figure 32 Number of people willing to switch to cash-based transactions

Would you switch back to digital transactions if improvements are done?

The survey results depicted that if improvements are done, users are willing to switching back to using digital modes of transaction. 77.2% of the users agreed that they will switch back to using digital modes of transaction if failure rates are reduced, proper infrastructural requirements are met and safety and security are provided to users. 22.8% of the users didn't want to switch back even if improvements are done.

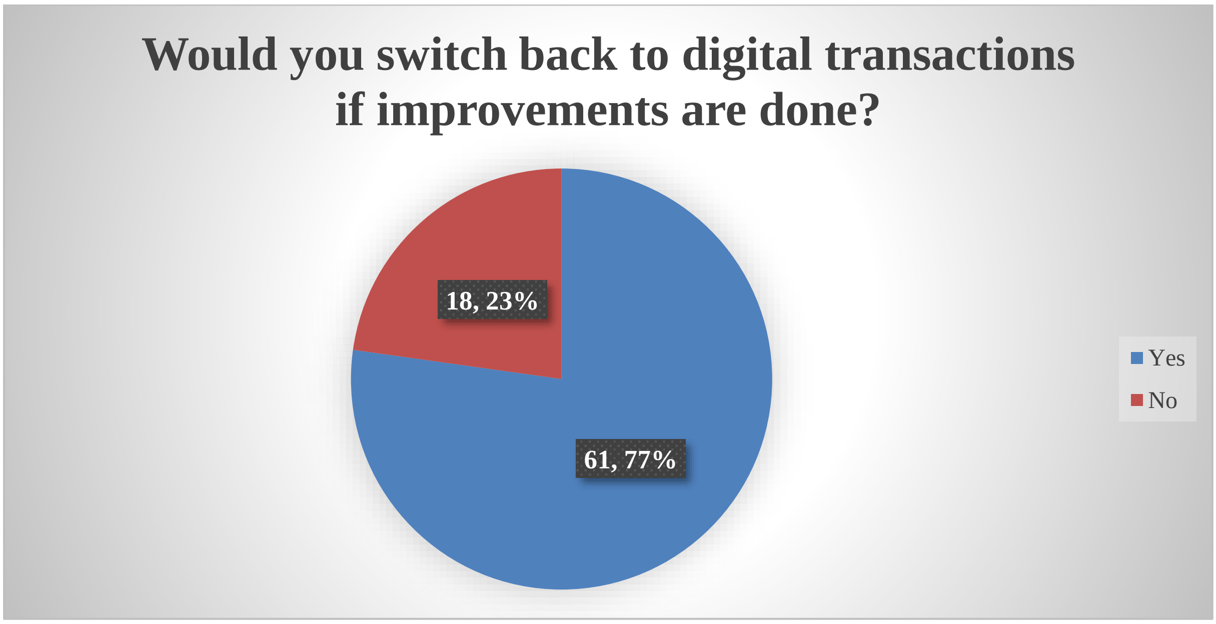

Figure 33 Comeback to digital mode if improvements are done

According to a survey by ACI Universal Payments and YouGov, 44% of the people consider the failed transaction as one of the major concerns while transacting digitally. Failed transactions lead to behavioral changes in the people who think of switching back to traditional methods to avoid the hassle caused due to failed transactions.

AREAS OF CONCERN

When it comes to digital payment methods (UPI and eWallet/digital wallets), do you consider any of the following as areas of high concern?

Failed transactions	44%
Problems processing refunds	30%
Lack of acceptance infrastructure - either online or at the merchant locations	15%
None of the above, I have no concerns about digital payments	13%
Inconvenient compared to physical cards or cash	12%
Poor internet conectivity	32%
Fraud	30%
Privacy of date	37%
Assocoated fees or lack of clarity about fees	15%

YouGov ACI UNIVERSAL PAYMENTS.

