DIGITAL BANKING PENETRATION IN RURAL AREAS: CHALLENGES AND WAY FORWARD

SUMMER INTERNSHIP PROJECT REPORT

on the topic

"Digital Banking Penetration in Rural Areas: Challenges and Way Forward"

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NIRMA UNIVERSITY

NIRMA UNIVERSITY
INSTITUTE OF MANAGEMENT
NAAC ACCREDITED 'A' GRADE

Prepared By :

Bhoomika Karmani

MBA FT 2020-22

Institute of Management

Nirma University

Under the Guidance of:

Prof. Rajwinder Kaur

Faculty Mentor

Institute of Management

Nirma University

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The internship at Reserve Bank of India was a privilege for me and is a turning point as far as my career is concerned. It provided me the opportunity to interact with some greatest of minds along with getting huge insights regarding the Financial Inclusion and Literacy status of the nation. This internship has sharpened my research skills and allowed me to delve deep into the banking aspects when it comes to Financial Inclusion of Rural Areas.

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PROFILE OF THE ORGANISATION

The Reserve Bank of India (RBI) traces back to 1926, when the Royal Commission on Indian Currency and Finance – popularly known as the Hilton-Young Commission – advocated the establishment of a central bank for India to separate currency and credit control from the government and to strengthen banking facilities across the country. The Reserve Bank of India Act of 1934 established the Reserve Bank and began a series of events that culminated in the institution's first operations in 1935. The Reserve Bank's mission and functions have evolved through time as the Indian economy and financial sector have evolved.

OBJECTIVE OF RBI

The primary objective of the central Bank is specified as the preamble to the Reserve Bank of India Act,1934 which states

- **"to regulate the issue of Bank notes and the keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage"**
- **"that it is essential to have a modern monetary policy framework to meet the challenge of an increasingly complex economy and the primary objective of the monetary policy is to maintain price stability while keeping in mind the objective of growth"**

The RBI's main role, as stated in the Act, is to maintain monetary stability, i.e., to maintain confidence in the value of the country's money or to protect the currency's purchasing power. In the end, this means low and steady inflation expectations, regardless of whether the inflation comes from internal sources, changes in the currency's value, supply limits, or demand pressures. The RBI also has two other major responsibilities: inclusive growth and development and financial stability.

Banks dominate India's financial system. Their regulation and supervision are thus critical for both the protection of depositors' interests and the maintenance of financial stability. The RBI sets and administers the regulatory policy framework for banks operating in India, with powers derived from the Banking Regulation Act, 1949. The scope of regulation and oversight has grown throughout time to embrace nonbanking companies as well.

The national economy and financial system have become increasingly integrated with the rest of the world over the previous two and a half decades. While increased global integration benefits India's economy by broadening the scope and scale of its growth, it also exposes India to global shocks. The

financial crisis of 2007-08 revealed financial instability in other economies, putting our financial stability at jeopardy. As a result, the RBI's duty to maintain financial stability has become even more vital.

OVERVIEW OF FUNCTIONS OF RBI

ROLE OF RBI IN BANKING INDUSTRY

The RBI's primary goal is to maintain price stability through monetary policies. The measures taken by the RBI to regulate the supply of money in order to ensure economic growth are known as monetary policies. The Reserve Bank of India supervises India's financial sector, which includes commercial banks, financial institutions, and non-banking companies. According to the Foreign Exchange Management Act, the Reserve Bank of India (RBI) has the authority to handle all foreign exchange in order to promote international trade and ensure the proper growth of the Indian foreign exchange market. RBI is also in charge of our country's foreign exchange and gold exchange. It is the only bank with the authority to issue currency and coins, implying that RBI has the ability to generate or kill fiat currency. Our country's financial system is controlled by the RBI. It controls and supervises the activities of other banks through a variety of approaches, including bank licence supervision, inspections, etc.

FINANCIAL INCLUSION AND DEVELOPMENT DEPARTMENT

As per RBI, This Department's role encapsulates the essence of renewed national focus on Financial Inclusion, promoting financial education and literacy and making credit available to productive sectors of the economy including the rural and MSME sector.

Primary functions of this department are-

- **Credit flow to priority sectors:** Macro policy formulation to strengthen credit flow to the priority sectors. Ensuring priority sector lending becomes a tool for banks for capturing untapped business opportunities among the financially excluded sections of society.

- **Financial Inclusion and Financial Literacy:** Ensuring access to an array of basic formal financial services and products and scaling up financial awareness initiatives. The National Strategy for Financial Inclusion (NSFI) 2019-24 and the National Strategy for Financial Education (NSFE): 2020-25 sets forth the vision and key objectives of the Financial Inclusion and Financial Literacy policies in India to expand the reach and sustain the efforts through a broad convergence of action involving all the stakeholders in the financial sector.

- **Credit flow to MSME:** Stepping up credit flow to MSME sector and provide a simpler and faster mechanism to address the stress in the accounts of MSMEs

- **Credit Delivery to SHGs, SC/ST community and Minority Communities:** To enhance flow of credit to individuals, Self Help Groups, persons belonging to SC/ST category and Minority Communities through select Government Sponsored Schemes.

- **Credit flow to agriculture:** Providing broad guidelines for easy access to finance to farmers and assistance measures for farmers in natural calamity affected areas.

ABSTRACT

Rural India has a huge impact on the country's economic development. 870 million people live in India's rural areas, which account for 66 percent of the country's population. With the changing nature of ICT penetration, rural people will account for half of all internet users in India by 2020. It is vital to implement digital efforts in rural areas and to improve the digital payment model's trends. Given the advantages of increased transaction transparency, it is critical that the shift to digital payments be accelerated. The Reserve Bank of India has been encouraging the banking sector to expand its network by opening new brick-and-mortar branches, expanding the scope of business correspondents, and installing new ATMs/WLAs at every tier. The government has previously implemented many initiatives such as no-frills zero balance Jan Dhan accounts, DBT programmes, issuance of RuPay cards, issuance of Kisan Credit Cards, Aadhaar-enabled programmes, and unified payment interface throughout the last decade. Because of their financial exclusivity, India's rural population remains far off from the mainstream of digitization banking transactions. Many policy efforts have been implemented by governments to incorporate low-income rural residents. The pilot survey undertaken within the purview of EXPANDING AND DEEPENING DIGITAL PAYMENTS SYSTEM has shown positive impact in the district identified for Gujarat with increase in the usage of Mobile banking, POS Terminals, Debit/Rupay Cards and net banking. Such initiatives when implemented aggressively could increase the penetration of banking and its digital products in the unbanked rural areas of the country that face numerous challenges in terms of awareness, literacy, level of income, infrastructure etc.

CHAPTER 1

INTRODUCTION

1. INTRODUCTION

Long waiting times in queues and inconvenience during a bank visit has been done away with to a great extent. Thanks to digital banking for revolutionising the way of managing the finances and undertaking the traditional systems of the financial services industry.

A couple of years back the traditional system of going to brick and mortar outlets of banks was the only option to handle the funds and digitization was a vision until it became "the new usual".

1.1 DIGITAL BANKING

Digital banking implies digitization of all the banking services that were earlier to be undertaken through the physical process. It involves carrying over the banking transactions electronically i.e. either online or through mobile banking and thus eliminating the use of paper while depositing cash, withdrawing cash or even transferring the money to other party. The RBI Ombudsman scheme for digital transactions defines a 'Digital Transaction' as "Digital Transaction' means a payment transaction in a seamless system effected without the need for cash at least in one of the two legs, if not in both. This includes transactions made through digital / electronic modes wherein both the originator and the beneficiary use digital / electronic medium to send or receive money."

Digital banking in India began to take shape in the late 1990s, with ICICI Bank becoming the first to offer the service to its retail customers. Digital banking only became common in 1999, when internet charges were lowered and internet knowledge and trust were increased.

Thereafter, New creative emerging technology and forward-thinking thought processes have spawned entirely new industries and social dimensions. Make in India and Digital India have become buzzwords for our country's bright and sustainable industrial and financial growth. Bankers may use digital banking to meet their short-term and long-term business and technical needs. The flagship programme of the Indian government is Digital India, which aims to transform India into a digitally empowered country. India's government has imagined the future to be faceless, paperless, and cashless. In turn, the advantages of business effectiveness, cost savings, precise performance, and increased competitiveness associated with digital banking could have paved the way for cashless banking. Simultaneously, FinTech firms, which are essentially financial technology firms that promote banking and financial services, are giving conventional banking a severe competition. Digitization aims to steer the economy towards minimal use of a cash as a mode of payment.

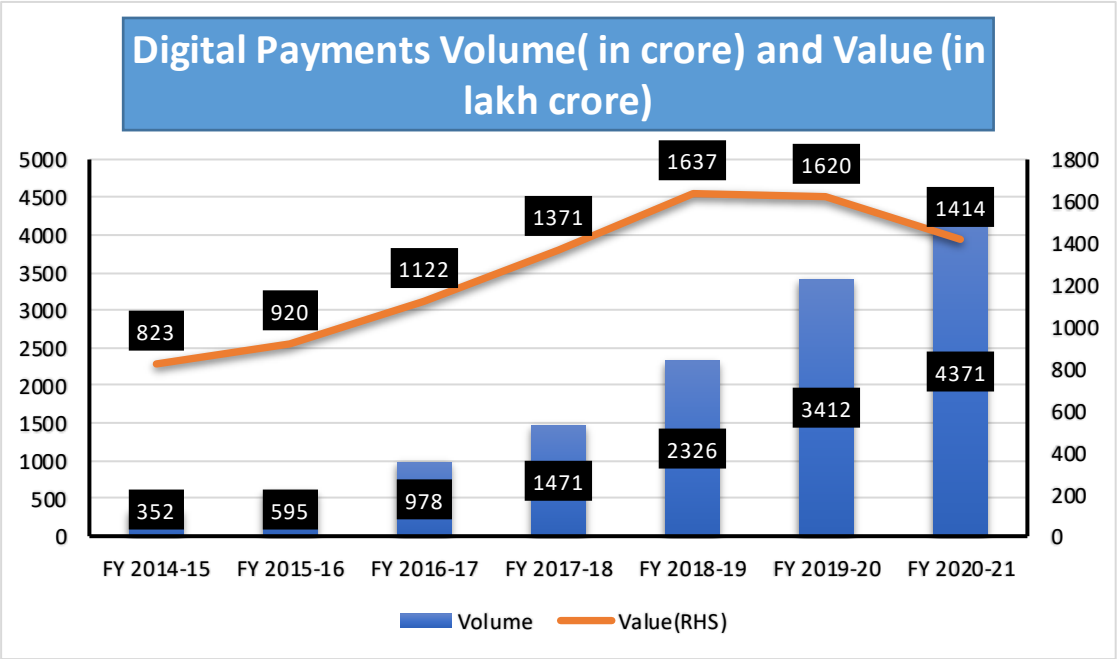


Figure 1.1. Digital payments volume and value from FY 2014-15 to FY 2020-21

Source- RBI data

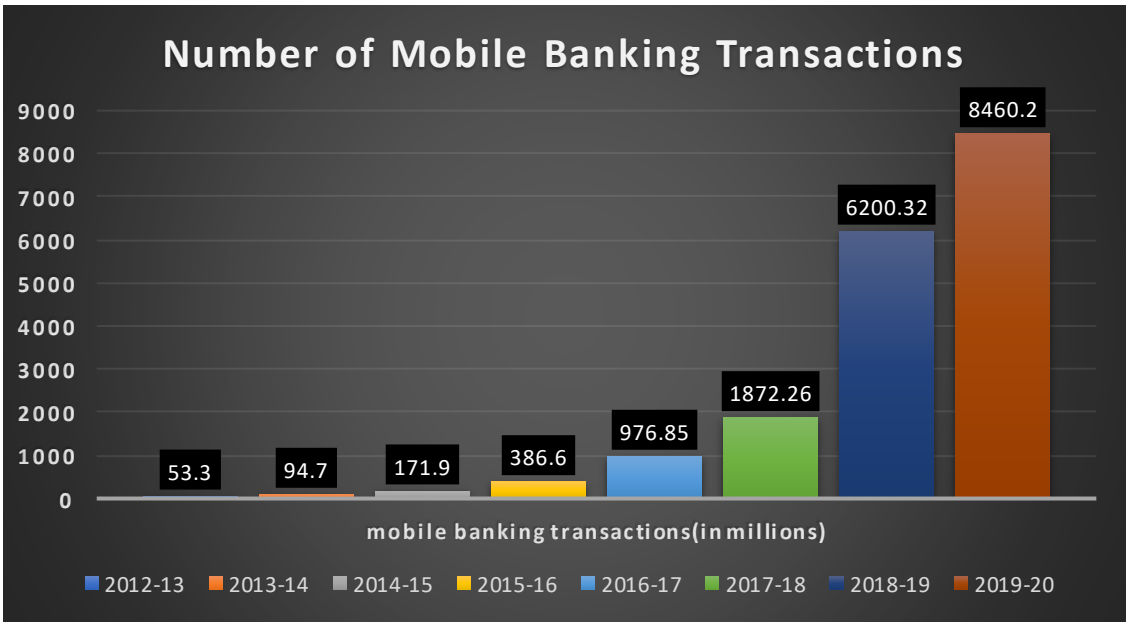


Figure 1.2. Number of Mobile banking transactions from FY 2012-13 to FY 2019-20

Source- Statista

Digital Transactions make use of following-

a. **Debit Cards and Credit Cards-** Consumers benefit from the security, convenience, and control that these banking cards provide. Currently, a wide range of cards, including credit, debit, and prepaid cards, are available throughout India. For secure payments, these cards use two-factor authentication, such as a PIN and an OTP. Card payment systems include RuPay, Visa, and MasterCard, to name a few. People can use payment cards to make purchases in stores, on the internet, through mail-order catalogues, and over the phone. They save both customers and businesses time and money, making transactions easier. During 2019-20, the number of credit and debit card payment transactions climbed by 23.5 percent and 16.1 percent, respectively, while the value increased by 21.1 percent and 35.6 percent, to 7.3 lakh crore and 8.0 lakh crore, respectively.

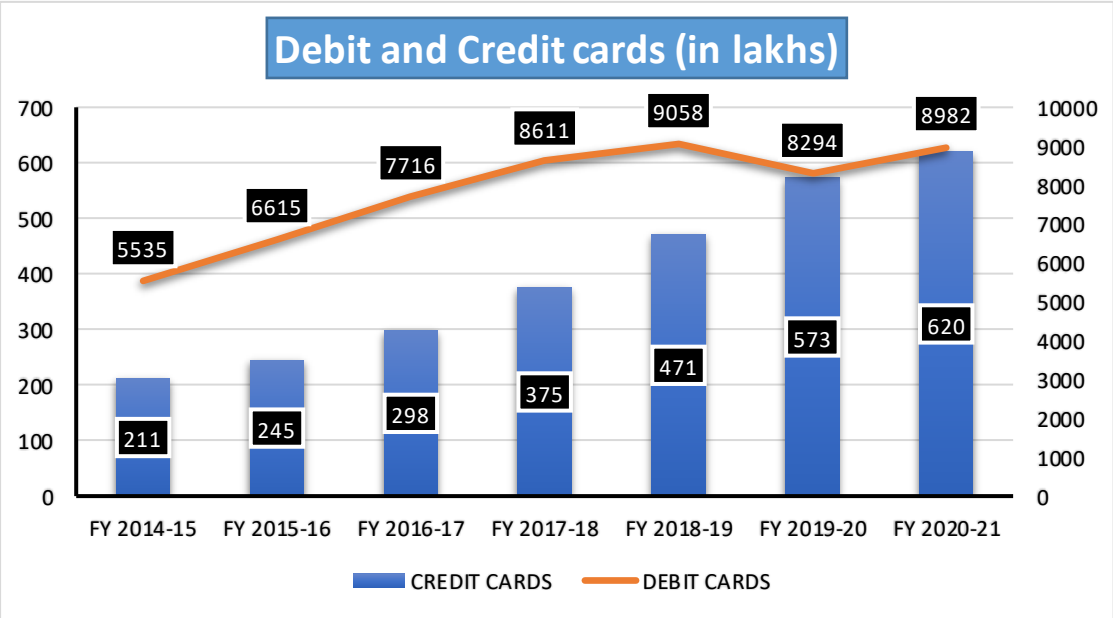


Figure 1.3. Number of Debit and Credit Cards from FY 2014-15 to FY 2020-21

Source- RBI data

b. **Mobile Wallets-** these are like actual wallets but in digital format that can be used to carry cash and can be used for making various transactions online using one's phone, tablet or smart watch . the funds are stored in these wallets by linking them to the bank accounts. lately various banks offer such kind of service like paytm, M-Pesa, jio money etc. The total digital wallet transactions in India nearly doubled to 253.2 crore in May 2020, from 124.3 crore in February 2020, according to Reserve Bank of India (RBI) data; The overall value of digital wallet transactions increased even faster in May, rising to 11,080 crores from 2,836 crore in February.

c. **USSD-** *99# is a digital payment mechanism that can be used to conduct mobile transactions without the need to download an app. These forms of payments can be done even if you don't have access to a mobile data network. The USSD and the National Payments Corporation of India are both supporting this service (NPCI). The primary goal of this form of digital payment service is to foster participation among underprivileged groups of society and to integrate them into mainstream banking. This service can be used to make fund transfers, see bank statements, and inquire about balances. This type of payment method also has the advantage of being available in Hindi.

d. **AEPS(Aadhar Enabled Payment System)-** AePS is a bank-led approach that allows a bank client to access their account and undertake basic banking operations such as cash deposit, cash withdrawal, intrabank or interbank fund transfer, balance inquiry, and obtaining a mini statement through a BC using their Aadhaar number. Its other main goal is to make it easier for any central or state government body to disburse government entitlements like NREGA, social security pensions, and so on, by utilising Aadhaar and UIDAI-supported authentication.

e. **POS Terminals-** Traditionally, point-of-sale (PoS) terminals were those that were put in all stores where customers could make purchases using credit or debit cards. It's usually a small device that reads credit cards. However, as a result of digitization, the scope of PoS is broadening, and it is now available on mobile devices and through web browsers. Physical PoS, Mobile PoS, and Virtual PoS are three different types of PoS terminals. Physical point-of-sale terminals are those found in shops and stores. Mobile PoS terminals, on the other hand, function with a tablet or smartphone. This is useful for small business owners because they do not need to invest in costly electronic registration systems. the number of Point of Sale (PoS) terminals increased by 38.2 per cent to 51.4 lakh and the number of Bharat QR codes deployed increased by 74.6 per cent to 20.28 lakh as at end-March 2020. Moreover, the number of ATMs climbed from 2.22 lakh to 2.34 lakh during the same time period.