Figure 34 Areas of concern in digital modes

IMPACT OF TRANSACTION CHARGES

Transaction charges are levied by the service providers to the consumers for the service that is offered from their platform. Transaction charges are the charges that are attributed to that particular mode of payment. When we transact digitally through different modes, we are charged a certain percentage of money for using that service or the platform that is provided by the merchant or the financial intermediary facilitating the merchant for providing that service. Before January 2020, NEFT and RTGS services provided by the Reserve Bank of India were charged, but starting January 2020, transaction charges on both the service were made zero by the RBI to support India's transition to a less cash economy and to make people switch to digital modes of transaction. These services were also made available 24*7*365 days in the year and free of cost. UPI and BHIM UPI launched by NPCI also didn't levy any transaction charges from the customers for using their platforms. Nil transaction charges definitely impact the growth of the service as more and more people tend to use those services for performing transactions. NEFT and RTGS transaction volumes increased after the removal of transaction charges, similarly with the waiving of MDR charges, UPI and BHIM UPI transactions grew manifolds.

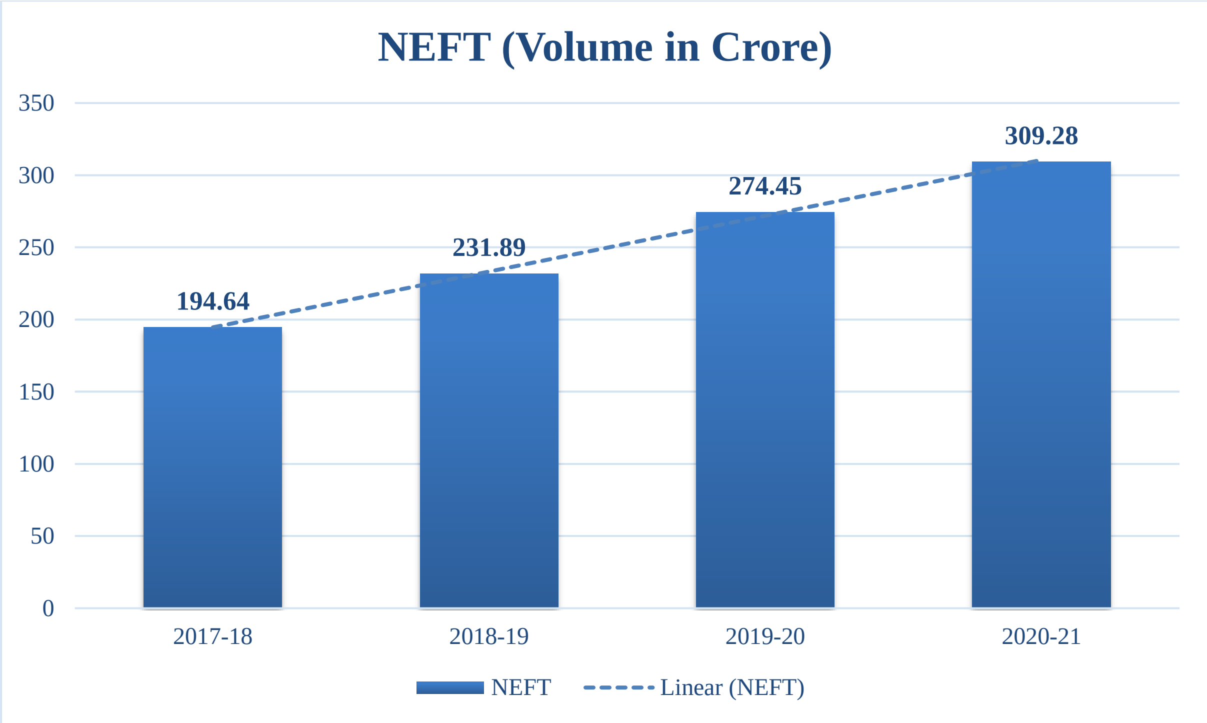

Figure 35 NEFT Transactions (Volume in Crores)

NEFT Transaction volumes showed 12.27% CAGR growth from 2017-18 to 2020-21.

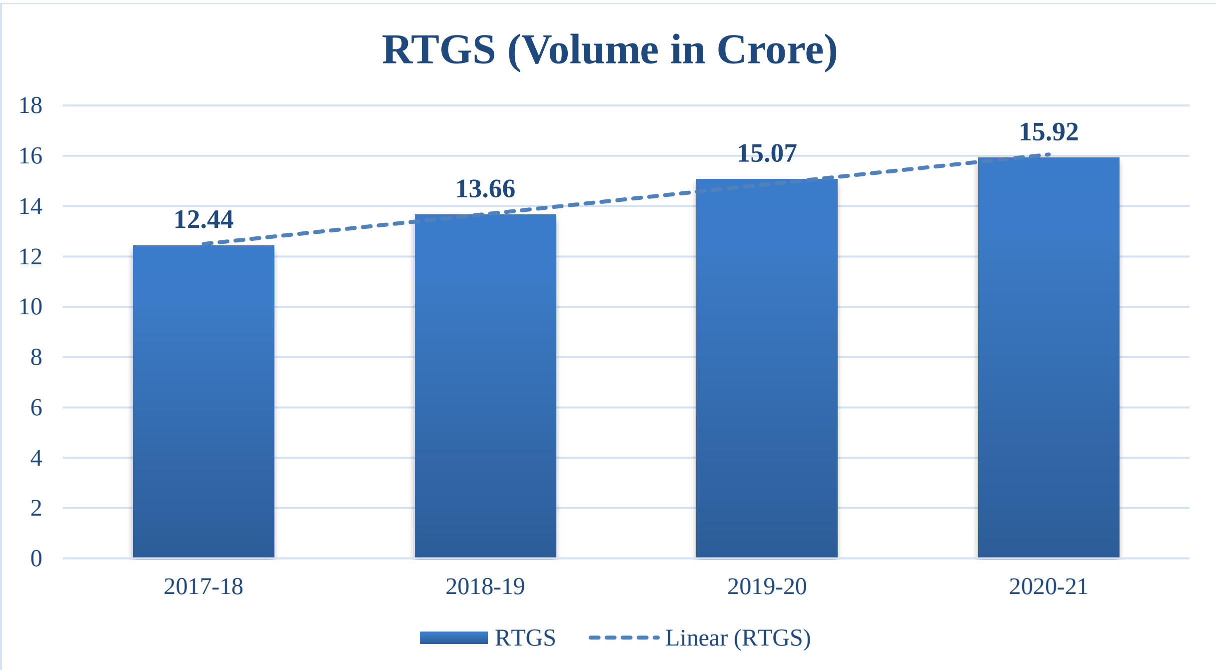

Figure 36 RTGS Transactions (Volume in Crores)

RTGS Transaction volumes showed 6.36% CAGR growth from 2017-18 to 2020-21.

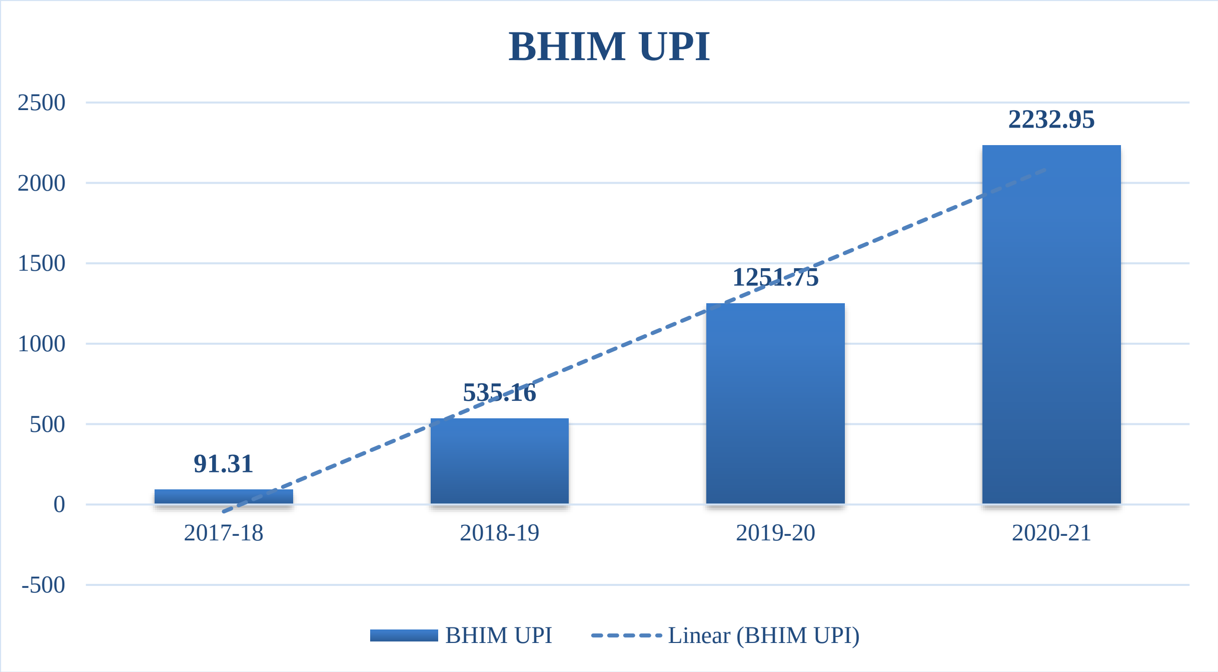

Figure 37 BHIM UPI Transactions (Volume in Lakhs)