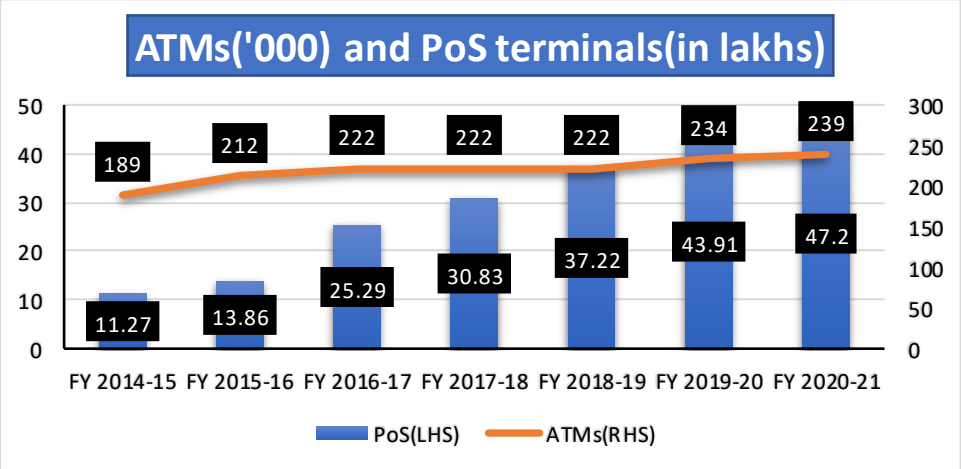


Figure 1.4. Number of ATMs and PoS Terminals from FY 2014-15 to FY 2020-21

Source- RBI data

f. **UPI(Unified Payment Interface)-** It combines several bank accounts (from any participating bank) into a single mobile application, as well as various banking capabilities, smooth fund routing, and merchant payments under a single umbrella. It also offers peer-to-peer collect requests, which can be scheduled and paid according to your needs. Currently, each bank has its own UPI app available for Android, Windows, and iOS.

Year	UPI Volume(crore)	IMPS Volume(crores)	BHIM Volume(crores)	UPI Value(billion)	IMPS Value(billions)	BHIM Value(in billion)
2018-19	539	175.29	0.68	8769.71	15902.57	5245.56
2019-20	1251	257.92	0.91	21317.3	23375.41	7197.08
2020-21	2233	327.83	1.61	41036.58	29415	8725.52

Table 1.1. Mobile Banking Modes Values and Volume from FY 2018-19 to FY 2020-21

Source- NPCI data

g. **Net Banking-** The method of doing banking transactions over the internet is referred to as internet banking. Many services, such as transferring funds, making a new fixed or recurring deposit, cancelling an account, and so on, are available. E-banking or virtual banking are other terms for internet banking. Internet banking is typically used to make NEFT, RTGS, or IMPS online fund transfers. Unlike visiting a physical bank, internet banking services have no time constraints and can be used at any time and on any day of the year. Among the electronic modes of payment, RTGS transactions increased by 10.3%, with a value of 1,311.6 lakh crore, down by 3.3 percent from the previous year, owing to a drop in large value corporate transactions in accordance with the slowdown in economic activity. At the end of March 2020, the RTGS facility was offered through 1,53,605 branches of 218 banks. The number of transactions in the National Electronic Funds Transfer (NEFT) system increased by 18.3% last year. The NEFT facility was offered through 1,53,687 branches of 217 banks by the end of March 2020.

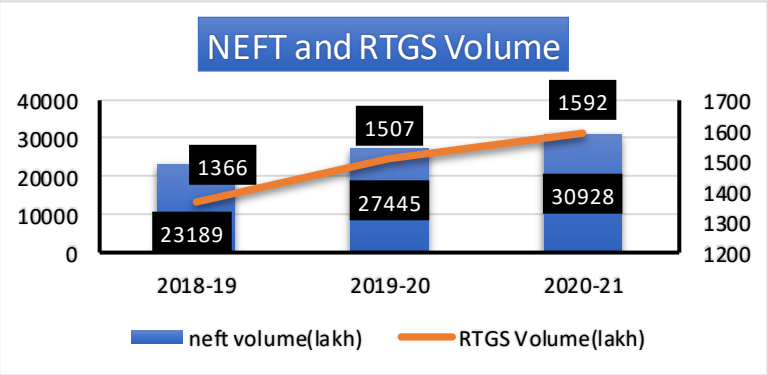


Figure 1.5. NEFT and RTGS Volume from FY 2018-19 to FY 2020-21

Source- RBI data

h. **Rupay cards-** RuPay is a local debit and credit card payment network that is widely accepted at ATMs, POS devices, and e-commerce websites in India. It was founded in 2012. It was created to realise the RBI's objective of a local, open, and multilateral payment system. RuPay has enjoyed strong growth since demonetisation in 2016, helping India move closer to becoming a cashless economy.

*PMJDY (Pradhan Mantri Jan Dhan Yojana) was launched by prime minister in august 2014 to promote financial inclusion by ensuring one savings bank account to each without any minimum deposit limit. Further it was incentivised by the transfer of government subsidies in those accounts.

	2015	2016	2017	2018	2019
No. of PMJDY accounts (in crores)	14.72	21.43	28.17	31.44	35.27
No. of Rupay cards issued to PMJDY account holders (in crores)	13.14	17.75	21.99	23.65	27.91
Rupay cards as a percentage PMJDY account holders	89.30%	82.80%	78.10%	75.20%	79.10%

Table 1.2. Number of PMJDY Account holders and RuPay cards issued to them from FY 2015 to FY 2019

Source- PMJDY, Government of India

1.2 NATURE OF THE PROBLEM

Because of their financial exclusivity, India's rural people remain far off from the mainstream of digitization banking transactions. Many policy efforts have been implemented by governments to incorporate low-income rural residents. However, there is also a lack of understanding of banking digital services. This study is significant in knowing the loopholes in the various initiatives taken along with the possibility of improvising them after knowing the issues that come up during the process.

1.3 RESEARCH GAP

Digital Banking in India has grown out significantly majorly since the digital India project launched by the government and post demonetization to make India cashless with prompt payments from anywhere and everywhere. But the success of Digital banking reform is still far fetched due to unequal

penetration among urban and rural areas of the nation. Many studies have explored the challenges faced but they lack in human involvement part and gaining first hand information. Moreover, any study related to the districts of Gujarat has not been found in respect to digital banking. Also, the insights from the expanding and deepening of digital payments are not shown in any study so far. This study is undertaken to understand the digital penetration in the select districts of Gujarat and knowing the real challenges that are encountered to make any rural area enough digitally inclusive. This project looks upon the initiatives and efforts taken by RBI and government to increase the penetration in rural areas and promotion of financial literacy.

1.4 OBJECTIVES

1. To explore the need of Digitisation in Banking Sector.
2. To analyse the expanding and deepening of digital payments policy for the district selected under Gujarat state
3. To know the efforts taken by RBI and Government to boost Digital Banking in rural India.
4. To analyse the issues and challenges behind the promotion of Digital banking.
5. To explore the international cases of boosting digital banking penetration.

1.5 UTILITY OF THE STUDY

This study seeks the answers as to what are the main issues behind the rural areas laaging in usage of digital banking and analysing the levels of awareness and working out the solutions for the same. Also this analyses the feedback of the expanding and deepening digital payments program launched by RBI and various other government initiatives to boost the digital banking.

CHAPTER 2

REVIEW OF LITERATURE

➢ 2.1 REVIEW OF LITERATURE

1. **Ahmed, Manjida and Singel, Rahmi *(Dec 2020)* -** Financial inclusion is increasingly being recognised world over as a key driver of economic growth and poverty alleviation. Access to formal finance can boost job creation, reduce vulnerability to economic shocks and increase investment in human capital. At a macro level, greater financial inclusion can support sustainable and inclusive socio-economic growth for all. Financial inclusion means the participation of poor people in accessing financial products and services such as savings, pension, credit, payment account etc. The economic growth and welfare of a nation depends upon accessibility of people to financial services. An all-inclusive financial system is essential because it enhances efficiency and welfare by providing scope for secure and safe saving practices and by facilitating a wide range of efficient financial services. The present study will focus on the progress, challenges and opportunities of financial inclusion in India.
2. **Kaur, Simran Jit; Ali, Liaqat; Hassan, M. Kabir and Md Al-Emran *(Nov 2020)*-** The purpose of this qualitative study is to examine the impact of banks' in-branch efforts in India on customers transitioning from branch banking to digital banking. Bank executives representing senior management from both public and private sector banks in India were interviewed in-depth in semi-structured interviews. The data was analysed using a qualitative content analysis technique. Based on data reduction, display, and conclusion-drawing methods, a variety of replies gathered during interviews were grouped into four key themes. Clients' in-branch communication, branch digital transformation, customer-centric initiatives, and a redefined role for branch staff all have the potential to help customers transition to digital banking. According to the report, the most important aspect in increasing digital banking acceptability in India is the need for comprehensive cultural and organisational reforms at the bank level in order to win customers' confidence and trust in digital banking.
3. **Neog, Nilutpal *(Dec 2019)*-** The banking sector has a significant role in capital accumulation and provides the necessary infrastructure for investment in order for an economy to grow. The bank will only be able to do so if people are aware of the importance of saving and banking. Only if their accounts are active can they achieve financial inclusion. People should endeavour to keep their bank accounts active in addition to opening them. Digitalization of banking services can assist an account stay active to a greater level because it allows users to manage their accounts from the comfort of their own homes. However, because people in rural regions lack sufficient education, their use or adoption is quite limited.

4. **Dhar, Parijat and Barua, Dr. Nissar A.** ***(Dec 2019)***- Poor and vulnerable populations, disadvantaged locations, and lagging sectors need access to safe, simple, and affordable credit and other financial services in order to accelerate growth and reduce income gaps and poverty. It is disheartening to note that, despite forty-four years of social responsibility on the part of Indian scheduled commercial banks and the enactment of the Regional Rural Banks (RRBs) Act in the mid-1970s, commercial banks, regional rural banks, and co-operative credit institutions have expanded both geographically and functionally, without making segregation. Over the last few years, the Reserve Bank of India (RBI), as well as other policymakers, have pursued the objective of financial inclusion and made significant progress in enhancing the masses' access to financial services. The improvement, however, is far from adequate. While a few regions have made significant progress in terms of providing access to money to the excluded, the North-East, Eastern, and Central regions continue to trail behind in terms of banking system penetration. The purpose of this research is to investigate the state of bank penetration in Assam, specifically in the Bongaigaon district.
5. **M. Shettar, Dr. (Smt.) Rajeshwari** ***(June 2019)***- The current need for banking is anytime, everywhere banking, which necessitates innovative, secure, and ready-to-use solutions to satisfy the demands of empowered and tech-savvy customers.The transition from traditional banking to a digital world is only the beginning of digital transformation. It is a significant shift in how banks and other financial organisations learn about their consumers, communicate with them, and please them. Understanding digital customer behaviour, preferences, choices, expectations, and goals, among other things, is the first step toward a successful digital transformation. This shift causes huge organisational shifts from a product-centric to a customer-centric perspective.
6. **P, Venkatalaxmi and Dr. K Ramachandra** ***(March 2019)***- Because there are distribution issues due to localised limits, technology interventions are most likely to improve financial inclusion. This study focuses on digital banking services that aid financial inclusion in the rural sector by allowing the most low-income persons to participate in banking operations. Furthermore, the government has taken the initiative to integrate the entire country in the digital banking sector. The impact of the digital banking effort on the start of financial inclusion is also highlighted in this report. Through digital banking, the emerging economy can easily connect all groups of society and help to achieve the goal of monetary inclusion.
7. **Byakod, Prasad Rajendra; Chaya U.; Kulgude, Pooja; Sharma,Abhishek ; Singh, Priyanka and Mazumdar, Chandra Sen** ***(Aug 2018)***- The state of Karnataka's economic success is heavily reliant on rural Karnataka. The influence of demonetization on ICT (Information and Communications Technology) penetration, as well as digital initiatives for rural sectors, has heightened the need to improve the trends of the Digital Payment System (DPS) in rural Karnataka.

The existing technical infrastructure and adoption status of digital payment systems in the rural Karnataka regions of Nelamangala and Bidadi are investigated in this study. Customers' adoption of electronic payment services is influenced by a number of factors.

8. **Nayak, Raghavendra *(June 2018)*-** The concept of "digitalization" has overtaken the modern environment in which we live. India's government has established the Digital India Program, with the goal of transforming the country into a digitally enabled society and knowledge economy. The concept of digitalization has played a significant influence in all areas of the economy, including the financial industry. Digitalization has become critical for the Indian banking sector, which plays a critical role in advancing financial inclusion and is primarily focused with offering better services to clients with the possibility of gaining more in the future. In recent years, the Indian banking sector has experienced enormous expansion.
9. **Ali, S. Md. Shakir; Akhtar, Md. Wasim and Safiuddin, S. K.*(june 2017)* -** Rural India has a huge impact on the country's economic success, and with growing changes in ICT penetration and the impact of demonetisation, as well as digital initiatives for rural segments, the need to improve rural India's digital payment trends is critical. Given the advantages of transaction transparency, the potential to reduce parallel economy, and the convenience of doing business, it is critical that the transition to digital payments is accelerated, even in rural areas. Some of the most revolutionary recent advancements include the creation of numerous digital wallets such as Paytm, Mobiwik, and Free Charge.

   Despite the fact that social trends in rural areas are favouring the use of digital payments, there are still significant hurdles in making the paradigm change. If handled correctly, future moves like enabling digital payment transactions based on Aadhar IDs might be game changers. In this paper, the elements that influence and promote digital transactions in rural economies are examined, taking into account current trends, market analysis, infrastructure readiness, and stakeholder accountability in order to get insight into the important success aspects that must be addressed.
10. **Price Water house Coopers (2015)-** India's unbanked population was estimated to be 233 million people. Even for those who have access to banking, the opportunity to use a debit or credit card is limited due to the fact that there are only roughly 1.46 million places of sale that accept card payments. Wallet users have already surpassed mobile banking users and are three times the number of credit card users, according to a July report by Boston Consulting Group and Google.

CHAPTER 3

RESEARCH METHODOLGY

3. RESEARCH METHODOLOGY

3.1 APPROACH

This is a qualitative research study wherein the social behaviour of people in rural areas is identified towards adopting digital methods of banking and analysing the reasons behind less penetration of digital banking methods. Also this research involves flexible approach towards the collection of data including a mix of primary and secondary data sources.

3.2 SOURCES OF DATA

This research includes both primary and secondary data and hence is a combination of both the sources. For primary data I have done unstructured interviews of the Lead District Managers of the selected districts of Gujarat which are 11 in total. While the secondary sources include a. official websites of banks and RBI and also the website of National Payments Corporation of India(NPCI) b. Research reports published by Vakrangee, KPMG, Deloitte etc. c. newspaper articles like business standard, livemint, The Economic Times etc. All the data sources are mentioned in the Bibliography section at the end of the report.

3.3 METHOD OF DATA COLLECTION

For primary data sources, telephonic semi structured interviews have been undertaken from the LDM's of the selected 11 districts of Gujarat. The method of secondary data collection is through government websites like RBI's publications of annual report and various statistics publicly provided through its website. Also the census data is used for selection of districts of Gujarat that can be undertaken within the purview of rural areas. 11 districts were chosen seeing if the rural population in a particular area according to 2011 census was more than 50% of the total population. Also the secondary data was collected from various newspaper articles like business standard, livemint, The Economic Times and the Hindu.

3.4 SIZE OF SAMPLE AND METHOD OF SAMPLING

The size of sample is 11 forming the 11 districts of Gujarat namely The Dangs, Dohad, surendranagar, narmada, mehsana, Banaskantha, Sabarkantha, Panch Mahal, Junagadh, patan, Kheda. The method of sampling is Quota Sampling which is based on the demographic features of the population and here the classifying factor is the percentage of rural population among the total population. The districts having over 50% rural population are selected.

3.5 METHOD OF DATA ANALYSIS

The analysis of the data that was researched is represented as findings because this is a totally qualitative investigation. This was accomplished by careful observation, comprehension, and analysis of the facts. No editing was done because the data was to be given in its natural state. The data sources have been given in the Bibliography section.

CHAPTER 4

PRESENTATION OF DATA

➢ 4. PRESENTATION OF DATA

4.1 NEED OF DIGITISATION IN BANKING SECTOR

Cash seems to be everywhere, it's simple to use and store, and it's really convenient. The difficulty in analysing a country's journey from cash to digitisation stems from the fact that, due to the anonymity of cash transactions, determining the precise volume of transactions made in cash, and thus the value of such transactions. The pandemic has changed our lives in many ways, including how we shop, travel, and work, as well as how we bank. It has also influenced consumer behaviour. The social and economic landscape has been profoundly transformed as a result of the pandemic, while customer requirements and expectations continue to dynamically shift.

In today's emerging economies, the majority of people and small enterprises are not fully integrated into the formal financial system. They only deal in cash, have no secure way to save or invest money, and have no access to credit other than through informal lenders and personal networks. Even individuals with bank accounts may have restricted product options and be subject to exorbitant costs. As a result, a large quantity of money is held outside of the banking system, and credit is limited and costly. Individuals are unable to engage in economic activity that could improve their lives as a result of this. The economy suffers as a result.

Digital finance is a game-changing solution that can be implemented quickly and without the need for significant additional infrastructure investment. Mobile phones and other readily available technologies are already being used by banks, telecommunications companies, and other providers to provide basic financial services to customers. Using digital channels instead of brick-and-mortar branches lowers provider costs and promotes customer convenience, making finance more accessible to people of all income levels and in remote rural locations. Digital payments and digital financial services can eliminate large inefficiencies and enable significant productivity advantages for enterprises, financial service providers, and governments.

Consumers have become more discerning when it comes to digital interactions. The necessity for easy access to banking products, services, and information has grown tremendously as a result of many events that have changed the working of the economy such as the demonetization reform. The digital india initiative and the pandemic. Given that most customers are now comfortable using online channels, personalisation and customization supplied through digital offers may potentially affect conventional ‘customer loyalty' for physical proximity of branch.

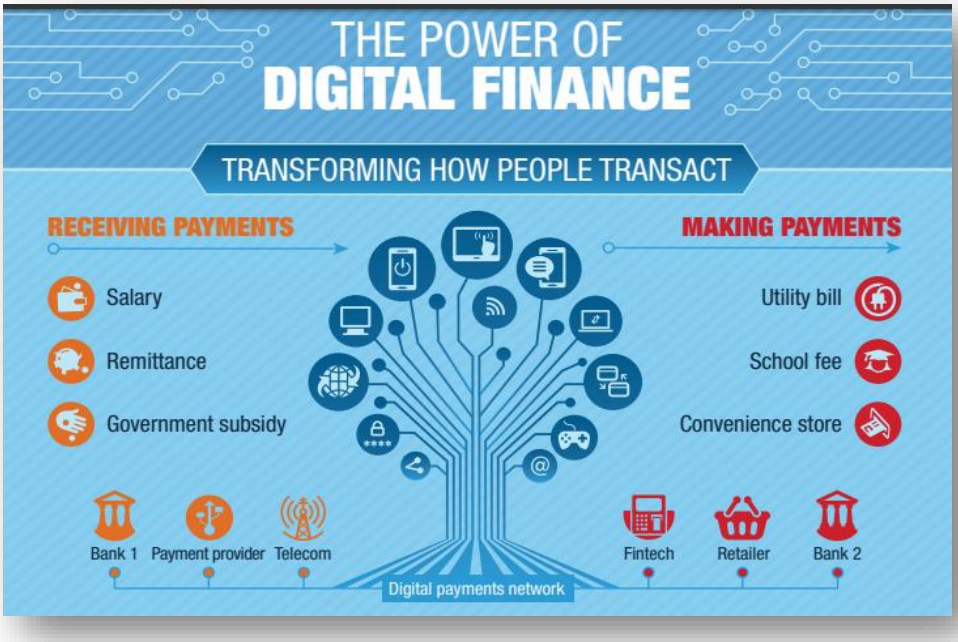


Figure 4.1. Capability of Digital Banking

Source- McKinsey Report, Digital Finance for All

Security and cost-cutting are key motivators for most traditional institutions to adopt digital. With the growing number of specialised banks and FinTechs, the fight for new consumers and customer retention has never been fiercer. Traditional banks have an edge over specialised banks and FinTechs in that they can provide a full range of products and services. In this ever-changing world, they just need to adapt to the customer-first strategy. Traditional banks were the king of payments for a long time. Banks had a virtual monopoly over the payment ecosystem through the debit card period and far into the digital era. This market is also changing, with the emergence of a slew of new payment service providers in recent years, as well as UPI becoming a key payment option for most Indians. Through their online presence and collaborations with some of the larger platform players, several payment platforms have built vast merchant networks. Several payment solutions would dominate the future in the sector, primarily Biometric Authentication, Invisible Payments, and Voice-enabled Payments. Banking is a labor-intensive, repetitive job in which the employee is prone to making mistakes. Banks have introduced a variety of technological advancements as a result of the expansion of digital technology. Automation, biometrics, chatbots, machine learning, and blockchain

technology are just a few of the various digitalization approaches used by the banking industry. Banking solutions and products have changed and improved dramatically as a result of technology advancements. The digital banking revolution is exemplified by internet and mobile banking. Withdrawing, depositing, and transferring funds has never been simpler. For banking purposes, there is no need to go to a bank branch. The bank can now be accessed 24 hours a day, seven days a week. Banks began employing computer technology with standalone personal computers to reduce errors and speed up the process, and subsequently built up their own local area networks (LAN). The role of banking digitalization in India, which began in the 1980s, has come a long way. However, there is still a long way to go in the banking industry's digitalization, and a lot of obstacles to overcome before we can provide end-to-end digital banking in India.

Customers can take advantage of a variety of banking options provided by digital banking technology. Customers will find banking much more convenient and simple as a result of this. One of the most significant benefits of bank digitalization is improved customer service. Banks are open 24 hours a day, and systems are updated in real time. Customers would no longer have to wait in long lines to enquire about their account information. Digital platforms are anticipated to bring low-cost financial services to both the unbanked and underbanked populations, particularly in rural and remote areas, and so expand digital financial access to provide high-quality, inexpensive financial services. Transaction costs could be reduced by as much as 90% by using digital channels instead of traditional methods, lowering break-even costs. It is a huge step forward for firms and the trading sector. E-commerce and other comparable firms would not have been viable without online banking. The use of innovative digital banking systems has eased every part of purchasing and payments. People need banks just as much as banks need people. Year after year, private banks introduce new value-added services, therefore every bank must embrace digital transformation to stay competitive.

By reducing parallel economy, enhancing ease of doing business, and increasing transaction transparency, digital banking will aid in the empowerment of rural economies. It allows for a more efficient payment and accounting system, resulting in a significant increase in the speed with which banking services are delivered.All of these elements point to a strong future for India's banking sector. Banks that go through this process should expect lower expenses and more streamlined processes.

This connection also makes it easier for customers to have a more pleasant and engaging experience. To keep up with this fast changing online environment, banking staff must be digitally upskilled.

4.2 REVIEW OF EXPANDING AND DEEPENING DIGITAL PAYMENTS ECOSYSTEM IN GUJARAT

4.2.1 ***EXPANDING AND DEEPENING DIGITAL PAYMENTS ECOSYSTEM-*** This policy is a kind of developmental policy announced by governor of RBI on October 4, 2019 to increase the digital footprints in the country. The primary role of this policy was to identify a district in every state and UT to make it 100% digitally enabled within a single year. The selection of districts was to be undertaken by the State level bankers or union territory level banker committee and further the project was to be headed by one bank in that district having significant presence in the region. This was initially launched as a pilot survey for 42 districts selected all over the nation. The aim was to complete the survey by 2020 but due to covid restrictions the new deadline was fixed as March, 2021.

4.2.2 ***OBJECTIVE-*** The program's goal is to make it possible for everyone in the targeted districts to make and receive digital payments in a safe, secure, quick, economical, and convenient manner. This would include, for example, providing the infrastructure and literacy required to process such transactions.

4.2.3 ***DISTRICTS IDENTIFIED-*** According to data provided by SLBCs/UTLBCs, a total of 42 districts have been recognised across States/UTs, of which 8 districts are Aspirational Districts identified under the Government of India's "Transformation of Aspirational Districts" initiative. Annex - I contains a list of recognised districts by state/UT and the Nodal Banks to which they have been assigned.

4.2.4 ***MAIN FUNCTION-*** The primary role of the banks was to convince the merchants/traders/businesses/utility service providers to come into the purview of digital payments interface and adopt it as a method of receiving payments in the districts so that the customers would be motivated to use such facilities offered by the merchants. So to oversee this, SLBC/UTLBC was responsible to carry on the survey in the district identified in their state and assign them the targets for this purpose.

4.2.5 ***ROLE OF NODAL BANK-*** Every Nodal Bank must appoint a senior level Nodal Officer at the Head/Corporate Office level to oversee the overall implementation of the programme in the bank's regions. Nodal Banks' Controlling Offices will be in charge of spearheading the entire programme on the ground in the districts that have been assigned to them, under the overall supervision and guidance of their Head/ Corporate Offices. These banks were required to collect the

data from all the banks and then present the aggregated data to the RBI Regional office and SLBC/UTLBC after examining its integrity. The head office or the controlling offices of these nodal banks were required to address the issues faced while implementation and were the communicating points to the RBI Central office.

4.2.5 ***DISTRICT IDENTIFIED IN GUJARAT-*** Banaskantha

4.2.6 ***CURRENT STATUS-*** There has been a tremendous improvement in the digital payments statistics post the implementation of this programme and the success rate has been nearly 100% with a boost in lot of modes for digital payments including NEFT, RTGS, RUPAY Card etc. This has been done by incentivizing the merchants and traders on every transaction done online. Every small vendor has been provided with the QR code to enable the digital transaction. Also, this region has mostly rural population, so despite the challenges this programme has uplifted the status of the people making them aware about digital banking and its convenience. Before this programme people didn't also have their accounts in banks and the area was unbanked but this survey gave the boost to the banking habits of people.

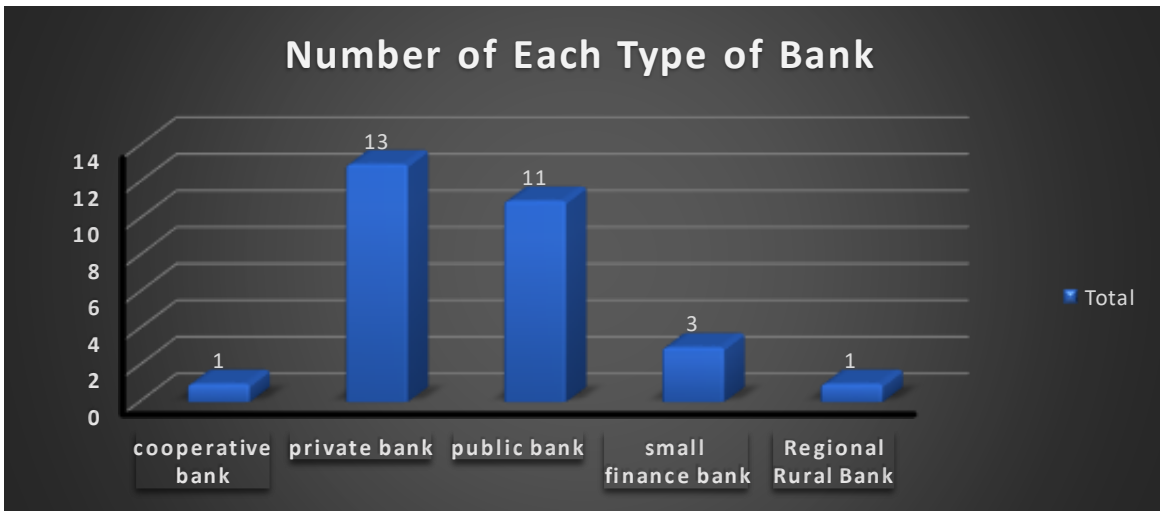


Figure 4.2. Number of each type of banks in Banaskantha District

Source- LDM, Banaskantha

The population in banaskantha district 413377 in urban areas while 27,02,668 in rural areas. While having the glance of the bank branches set up in the district, 1 was a cooperative bank, 13 were private banks, 11 were public banks, 3 were small finance banks and 1 was regional rural banks. Therefore, the maximum number of branches were of private sector banks followed by public sector.

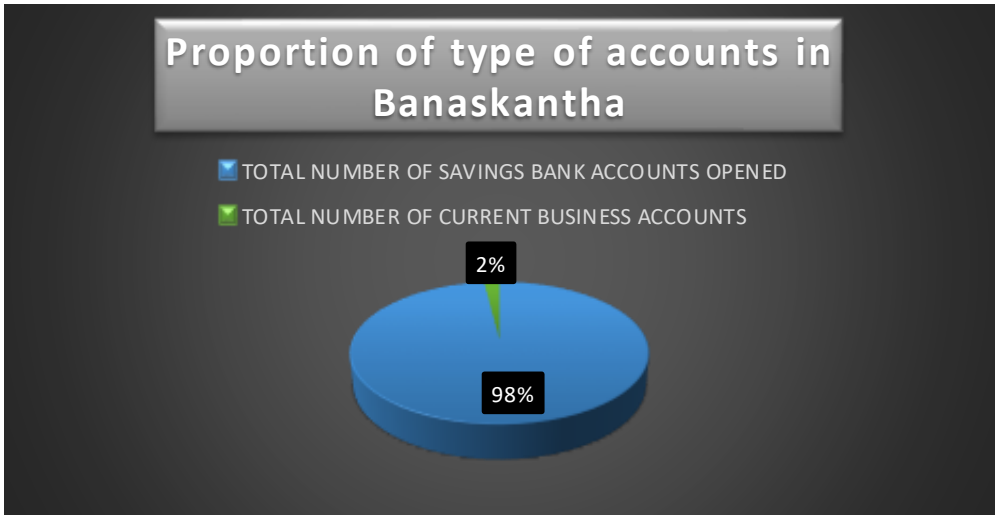


Figure 4.3. Proportion of type of accounts in Banaskantha District

Source- LDM, Banaskantha

The proportion of current business accounts were only 2% as compared with 98% concentration of savings bank accounts.