BHIM UPI Transaction volumes showed 122.37% CAGR growth from 2017-18 to 2020-21.

CONCLUSION

Digital payments have impacted the lives of millions of people. People can now transact digitally through different modes of payment gateways in the comfort of their homes. India ranked 1st in the volume and the value of transactions in the year 2020 through various digital modes. But still, the reach of digital modes of payments is inclined more towards the Urban India than the Rural India. The studies have shown that people still are hesitant to adopt digital modes of payments as a means of transaction in place of the traditional cash-based transaction method due to various reasons. Some of the reasons that could be inferred were the lack of infrastructural facilities in terms of internet coverage in the urban and rural areas. Though the Government has been focussing on providing internet to the remotest locations with the help of Google, still it will take years to have good coverage in the rural areas. Apart from infrastructural anomalies, people hesitate to transact digitally due to the lack of safety features associated with digital modes. Fraudulent transactions and the acts of the wrong transaction have built a sense of fear in people to use digital modes. Strengthening customer complaint resolution and providing stringent laws to combat fraud transactions can rebuild that confidence in people and make them switch to using digital modes of transactions. Apart from that, transaction failures and transaction charges levied to use the services also hinder the growth of digital payments. To increase the level of acceptance of digital acceptance and shift towards a less cash-based economy, the Government along with financial institutions must come up with ways to tackle the limitations of digital modes of payments and provide the consumers with hassle-free modes of payment. The affordability, safety, and regulatory frameworks need to be focussed upon so that customers are more inclined towards digital payments. The strengthening of internet services by the telecom service providers and making available internet at lower prices as compared to the world will be the driving factor for digitizing of the payments. The government along with financial institutions must work upon strengthening the regulatory framework and provide safe and secure transaction mediums to consumers.

LIMITATION OF STUDY

- The sample size of the study was limited to 150 respondents only. Hence, the sample size may not represent all the digital payment method users' behavior.
- The study was only conducted during the pandemic and no inferences were done before the pandemic for this study.
- The study is limited to the respondents from Punjab and Chandigarh. Therefore, the inferences drawn cannot be generalized.

RECOMMENDATIONS

Key recommendations include:

1. Strengthening the payment infrastructure to promote a level playing field for NBFCs and banks.
2. Digitizing registration and compliance processes and diversifying credit sources to enable growth opportunities for MSMEs.
3. Building information sharing systems, including a 'fraud repository', and ensuring that online digital commerce platforms carry warnings to alert consumers to the risk of frauds.
4. Improvements in the payment systems to provide a better customer experience. To decrease the cash-based transactions and accelerate the growth of digital modes of payments. To provide better customer complaints resolution mechanism and enhance the security features of digital modes of transactions.

5. To provide access to debit cards and POS machines for better accessibility at the small centers across India. With better availability of POS machines, reduce the Cash in Circulation vs. GDP% over time.

LEARNING FROM THE PROJECT

My summer internship with the Reserve Bank of India provided me with both tangible and intangible takeaways that I would carry with me in the corporate world. During these 2 months working under my concerned mentor, I got insights into how a study report on a particular topic is developed. Earlier in the classroom training, I got an idea about the theoretical aspects of carrying out a research study but now as a part of my summer training, I actually got hands-on experience of carrying out a study and applied the process of research that I studied in the classroom.

In this project, I learned how you need to build the topic assigned to you and do rigorous and in-depth study about the topic. Once you have dipped in the vast ocean of the knowledge of the topic of study then you need to analyse it and present it in your own words. In order to make the report authentic, it is also necessary that the sources of the data must be authentic as it increases the credibility of the report. So, for my summer internship report also referred to all the public platforms of the information.