4.2.7 SAVINGS BANK ACOUNTS

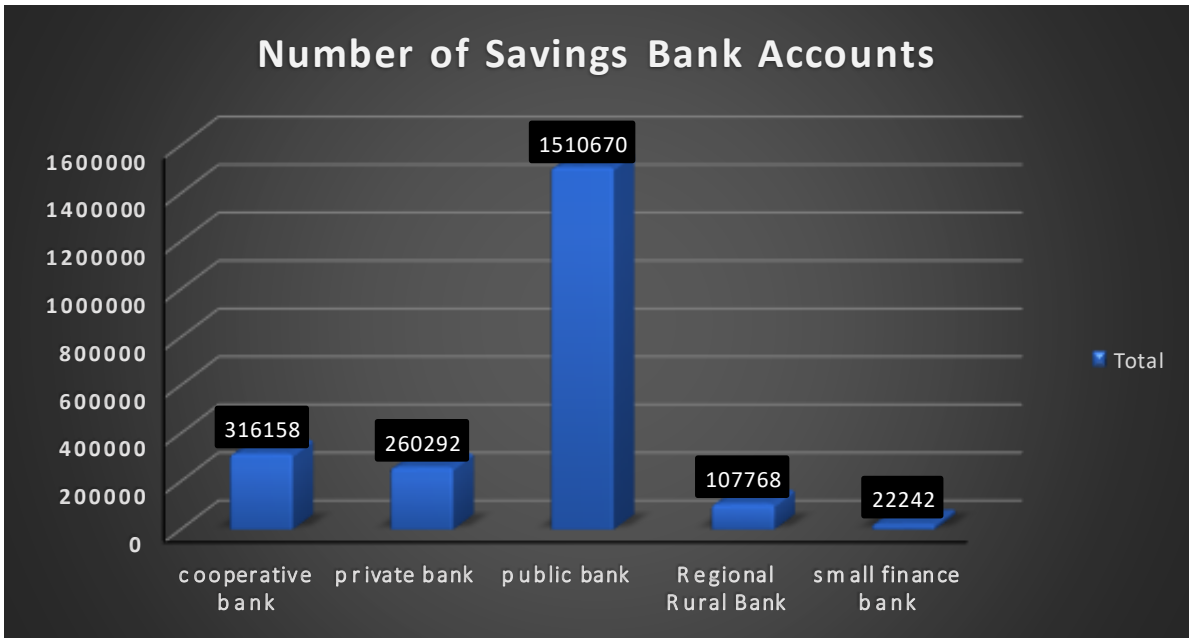


Figure 4.4. Number of savings bank accounts in each type of banks in Banaskantha District

Source- LDM, Banaskantha

The total number of savings bank accounts in the district were 22,17,130 out of which 11,34,000 accounts were opened under PMJDY and were jan dhan accounts. Also, the public sector banks' penetration in the district was second highest but the number of savings bank accounts it holds is the highest that is 68.13% and comparatively private sector banks that have the maximum banks hold

just 11.74% of savings bank accounts. Single Cooperative bank holds 14.25% of these accounts while a single RRB holds 4.86% and the rest were with the small finance banks.

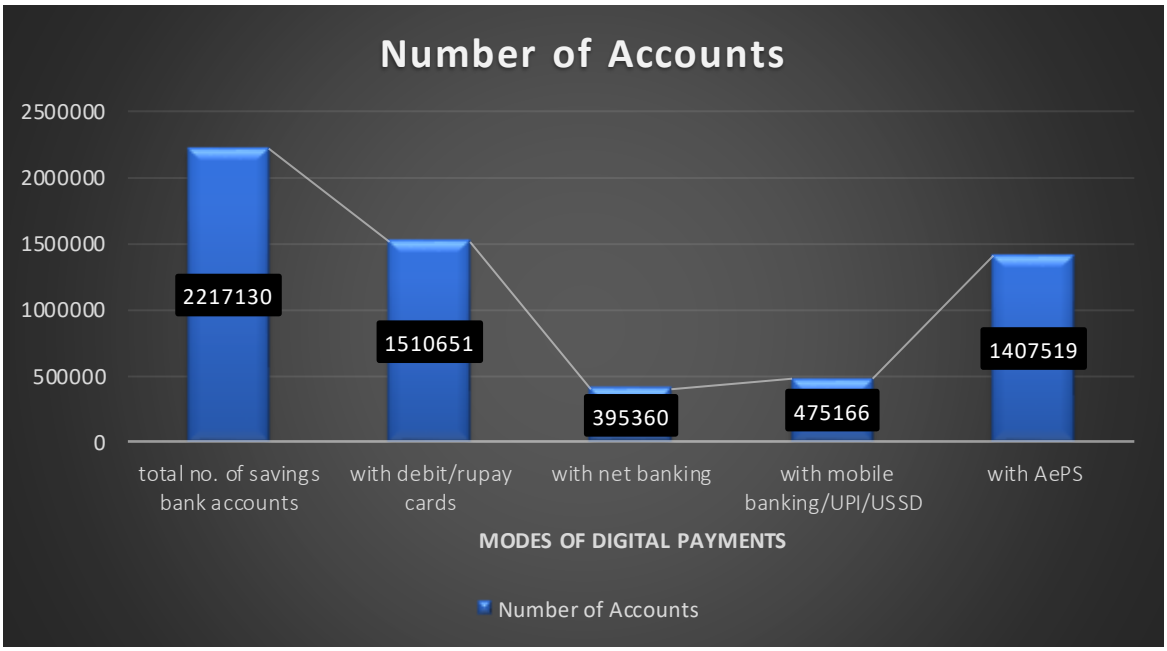


Figure 4.5. Number of accounts with different modes of digital banking in Banaskantha District

Source- LDM, Banaskantha

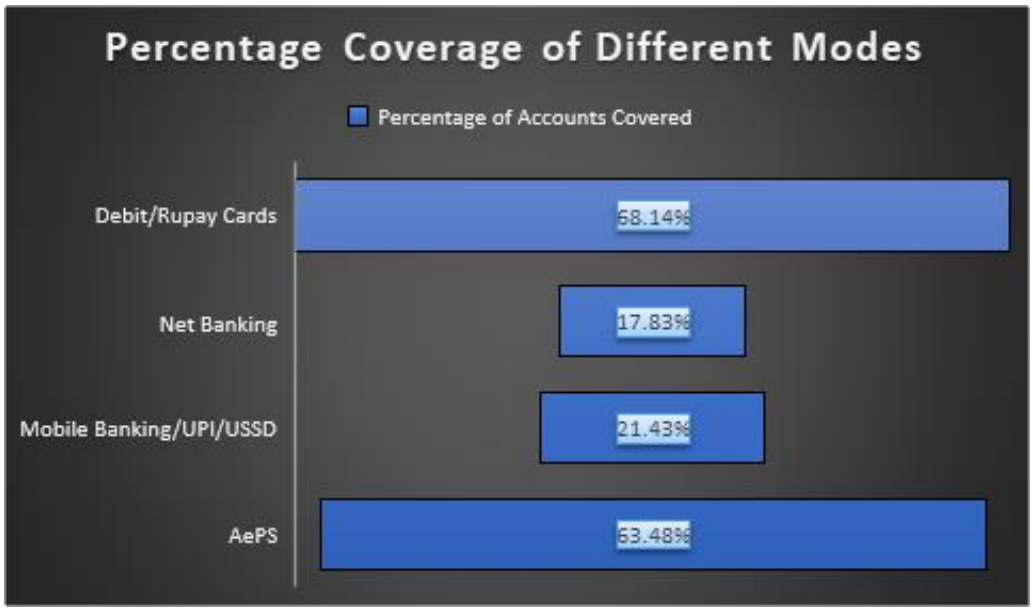


Figure 4.6. Percentage of accounts with different modes of digital banking in Banaskantha District

Source- LDM, Banaskantha

The major prominent modes that were adopted by the people of banaskantha district were Debit and Rupay cards that were given on the opening of savings bank accounts, net banking in the form of NEFT and RTGS, Mobile banking involving UPI transactions and USSD, Aadhar enabled payment systems. Debit and rupay cards were mostly used while net banking was least used mode among these mentioned modes.

4.2.8 CURRENT BUSINESS ACCOUNTS

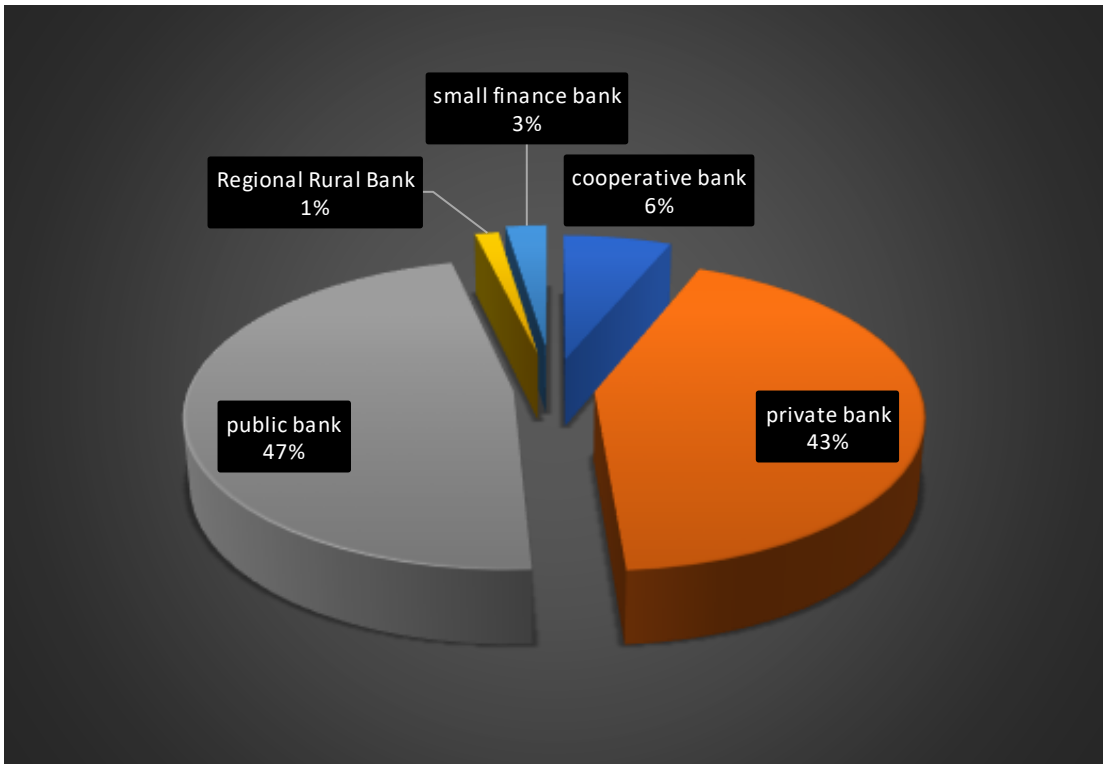


Figure 4.7. Number of current accounts with different types of banks in Banaskantha District

Source- LDM, Banaskantha

As stated earlier, of the total accounts opened in the district only 2% were current business accounts which were covered by public sector banks 47%, by private sector banks 43%, cooperative banks 6%, small finance banks 3% and 1% by the regional rural banks.

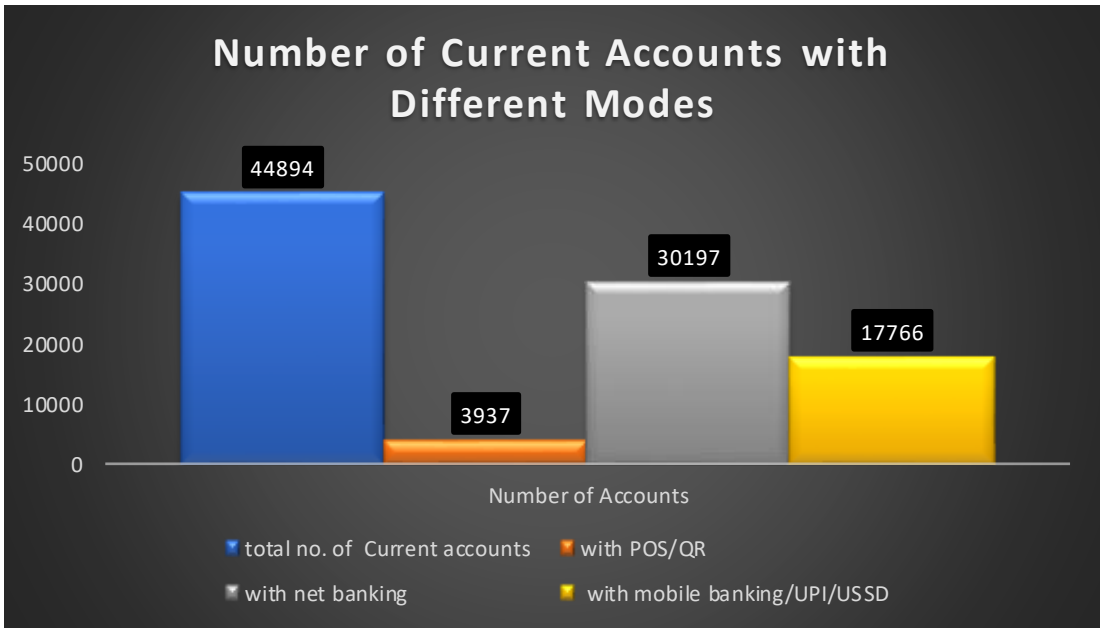


Figure 4.8. Number of current accounts with different modes of digital banking in Banaskantha District

Source- LDM, Banaskantha

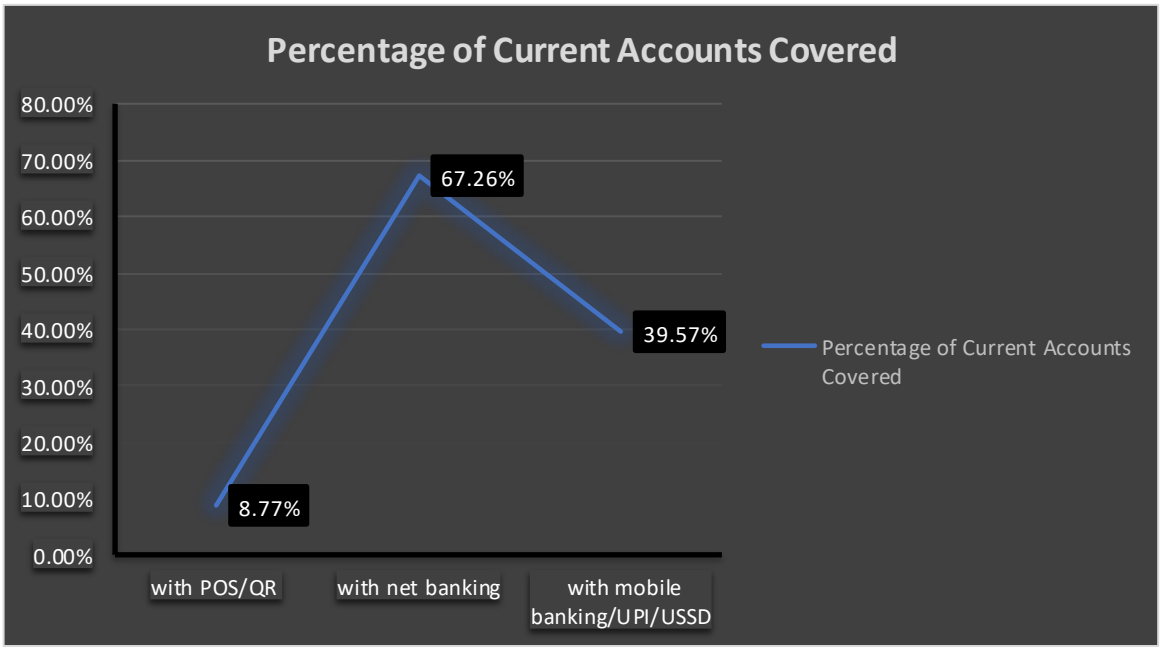


Figure 4.9. Percentage of current accounts with different modes of digital banking in Banaskantha District

Source- LDM, Banaskantha

the total 44894 current business accounts were covered with POS/QR codes, net banking or with mobile banking/UPI/USSD. A single account could also be possibly covered with two or all three modes but at least 78.79% of accounts were covered with at least one of these facilities while 4846 accounts were ineligible for these digital modes as per boards policies.

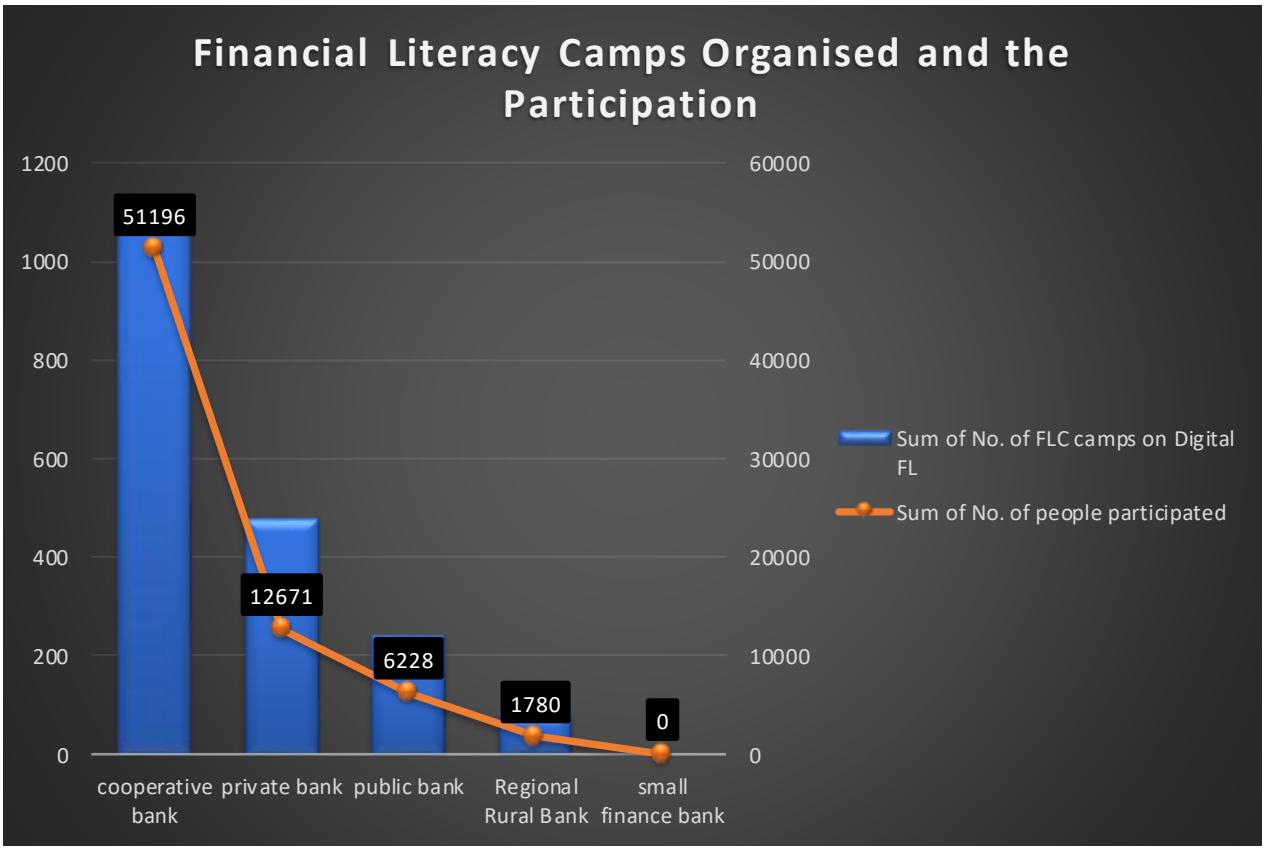


Figure 4.10. Total number of Financial Literacy Camps organised by different categories of banks and number of people participated in Banaskantha District

Source- LDM, Banaskantha

The total number of people participated in the camps seems lower. This graph depicts on an average the number of persons per camp organised by cooperative bank turns out 47, by private sector banks 26 , by public sector bank 26 ,by Regional Rural Bank 22 and small finance banks didn't organise any camps.

4.3 STEPS TAKEN BY RBI AND GOVERNMENT TO BOOST DIGITAL BANKING

1. **SANDBOX ECOSYSTEM-** The Reserve Bank is working hard to create an ecosystem that will not only nourish new innovations but also fuel the financial community's technological ambitions. To support the growth of FinTech in India, the Reserve Bank of India (RBI) joined a select group of countries in August 2019 that have their own regulatory sandbox ecosystem, where any regulated or unregulated entity can come and live test their innovative products or services in a controlled environment. This is a partnership between the regulator, innovators, financial service providers, and end users (customers) to ensure that Indian consumers continue to receive world-class financial services. The 1st Cohort on "Retail Payments" and the 2nd Cohort on "Cross

Border Payments" received positive feedback. The Reserve Bank has also established our own Innovation Hub (RBIH). For the exchange of ideas and creation of prototypes relevant to financial innovations, this hub will engage with financial sector institutions, the technology industry, and academic institutions.

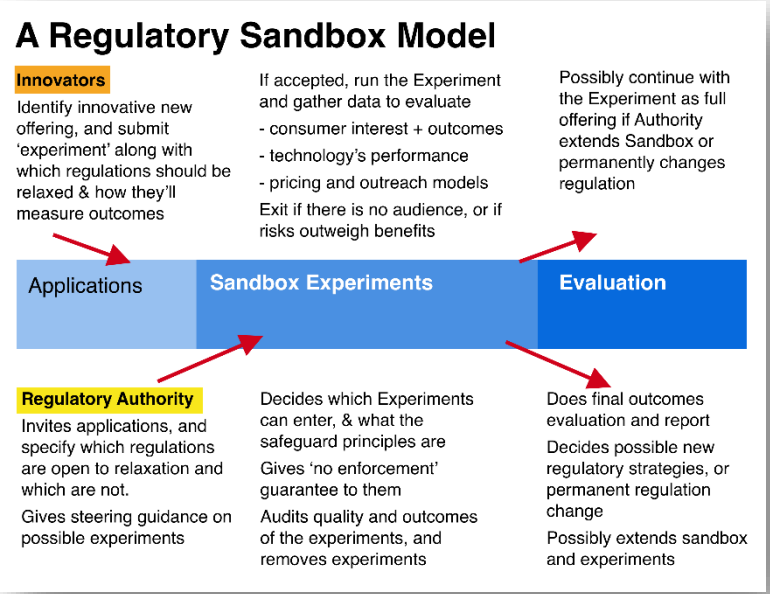


Figure 4.11. Sandbox Ecosystem Model

Source- Medium.com

2. **KISAN CREDIT CARD-** On November 24, 2012, the RuPay Kisan Credit Card was officially launched to help farmers. There are around 1000 RuPay Card issuing banks in the world now, some of which have issued Kisan RuPay Cards. Farmers seem to prefer withdrawing the credit amount in cash and utilising it for agricultural inputs rather than using the card directly. In addition, some vintage kisan credit cards in the form of passbooks are still available. Banks have begun the process of converting these to RuPay Kisan Cards, which will allow them to be used more readily.

Figure 4.12. Kisan RuPay Card

Source- KrishiJagran.com

3. **SETTING OF NATIONAL CENTRE FOR FINANCIAL EDUCATION-** RBI, SEBI, IRDAI, and PFRDA formed the NCFE under Section 8 of the Companies Act, 2013 in response to the Financial Stability and Development Council – Sub Committee (FSDC-SC) Under the aegis of the National Strategy for Financial Education for creating financial awareness and empowerment through financial education campaigns across the country in the form of seminars, workshops, conclaves, trainings, programmes, and campaigns, the NCFE continued to focus on promoting financial education across India for all sections of the population.
4. **INCENTIVES FOR ONLINE PAYMENTS-** The government also announced incentives, such as the elimination of certain service fees, to encourage the use of debit cards, the Internet, and mobile phones for electronic payments. To encourage more people to use RuPay cards, the National Payments Corporation of India (NPCI) waived 'switching charges.' Banks, including private ones, and service providers have agreed to forgo the service price on debit card use. This was done to ensure that digital transactions were more widely accepted. In addition, the railways declared that there would be no service charge for ordering tickets online.
5. **VEHICLES WITH DIGITAL TAG-** To promote digital payments at checkpoints and toll plazas, the Ministry of Road Transport and Highways advised automobile manufacturers to ensure that all new vehicles have an Electronics Product Code Global Incorporated (EPCG)-compliant Radio-Frequency Identification (RFID) facility, allowing people to pay digitally at such locations without having to queue.

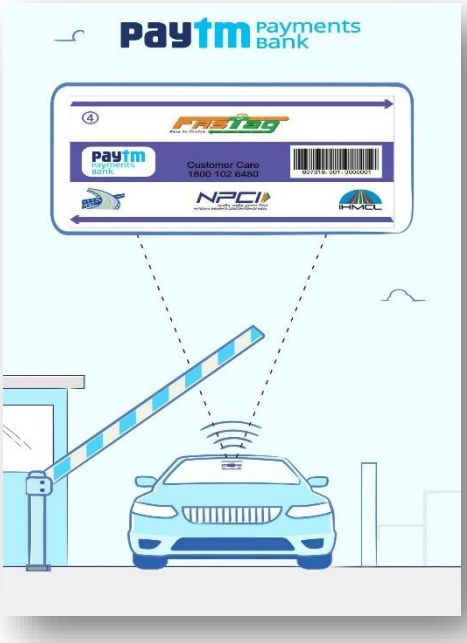


Figure 4.13. Digital Payment Fast Tag

6. **ONLINE PAYMENT OF SALARIES-** For all payments to employees, all public sector units and government organisations have been instructed to adopt solely digital payments, Internet banking, Unified Payment Interface (UPI), and Aadhar-enabled payments.

   The government hoped that all private sector payments, including salaries and wages to employees/workers, would be made online as well. In transactions with private contractors or agencies, it is now essential for the government and its agencies to offer digital payments as an alternative to check or demand draught payments. Officials from the National Payments Corporation of India (NPCI) claimed that all public sector banks now have a UPI app that users may use to promote digital transactions.

7. **POSITIVE PAY MECHANISM-** The Reserve Bank of India launched a number of initiatives to boost digital payments, including a plan for making offline payments with mobile devices and cards, as well as a Positive Pay method to combat high-value check fraud. Cheques will be processed for payment by the drawee bank based on information provided by the client at the time of issuance of the cheque, according to the Positive Pay mechanism, which will cover around 20% and 80% of total cheques issued in the country, respectively, by volume and value. The method will apply to all checks with a value of $50,000 or more. It will improve client security when making checks payments.

8. **PILOT SURVEY FOR OFFLINE DIGITAL PAYMENTS-** In the meanwhile, the RBI proposed allowing a trial scheme for small value payments in off-line mode with built-in provisions for defending users' interests and liability protection, noting that there has been significant increase in digital payments but that Internet connectivity remains an issue. The pilot was supposed to run until March 31, 2021. Banks and non-banks alike can join by using cards, wallets, mobile devices, or any other available channel. Payments can be made without the need of an additional factor of authentication, up to a maximum of Rs.200 per transaction. The highest limit of offline transactions on an instrument will be 2,000, and payment operators will be required to offer clients real-time alerts. On the basis of the pilot survey's findings, full directions for the scheme's implementation will be released.

9. **FINANCIAL LITERACY CAMPS-** Financial literacy camps were initiated by RBI as a responsibility of Lead District Managers to set up campaigns and villages on a specific topic each time with an objective to promote financial literacy and greater awareness about Financial Products. Starting from April 2017, Financial Literacy Centre's were advised to conduct special camps on "Going digital" through UPI and *99# (USSD)". Two posters, one on UPI and one on *99# have been prepared for the benefit of the trainers and the audience. The English, Hindi and local language versions of the two posters are available at the financial education webpage of the Bank for download and printing purposes. While the A2 and A3 sizes can be used by trainers, A4 and A5 sizes can be

distributed to the general public during the camps. Besides the special camps on going digital, FLCs will continue to conduct the tailored camps for the different target groups.