One more thing necessary for the report was to present various facts and figures as they also make the report more understandable in a shorter amount of time and also make it more visually appealing. Thus, this report consists of various types of charts which support the qualitative information that is presented in the report.

The topic assigned to me provided me an understanding of the acceptance level of digital payments in India and what steps the Government of India is taking to promote digital payments. The Government has collaborated with many Tech Giants like Google to promote digital payments in India. NPCI launched UPI in 2016, breakthrough technology to make payments using mobile phones. Various other platforms like BHIM UPI, Bharat Bill Payment System, National Electronic Toll Collection, and others have been launched to facilitate digital payments and make a shift from a cash-based society to a less cash-based society.

At last, as I reached the end of the project it also provided me with a sense of accomplishment and helped me boost my confidence for further when I will actually take a job. Thus, I will carry this experience with me throughout my life anywhere I go in the corporate world.

REFERENCES

Number of smartphone users in India 2015-2022. Statista. (2021, June 29). https://www.statista.com/statistics/467163/forecast-of-smartphone-users-in-india/

Keelery, S. (2020, December 4). *Digital payments in India - statistics & facts*. Statista. https://www.statista.com/topics/5593/digital-payment-in-india/

NPCI. (2020). *Digital Payments Adoption in India 2020*. https://www.npci.org.in/PDF/npci/knowledge-center/Digital-Payment-Adoption-in-India-2020.pdf

R.T.M.N.S.J.R.R. (2020, February). *Digital Payments Diffusion in Emerging and Developed Economies*. International Journal of Innovative Technology and Exploring Engineering (IJITEE). https://www.ijitee.org/wp-content/uploads/papers/v9i4/D1357029420.pdf

Statista. (2020, October 16). *Number of internet users in India 2015–2025*. https://www.statista.com/statistics/255146/number-of-internet-users-in-india/

Kemp, S. (2021, February 11). *Digital in India: All the Statistics You Need in 2021*. DataReportal – Global Digital Insights. https://datareportal.com/reports/digital-2021-india

Statista. (2021, April 27). *Internet penetration rate in India 2007–2021*. Statista. (2021b, April 27). *Internet penetration rate in India 2007–2021*. https://www.statista.com/statistics/792074/india-internet-penetration-rate/

ACI Worldwide. (2021). *Prime Time for Real-Time*. https://go.aciworldwide.com/rs/030-ROK-804/images/2021-Prime-Time-Report.pdf

Gopakumar, G. (2021, March 31). Digital payments in India to account for 71% of all payments by 2025: report. *Mint*. https://www.livemint.com/news/india/digital-payments-in-india-to-account-for-71-of-all-payments-by-2025-report-11617193269439.html

Reserve Bank of India. (2019). *Benchmarking India's Payment Systems*. https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/BIPS04062019CE3C72E9873244ED8BAAE9C8FC5955A8.PDF

Reserve Bank of India. (2021). *Payment And Settlement Systems in India: Vision – 2019–2021*. https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/PAYMENT1C3B80387C0F4B30A56665DD08783324.PDF

Statista. (2021c, July 8). *Digital payments in India FY 2018–2021, by transaction type*. https://www.statista.com/statistics/1196776/india-digital-payments-by-transaction-type/

Okubo, T. (2021, July 11). *Money Supply*. Indiamacroadvisors.Com. https://www.indiamacroadvisors.com/page/category/economic-indicators/money-and-banking/money-supply/

Payment methods in India- IMRG. (2021). IMRG. https://www.imrg.org/india-payment/

UPI Product Statistics | NPCI - National Payments Corporation of India. (2021). NPCI. https://www.npci.org.in/what-we-do/upi/product-statistics

Performance Indicators Reports. (2021). Telecom Regulatory Authority of India. https://www.trai.gov.in/release-publication/reports/performance-indicators-reports

BCG-Google. (2020). *Digital Payments 2020- The Making of a $500 Billion Ecosystem in India*. Boston Consulting Group. https://image-src.bcg.com/BCG_COM/BCG-Google%20Digital%20Payments%202020-July%202016_tcm21-39245.pdf

Niti Aayog. (2021). *Connected Commerce- Creating a Roadmap for a Digitally Inclusive Bharat*. https://niti.gov.in/writereaddata/files/Connected-Commerce-Full-Report.pdf