Figure 4.14. Financial Literacy Camps by SBI

Source- twitter.com/theofficialsbi/status

4.4 CHALLENGES AND ISSUES BEHIND ADOPTION OF DIGITAL BANKING IN RURAL AREAS

4.4.1 11 DISTRICTS OF GUJARAT SELECTED TO KNOW ABOUT THE CHALLENGES

1. DOHAD

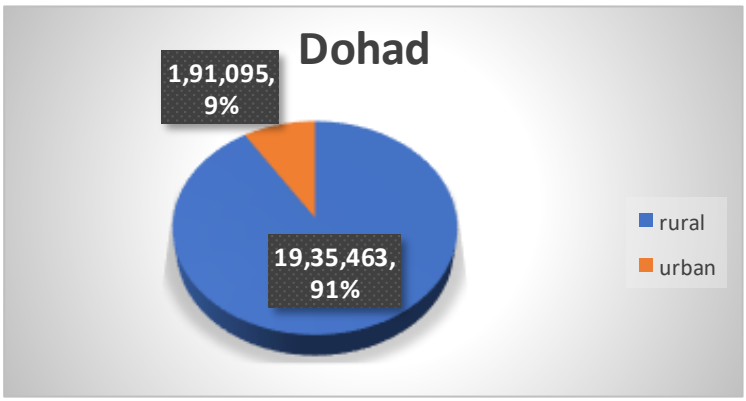


Figure 4.15. Urban and Rural Population of Dohad District

Source- CensusGujarat.gov.in

2. THE DANGS

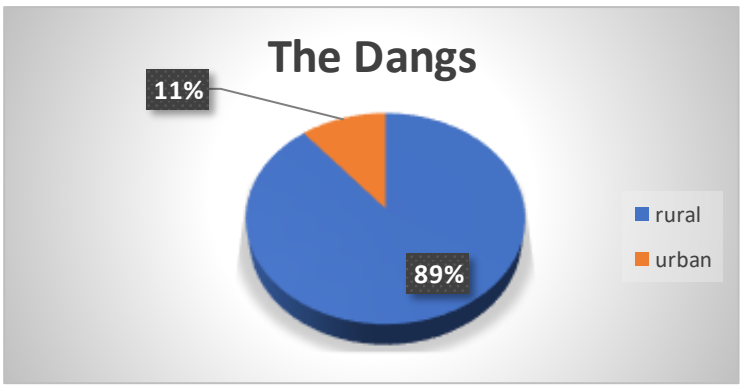


Figure 4.16. Urban and Rural Population of The Dangs District

Source- CensusGujarat.gov.in

3. NARMADA

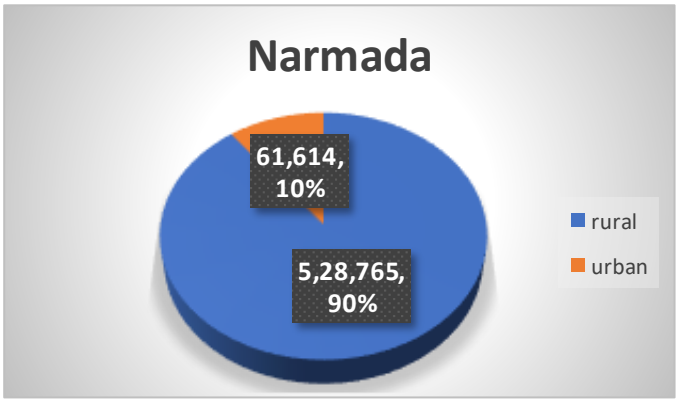


Figure 4.17. Urban and Rural Population of Narmada District

Source- CensusGujarat.gov.in

4. KHEDA

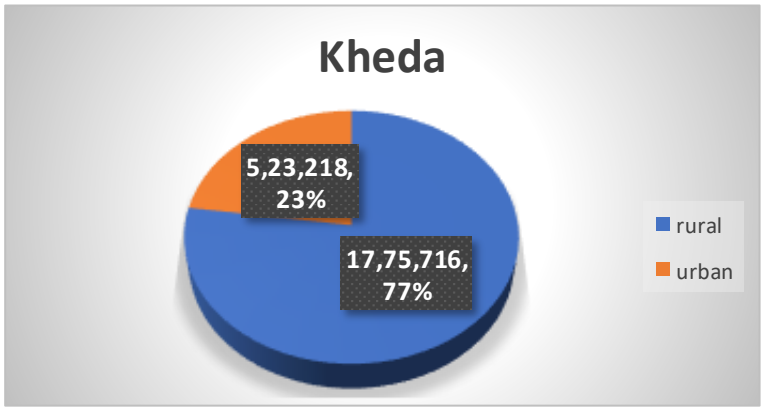


Figure 4.18. Urban and Rural Population of Kheda District

Source- CensusGujarat.gov.in

5. **MEHSANA**

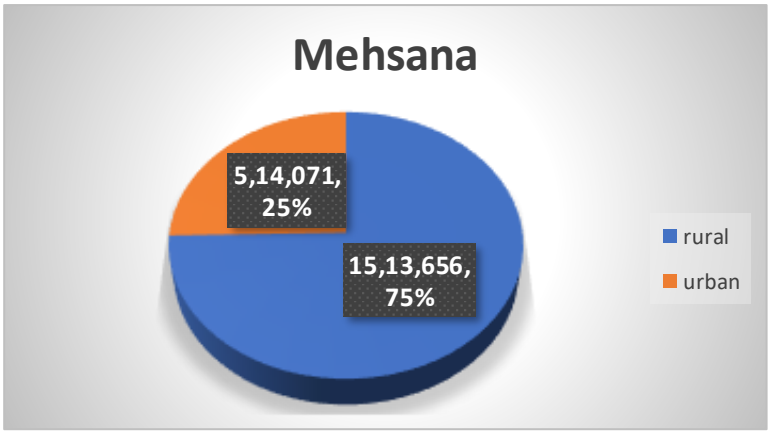


Figure 4.19. Urban and Rural Population of Mehsana District

Source- CensusGujarat.gov.in

6. **JUNAGADH**

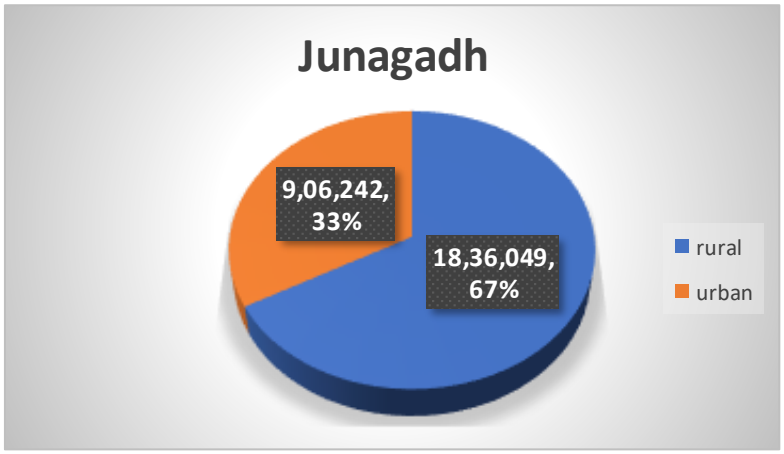


Figure 4.20. Urban and Rural Population of Junagadh District

Source- CensusGujarat.gov.in

7. **SABARKANTHA**

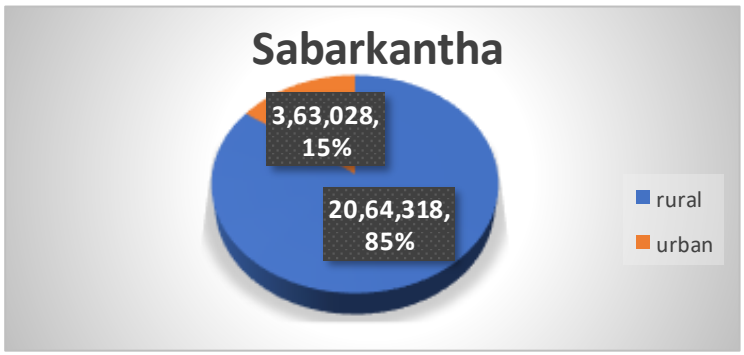


Figure 4.21. Urban and Rural Population of Sabarkantha District

Source- CensusGujarat.gov.in

8. **BANASKANTHA**

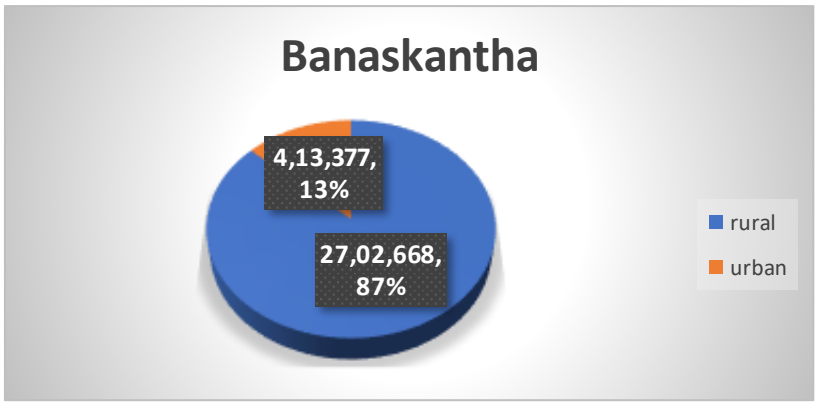


Figure 4.22. Urban and Rural Population of Banaskantha District

Source- CensusGujarat.gov.in

9. **PANCHMAHAL**

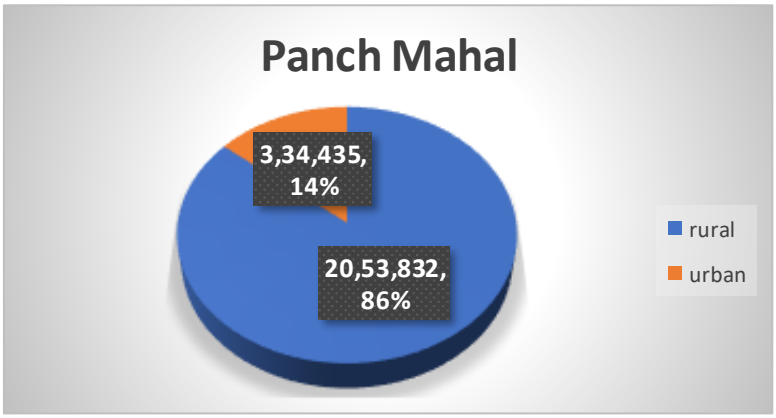


Figure 4.23. Urban and Rural Population of Panch Mahal District

Source- CensusGujarat.gov.in

10. **SURENDRANAGAR**

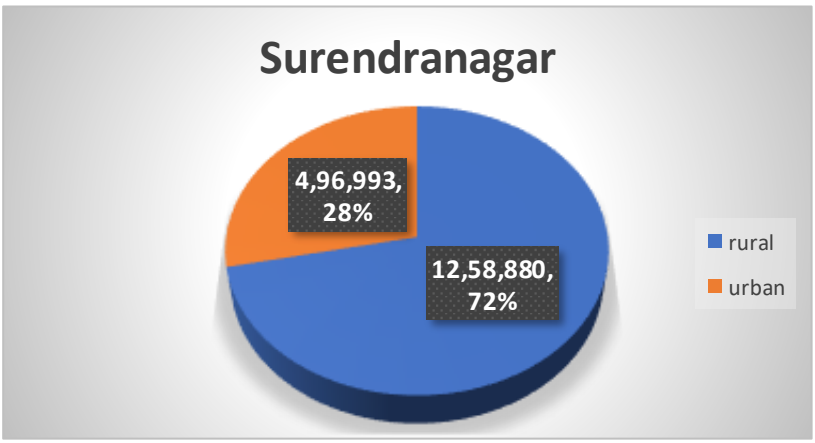


Figure 4.24. Urban and Rural Population of Surendranagar District

Source- CensusGujarat.gov.in

11. PATAN

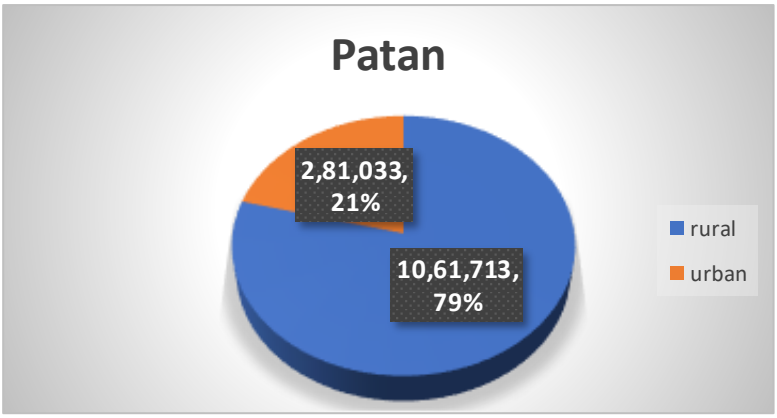


Figure 4.25. Urban and Rural Population of Patan District

Source- CensusGujarat.gov.in

4.4.2 CHALLENGES IDENTIFIED

1. **LACK OF INFRASTRUCTURE-** For both consumers and financial institutions, distance or lack of access to a formal banking outlet is a big hurdle. On the one hand, financial organisations confront difficulties such as obtaining adequate internet, electricity, and other resources. Separate bank branches, on the other hand, are seen as a non-viable solution due to high expenses and other issues. As a result, clients do not have access to basic banking services. There is a scarcity of bandwidth and technological reach in diverse regions. Digital payments will only be realistic if loopholes such as connectivity with appropriate bandwidth and adequate PoS solutions are resolved in a timely manner. Even though it has been agreed that IT services will be offered in every corner of India, many of the sites where the installations have been completed do not have services available to users.

2. **ILLITERACY-** One of the greatest hurdles to India's technological infrastructure upgrade is illiteracy and superstition. Local religious bodies and even panchayats have reportedly prohibited the usage of cell phones in certain areas. They also deny access to the internet and basic education to children and women. According to a 2016 report from the GSMA, more than 70% of Indian women do not have access to the internet. They also discovered that just about 38% of women in urban regions and just over 10% of women in rural regions have access to the internet. At all India level, the adult (15 + years) literacy rate is 69.3% and that among males is 78.8% and females is 59.3%. Rural – Urban gap existed in Adult literacy rate for both females and males. The adult literacy rate for females in rural areas is 50.6% vis-a-vis 76.9% in urban areas whereas for males the same in rural

areas is 74.1% vis-a-vis 88.3% in urban areas. Illiteracy is the foremost cause of being digitally backward.

3. **LOW AWARENESS ABOUT DIGITAL PROODUCTS-** The rural populace is less familiar with computers and smartphones. They don't even have a fundamental understanding of how to use a smartphone or a computer. The situation is also being exacerbated by a poor internet connection. Individuals who are unaware of the advantages of joining the formal banking system, or for whom the financial products and services available are inaccessible or unaffordable, do not consider it a priority in their daily lives. The dissemination of accurate information on how to use, benefit from, and employ internet banking is currently relatively limited. One of the greatest roadblocks to the development of e-banking is a lack of awareness of new technology and its benefits.

4. **FEAR OF FRAUD-** Many clients are concerned about deposit security while considering Anytime Anywhere Banking. The recurrent news of money being lost in digital transactions causes concern. Hackers and cyber thieves continue to put financial institutions on the attack. As a result, customers, particularly in rural regions, have developed a dread psychosis. Customers are wary about taking any dangers. Customers are concerned about the risk of private information being disclosed and the possibility of identity theft when using internet banking services. Many of them believe that using online banking services may expose them to identity theft. As the digital channel in financial services continues to develop, cyber security has evolved from a technological risk to a business risk.

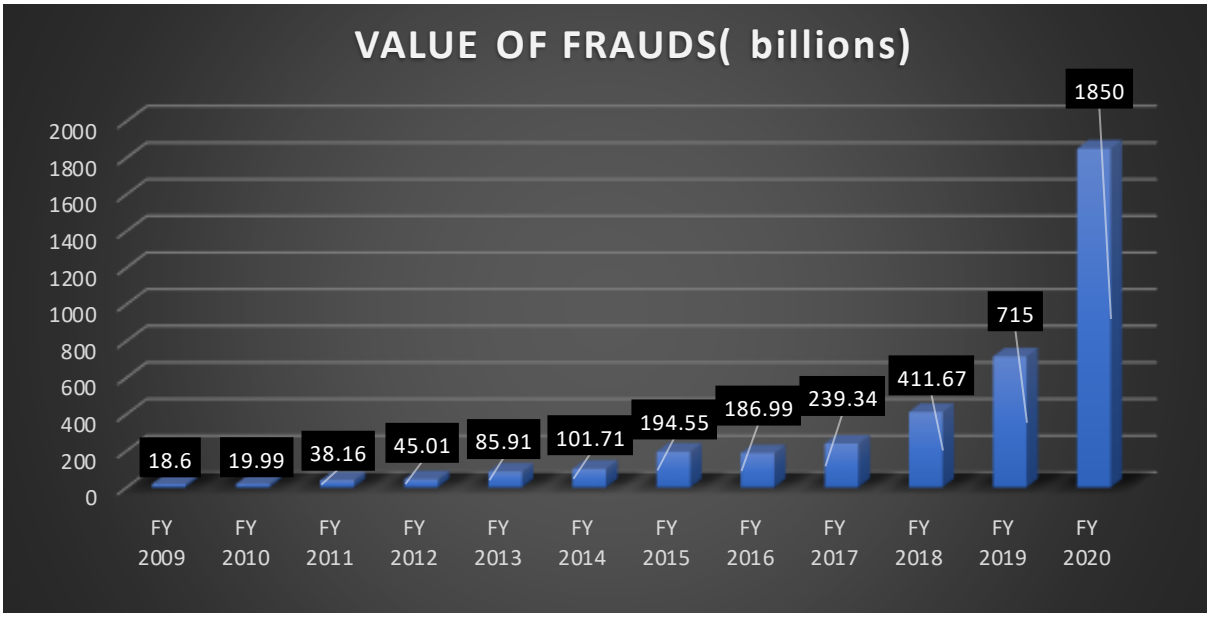
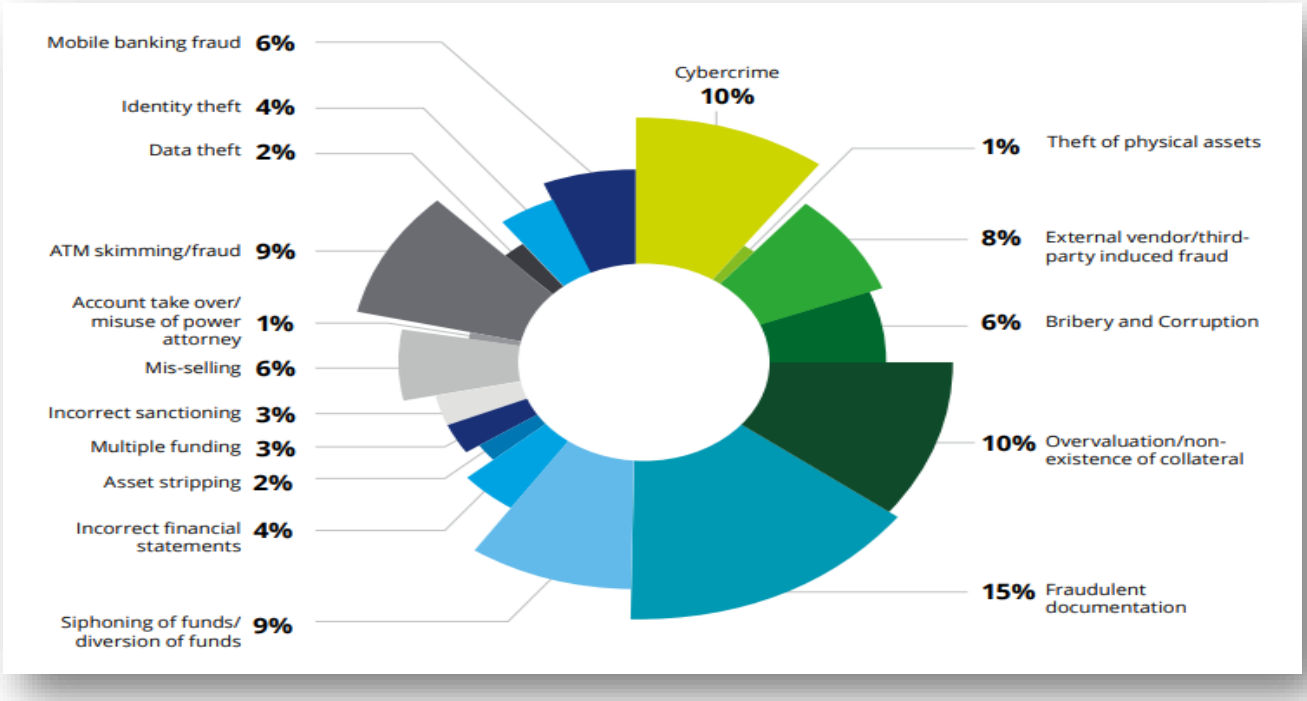


Figure 4.26. Value of Digital Banking Frauds from FY 2009- FY 2020
Source- Statista

Security breaches can tarnish reputations and undermine confidence, risking digital solutions investments. Millions of accounts can be affected by a single theft, as happened in October when 3.2 million card numbers were stolen in a malware-related security breach. Customers of SBI, HDFC Bank, ICICI Bank, Axis Bank, and other banks used these cards at ATMs. In China, the stolen debit cards were utilised. The heist is still being investigated, but it has nearly been forgotten in the rush to make digital payments a reality



. Figure 4.27. Types of Banking Frauds

Source- Deloitte/IndiaBankingFraudSurvey

5. **COMPLICATED NATURE OF DIGITAL TRANSACTIONS-** Being a part of the formal financial system is expensive—the bare least is financial literacy, which is significantly more difficult than literacy. In rural places, the transaction is a cost because most people struggle to fill out cheque and bank paperwork, even if they are literate. Being technologically backward, needs close assistance to understand the operations of digital payments which is not provided to the people who come from an era where mobile phones didn't even exist.

6. **BELIEF IN CASH SYSTEM-** The majority of rural people's requirements are met through cash transactions, therefore introducing the concept of digital payments is a difficult undertaking. Because the rural economy is generally informal or unstructured, cash serves better than digital transactions.

7. **NETWORK PROBLEM-** The lack of bandwidth and technology's reach to varied regions is another key issue in the digital divide. Despite the fact that it is stated that ICT services will be available in every corner of India, many of the areas where installations have been completed do not have services available to users. The Indian government has recognised that internet services are limited in rural India and has created a project dubbed the National Optical Fibre Network, which aims to provide internet access to India's rural villages by supplying high-speed internet to local panchayats. This ambitious initiative has been given a budget of roughly Rs 700 billion, and the government claims to have connected more than 60,000 panchayats to the internet, while the actual figure is a little more than 7,000.Tribal areas such as The Dangs in Gujarat don't have enough access to internet which minimises their possibility of opting digital modes to a great extent.

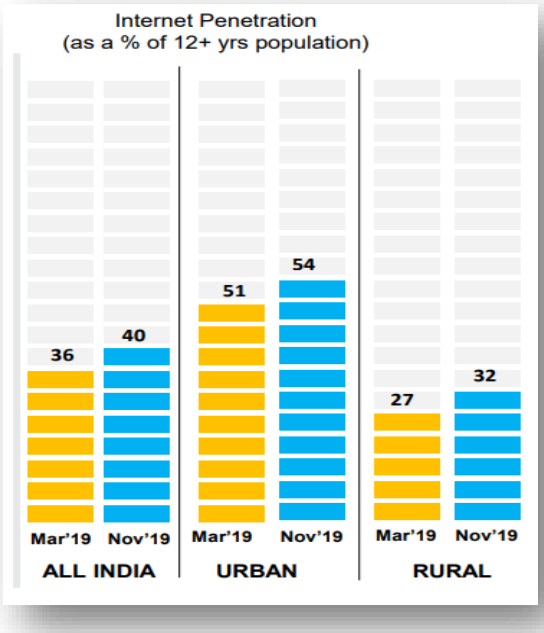


Figure 4.28. Internet penetration in Urban and Rural India

Source- IAMAI report/ Digital in India

8. **LACK OF TRUST-** One of the most significant barriers to the adoption of digital payments in the rural sector is a lack of trust. Whether it is due to developing information security challenges or a lack of consumer understanding, winning customer trust is one of the most difficult difficulties facing mobile wallets, digital transaction service providers such as banks, fin-tech businesses, and others. The misconception is that if money is parked at a bank, it can be deceived or kept from being withdrawn, making people even more apprehensive of digital transactions. Many individuals are sceptical about digital banking unless they can see proof that a bank exists in the physical world. They

have little faith in a bank that solely conducts digital transactions and has no physical presence. As a result, becoming entirely digitalized is difficult.

9. **ACCEPTANCE BY MERCHANTS-** The fact that banks take a long time to reconcile merchant transactions is another major impediment to merchant acceptance of digital payments. Consumers may accept digital payments from merchants, but vendors and suppliers may refuse to take digital payments from such retailers. These are the additional roadblocks to the growth of digital payments in rural areas.
10. **COST OF TRANSACTIONS-** The cost of transactions put on customers is also a key source of worry. Some businesses, for example, charge consumers the transaction cost for every debit card transaction, which is an added hardship. Such transaction fees must be avoided in order to increase the use of debit and credit cards. Although mobile wallet providers have made the transaction process considerably easier for clients, the charges associated with moving money from wallet to bank accounts remain a major worry. Consumers are leery of utilising mobile wallets for commercial transactions since mobile wallet businesses charge ranging from 1% to 4% for transactions to bank accounts.
11. **SMARTPHONE PENETRATION-** Smartphone penetration is low in india due to inadequate access of the smartphones to the rural people. Although most of them possess basic phones but either couldn't afford to buy the smartphones owing to their low income levels or are reluctant due to digital illiteracy to use the same.

4.5 INTERNATIONAL CASES TO BOOST DIGITAL BANKING

4.5.1. PEER-TO-PEER LENDING

Individuals and firms invest in small enterprises through P2P lending systems, which allow loans to be provided without the need of a bank. They connect borrowers and lenders on a one-on-one basis: Some allow lenders to pick the borrowers, while others group loans together, and internet auctions are frequently used for this. These platforms usually provide borrowers with business risk scores based on big data analytics. P2P lending is popular in China and is rapidly expanding in the US (leaders include Lending Club and Prosper, which cater to both retail and institutional investors) and the UK (with Funding Circle as leader).

4.5.1.1 CASE OF INDONESIA- P2P LENDING

CHARACTERISTICS OF INDONESIA- Indonesia confronts hurdles in achieving financial inclusion because it is an archipelagic country with an agrarian society. Geographically, slow infrastructure growth has kept public economic service facilities at the top of the priority list in rural areas. Furthermore, Indonesia is an agrarian country that relies heavily on agriculture and fisheries.

On the other hand, as an agrarian civilization, it has a low level of educational productivity for rural areas, which has an impact on village financial inclusion. First, because Indonesia is an archipelagic country made up of numerous small islands, the distribution of education and technology is uneven. Second, there are fewer teachers in rural areas due to a scarcity of professional human resources with academic credentials. Third, rural areas' access to decent education has been limited by a lack of infrastructure. Villagers have little economic and financial understanding as a result of these three variables, hence ecnomic productivity is low.

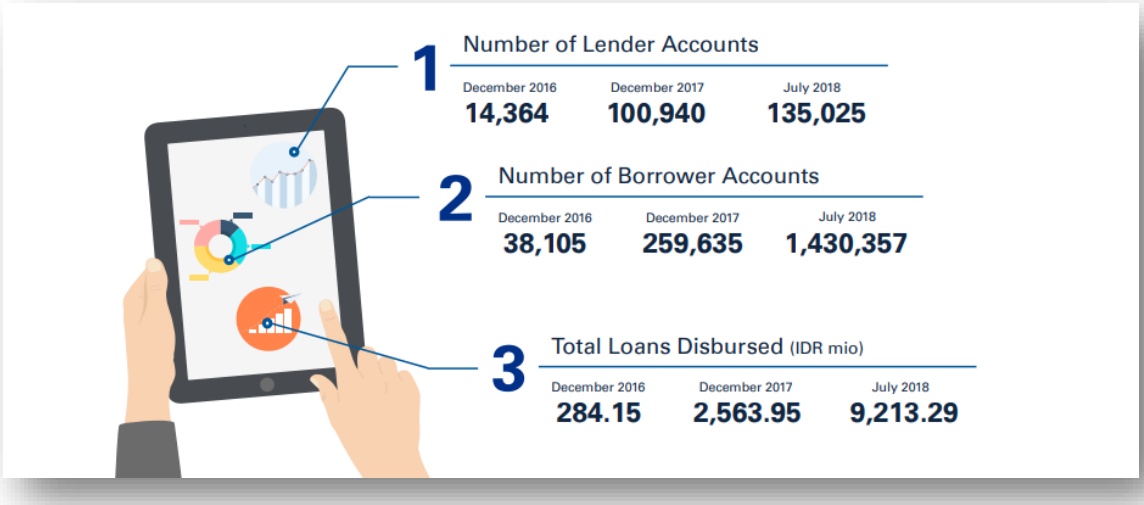


Figure 4.29. Growth of P2P Lending in Indonesia

Source- OJK 2018

As a result, a Peer-to-Peer Lending (P2PL)-based solution to attain infinite financial and economic cycles has been developed to meet these issues. P2PL is an investment activity in which people with excess finances (lenders) pool their funds with others who need funds, both MSMEs and individuals, and this is done online using devices (smartphones, tablets, or laptops) that can be used anywhere and at any time. As a result, this platform can be utilised to help rural communities eliminate economic and social disparities. Primarily it helped in cutting bureaucracy and increased the productivity.

4.5.2. MOBILE MONEY-

Mobile money, according to the IMF's Financial Access Survey, is a pay-as-you-go digital means of exchange and store of value enabled by a network of mobile money agents. It is a non-traditional banking financial service provided to clients by a mobile network operator or another organisation that partners with mobile network operators. Mobile money services do not require a bank account; all that is required is a basic mobile phone. Mobile banking, on the other hand, is the use of a mobile device application to access and execute banking services such as check deposits, balance inquiries, and payment transfers.

4.5.2.1 CASE OF GHANA- SUCCESS OF MOBILE MONEY IN GHANA

Between 2014-2017, mobile money account ownership increased by nearly 200 percent with 35 percent of adults in rural areas reporting that they had used a mobile money service.

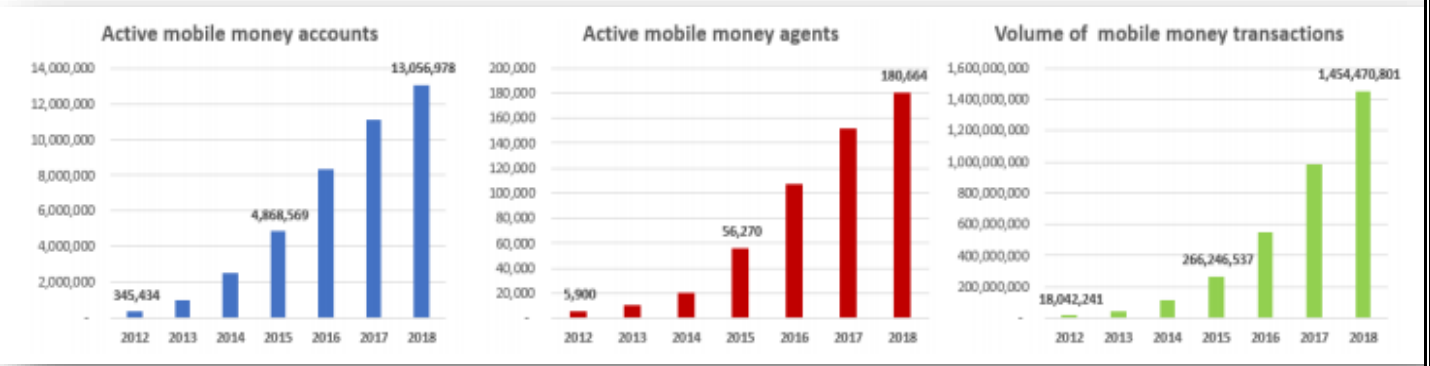


Figure 4.30. Mobile Money accounts, agents and transactions volume

Source- Digital Economy for Ghana Diagnostic Report, World Bank Group 2019

Ghana permitted non-banks – notably mobile network companies – to issue e-money, which was a crucial enabler. Prior to 2015, traditional financial institutions were the only ones who could use mobile money. Mobile network operators were merely conduits for these traditional financial institutions, with their responsibility confined to providing a platform. New standards were adopted

in 2015 that permitted mobile network operators to establish subsidiaries to issue e-money. The Bank of Ghana would be solely responsible for these subsidiaries. Mobile money might now be issued by regulated mobile network operators as well as regular financial institutions. Following the implementation of the 2015 EMI rules, provider investments in agent networks skyrocketed. Along with the number of active agents in the country, the number of active accounts and transaction volumes increased.

The Bank of Ghana accelerated Digital Financial Services expansion in May 2018 by forcing mobile money services to be interoperable with each other and with bank accounts. Following the BoG directive, all mobile money providers will be connected to the GhIPSS infrastructure starting in December 2018, providing full interoperability between mobile money providers and banks. This method allows funds to flow seamlessly between mobile money, bank, and e-zwich (the domestic prepaid, payment card brand65) accounts. Over one million transactions between customers of different mobile money providers were registered in September 2019, reflecting a 250 percent increase over the same month two years ago.

4.5.2.2 CASE OF KENYA- SUCCESS OF M-PESA

Kenya boasts Africa's largest and most successful mobile money market, continually outpacing the continent in terms of scale and innovation. M-Pesa was first introduced in 2007 by Safaricom, a mobile network operator with a 79 percent market share. It has become a common method of money transfer. Individually, this has resulted in formal financial inclusion reaching over 80% of the population in 2019 - the highest in Africa. There were 58.3 million mobile wallets in December 2019, or 1.7 mobile wallets for every adult. According to a recent study, mobile money has actively pulled 2% of Kenyan households out of poverty, owing to improvements in financial resilience and savings. M-fundamental Pesa's P2P payment solution served as a basis for the growth of a larger and more diverse DFS ecosystem.

Figure 4.31. M-Pesa in Kenya

Source- Sokodirectory.com

M-first Pesa's advertising slogan, "Send Money Home," alluded to the fundamental service it provided to low-income people: allowing internal remittances, mostly between urban and rural areas. This was supported by a large agent network that allowed M-Pesa clients to convert cash to e-money and back as needed.

M-Pesa has created a variety of P2P and P2B payments throughout time, covering a wide range of use cases, including minor informal sector payments and donations to informal savings clubs, utility bills, and payments at gas stations, supermarkets, and hospitals. M-Pesa has partnered with the banking industry and currently offers credit, savings, and overdraft-like services.

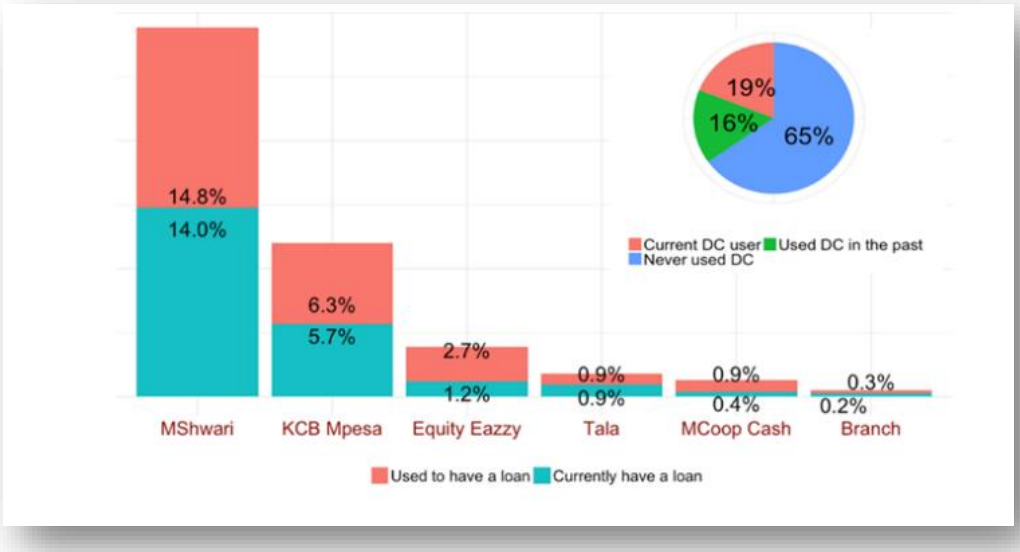


Figure 4.32. Loans statistics in Kenya

Source- Digital Financial Services, Pubdocs.worldbank 2019

KEY ENABLERS-

1. Private sector led model
2. Regulatory Flexibility
3. Simplified consumer due diligence

CHAPTER 4

ANALYSIS AND DISCUSSION

➢ 5. ANALYSIS AND DISCUSSION

5.1 FINDINGS-

1. There is a dire need for more initiatives by the government with enough acceptance infrastructure in place so that farmers may use these cards to purchase agricultural inputs such as seeds and fertilisers. It may be necessary to begin educational efforts to guarantee that farmers are able to utilise these cards securely. To encourage farmers to make digital payments, the government or banks may propose various incentive systems (such as loyalty points by issuing banks in light of the savings from KCC holders not doing cash transactions at bank counters).
2. In the case of payments, for example, the rise of digital alternatives is a result of the present ecosystem's inability to meet the demand for a smooth client experience. The present ecosystem is reliant on physical infrastructure to take non-cash payments, and the development of such infrastructure has lagged behind the issuance of payment instruments such as credit and debit cards.
3. The rural areas need an aggressive push to involve themselves into the banking ecosystem of the country. The expanding and deepening of digital payments system which is specifically focused towards uplifting the unbanked areas and promoting digital products has shown positive results that implies its further application to a country wide level.
4. The initiatives taken by the government and RBI such as financial literacy camps and others need to be revamped with more aggressive promotion and to be dealt strictly to fetch good results from their implementation.
5. In the case of pilot survey undertaken in Banaskantha, having a huge rural population it turns out that the expanding and deepening digital payments programme was successful enough in making the area financial inclusive in terms of the accounts opened in the unbanked area but still the usage of mobile banking and NEFT remained extremely low. This may be because of their unwavering trust in cash payments that involve large amounts of money and the lack of understanding when it comes to technology because operating smartphones brings out a cumbersome process for the tech backward population. Also, mobile banking and NEFT has got acceptance from the younger population of the district due to increasing literacy and awareness but the aged population prefer traditional methods.

5.2 RECOMMENDATIONS AND SUGGESTIONS

1. **GREATER COVERAGE OF SMALL MERCHANTS-** The local market players or street vendors or even farmers must be encouraged to accept the digital modes of transactions through QR codes or other Aadhar payments system to receive the transactional amount. This will make them comfortable in new digital space of payments and also will motivate their consumers to adopt for mobile banking while paying for the goods and services.
2. **INCREASED ACCESIBILITY AND MINIMAL LANGUAGE BARRIER-** To better serve clients in local languages, technology must be leveraged. This should include support for local languages in all user interfaces, including mobile, ATM, and other devices. All digital payment interfaces (web, mobile, POS, ATMs, MicroATMs, etc.) should be accessible to people with disabilities.
3. **INCREASED PROMOTION OF DIGITAL PRODUCTS-** In rural areas, the primary place where major transactions happen are Mandis where most farmers sell their produce and transact on daily basis. So that would be the ideal place for increased promotion of using mobile based payment systems to stimulate quicker payments at their own convenience where the amount would be reflected instantly hand without any hassle.
4. **MODIFYING THE INTERFACE FOR LEGAL PURPOSES-** Another driver of digitization is convenience and ease of use. Users use solutions that make transacting and going about their daily lives easier. Banks can provide APIs that allow tax and accounting software to initiate and approve transactions on behalf of users because banking and payments are part of business processes. Users will be able to keep better records and have more control over their businesses as a result of this. More linkages should be built into the ecosystem so that everyone benefits from digital payments and digital transformation.
5. **SPREADING FINANCIAL AWARENESS AND EDUCATING ABOUT DO's AND DONT's-** User Education and Awareness Digital payments are rapidly gaining traction and are being used all throughout the country. Newer users are constantly engaging with the payment system, even as the technology evolves. It's critical that these users are informed about the advantages and risks of digital payments. They must also be educated on their rights and the necessity of data and privacy protection. Furthermore, users must be informed on how to seek redress for any issues they encounter while using the system. These types of programmes have been undertaken by the regulator in the past, and the committee believes they should be continued. Officials from the SLBC / DLCC, on the other hand, should be allowed to request education sessions tailored to the difficulties

they are encountering in their region. Furthermore, the educational program's impact should be assessed. Periodic surveys can be used to assess the program's requirements as well as its impact. The Financial Education Fund can provide the budget for this initiative.

6. **ADDRESSING INFRASTRUCTURE ISSUES-** The country's underlying digital infrastructure is critical to the country's digital payment systems. This comprises fundamental data connectivity, as well as the time it takes to get OTPs, transactional alerts, and other notifications. The payments industry must measure these factors to verify that this infrastructure is available and working at an appropriate level. If they are not acceptable at any site, they must be escalated to the infrastructure providers, who will take appropriate measures and ensure that the payment system runs smoothly. Acceptance infrastructure, such as POS machines, Micro ATMs, and mobile payment apps, is a suitable point of instrumentation. Payment networks must encourage end points (POS and mobile apps) to monitor and report faults with the telecom infrastructure. Three developments in this area are inevitable-

   The first is the broad adoption of mobile connection and ownership. Everyone, affluent or poor, must own a mobile phone and have access to reasonable data plans in order to gain widespread access to a wide range of financial services. In rural areas and other "edges" of the network where markets are failing to provide due to low returns, governments, non-governmental organisations (NGOs), and the private sector may need to act.

   The second important component is a national digital-payment infrastructure. A strong payments "backbone" should enable secure, low-cost transactions between any two parties while also allowing providers to innovate. This will need to be backed up by large networks of people.

   CICO points (cash-in, cash-out)—often basic agent networks—allow users to access money. When they need cash, they may get it from a wide range of retailers and businesses that accept digital payments. The establishment of a well-distributed personal ID system is the third necessary component. Individuals require some sort of identification that can be easily verified by financial service providers.

7. **AWARENESS BY SELF HELP GROUP's**- SHGs may be able to assist individuals involved in the rural area's digital banking system initiative. Self-help groups would perform the functions of Bank Mitras in order to serve post offices and banks in the digital wave's transmission. In this way, rural social infrastructures such as Mahila Mandals, Youth Clubs, and Panchayati Raj Institutions should grow in order to promote the digital rural economy. Local residents would be taught about the digital economy and financial inclusion by line department officials such as school teachers, village development officers, and health staff.

5.3 WAY FORWARD

Despite the great potential and well-established promise of digital financial services to foster financial inclusion, there are still a number of obstacles to overcome. In order to make them sustainable banks must concentrate on creating compelling products that will spread consumer adoption that is active. As the size of the unbanked pool shrinks, Due to both physical and digital factors, during the following few years the next wave of growth is predicted to arrive as a result of these activities concentrating on the unbanked.

5.3.1 FINTECH REVOLUTION

The term "fintech," or "financial technology," has become a buzzword in the financial world. Fintech players all around the world are disrupting the financial services industry's status quo by offering a new perspective on client problems through the prism of technology. The fintech business in India has seen extraordinary growth as a result of rapidly changing demographics and consumer behaviour, which is fueled by the desire for convenience. With over a billion mobile phones, 330 million internet users (94 percent on wireless devices), and 240 million smart phones, India is rapidly becoming a digital economy.

Fintech companies are expected to significantly reduce the cost of financial intermediation, reducing lenders' profit margins. While this widespread upheaval may be unsettling, it also provides opportunities for digital transformation and, as a result, new revenue streams for banks. Banks are being forced to change long-standing business practises in order to provide a broader range of services and compete effectively with lean, agile, and inventive fintech firms. Partnerships between banks and fintech companies are on the rise, despite their infancy.

A clear understanding arises from this period of increased disruption: banks and fintech businesses are organically interconnected.

In India, bank-fintech partnerships are moving beyond simple vendor-customer connections to mentorship and investment opportunities incumbent financial institutions Banks benefit from this procedure because Providing them with early access to cutting-edge technology that they would not have found otherwise These platforms could be used by banks to test new products. In an increasingly digital world, new business models (such as digital-only banks) are emerging. In order to spread risk and assure speedier benefits, we should try to spread it out. Fintech companies, on the other hand, gain from it. the bank mentor's enormous experience and infrastructure, resulting in faster resolution of chinks in the armour the proverbial technological armour.

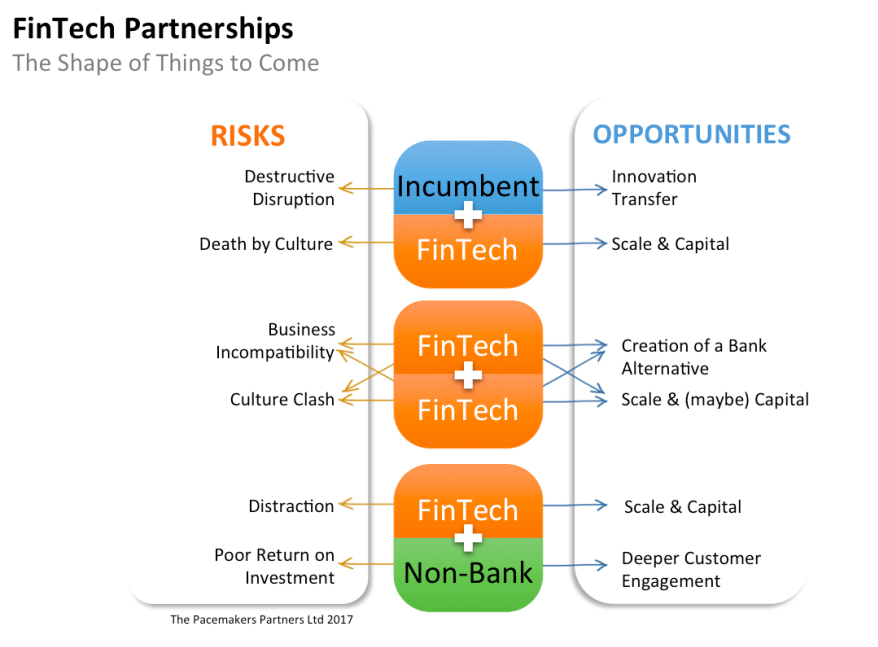


Figure 5.1 Fintech Revolution through Fintech Partnerships

5.3.2 BLOCKCHAIN TECHNOLOGY

The Blockchain and its accompanying Distributed Ledger Technology are a very exciting concept for all stakeholders in the financial services industry because of this fundamental change in the principle of information/value exchange through the Internet. On the one hand, Fintech players see this as a way to challenge banks' role as middlemen, while banks, on the other hand, are trying to use this technology to improve the value propositions they give their own clients.

In its recent financial stability report, the Reserve Bank of India (RBI) focused on the possibilities of Blockchain. RBI feels it can make a significant difference. The financial markets are undergoing a revolution. It has, nonetheless, taken into account the numerous use cases provided, It has also raised reservations about blockchain technology due to a lack of knowledge of the implications technology.

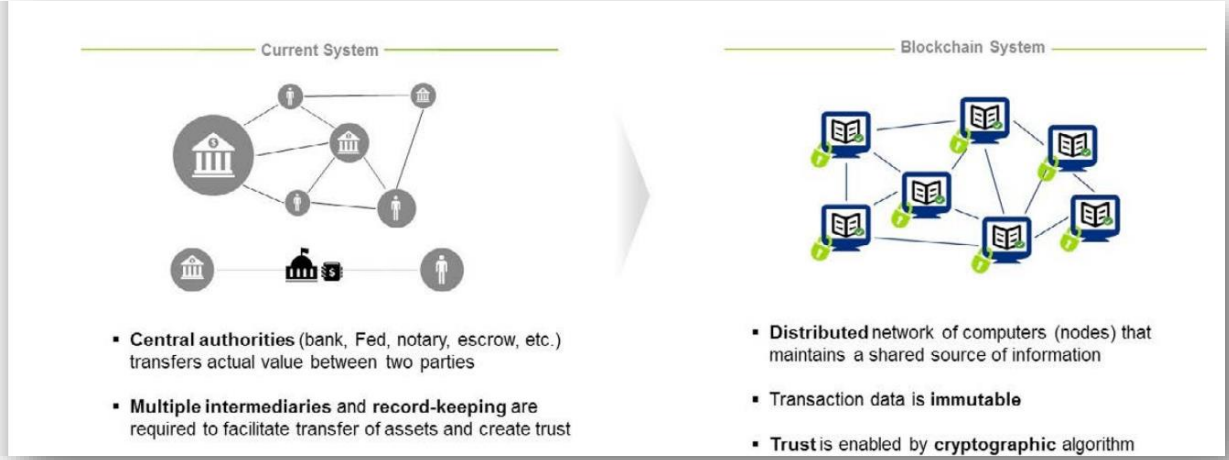


Figure 5.2 Blockchain Technology vs Current system

Source- Banking on The Future, CII-Deloitte

Individual players such as ICICI, Axis Bank, and Yes Bank have stated their intention to test Blockchain technology. The former has put together a team to come up with use cases that are relevant to the bank's aims. As part of its 'Thought Factory' initiative, Axis Bank is investigating Blockchain use cases in conjunction with entrepreneurs. NBFCs such as Muthoot Fincorp have expressed interest, and given their business dynamics and customer profiles, they are likely to start with identity management and KYC applications.

5.3.2 PERSONALIZATION-

Big data and AI-driven analytics are ushering in a new era in financial services, one in which every customer is treated as if they are the bank's top priority. Instant borrowing, proactive product recommendations, thorough purchase guidance, and budgeting recommendations based on characteristics such as real-time location, spending profile, and more are set to become the new norm for financial institutions' approach to customer customisation.

5.3.3 *PHYGITAL BANKING IN RURAL AREAS-*

Phygital is a concept that uses technology to connect the digital and real worlds in order to improve customer experience and reach out to more people. Banks should take use of a physical network's trust – digitise consumer cash, enable accessibility, and harness the power of digital – create a non-threatening environment, and equip customers to manage their money independently. The merchant point, a trust point where the consumer is equipped to manage his money, is at the heart of this

strategy. This customer is aided in implementing digital banking, including downloading the app, checking balances, maintaining beneficiaries, transferring funds, and setting up a UPI handle etc.

This hand-holding gives the consumer the assurance that he can handle things on his own, safe in the knowledge that if something goes wrong, the merchant will be there to help. This is effective on two levels. To begin with, the merchant's familiarity and handholding instil confidence in the customer, who is now ready to bank. Second, and perhaps more intriguingly, it raises the merchant to the rank of a "banker," resulting in a win-win situation. From the standpoint of the banking ecosystem, phygital is cost-effective, scalable, and most significantly, it reduces banking obstacles, allowing more people to bank. Most importantly, unlike other ATMs, these establishments are open till late in the evening and cash is always available. This facilitates and simplifies the lives of a rural customer.

5.4. CONCLUSION

India is quickly establishing itself as one of the world's largest and most powerful economies. Certain essential characteristics, such as enhanced transparency, corporate governance, and limiting the parallel cash-based economy, are required for long-term development and growth with robust economic development. Such advancements are only possible if rural India embraces digital payments and transactions as well. Given the magnitude of opportunities that are unfolding for market dynamics of digital payments, if the challenges that have been discussed are addressed and improved solutions in terms of UPIs, mobile wallets, and digital transactions with more secure features, ease of transactions, and lower costs are developed, the market for digital payments will be transformed.

It is vital for India to enable active digital payment innovation and connect this innovation to its financial presence. Customer protection in the payment industry is the major goal of digitalization in rural banking. In other words, the consumer should not be held liable for any losses resulting from illicit transactions or system failures.

LEARNINGS FROM THE PROJECT

The Summer Internship at RBI was full of exposure and insights. Being a research based internship, it allowed me to learn the basics of forming a research report which I had theoretically studied as a part of my academics. This provided me with hands on experience of doing a rigorous research about the topic and know the various sources to extract the required and relevant facts related to the topic.

I realized the importance of data in terms of statistics while going through the research as to their presentation and analysis. Data makes the research altogether more attractive, understandable and convincing. Comprehending numbers is easier than understanding the text also it makes the report authentic if the data sources chosen are reliable.

Furthermore, I came to know about the Financial Inclusion and Development Department of RBI and the plethora of functions performed by the department to reduce the financial exclusivity through various efforts taken by the banks. This made me realise the significance of banks in our lives and economy.

For the purpose of my research, I contacted various Lead District Managers of different districts of Gujarat that gave me the on ground reality of the issues faced by the people in rural areas and the banking operations carried out by them.

In Depth knowledge about Digital Banking and its various modes of payments was one of the major things I extracted from this research. Also knowing about the innovations and budding technology in this field provided me with a sense of how fast the banking revolution is taking over but it is dominated by the skewed nature as the majority of population living in rural areas are even devoid of basic financial products. Therefore, it turned out to be a lagging factor in terms of reach and covera ge.

I also gained a sense of what coming next in the banking sector and how will it operate in future combined with latest technology making it easier for customers to make payments along with the growing awareness of data privacy and other frauds. I got to learn some international methods of payments and the pace at which those methods proved to be revolutionary for those economies.

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.

ANNEXURE 1

List of districts (State and UT wise) identified for making 100% digitally enabled			
Sr. No.	State/ UT	Name of the identified district	Bank to which district is allotted
1	Andhra Pradesh	YSR Kadapa	Canara Bank
2	Arunachal Pradesh	Papum Pare	State Bank of India
3	Assam	Baksa (Aspirational)	State Bank of India
4	Bihar	Jehanabad	State Bank of India
5	Chhattisgarh	Mahasamund (Aspirational)	Bank of Baroda
6	Goa	North Goa	State Bank of India
7	Gujarat	Banaskantha	Central Bank of India
8	Haryana	Karnal	Punjab National Bank
9	Himachal Pradesh	Hamirpur	Punjab National Bank
		Solan	UCO Bank
		Chamba	State Bank of India
10	Jammu & Kashmir	Samba	J&K Bank Ltd.
11	Jharkhand	East Singhbhum	Bank of India
12	Karnataka	Raichur (Aspirational)	State Bank of India
13	Kerala	Thrissur	Canara Bank
14	Madhya Pradesh	Indore	Bank of India
		Betul	Central Bank of India
		Vidisha	State Bank of India
15	Maharashtra	Nandurbar (Aspirational)	State Bank of India
16	Manipur	Kakching	State Bank of India
17	Meghalaya	Ri Bhoi (Aspirational)	State Bank of India
18	Mizoram	Aizawl	State Bank of India
19	Nagaland	Kohima	State Bank of India
20	Odisha	Cuttack	UCO Bank
		Bolangir	State Bank of India
21	Punjab	Kapurthala	Punjab National Bank

22	Rajasthan	Karauli (Aspirational)	Bank of Baroda
23	Sikkim	West Sikkim	Central Bank of India
24	Tamilnadu	Virudhunagar (Aspirational)	Indian Overseas Bank
25	Telangana	Khammam	State Bank of India
26	Tripura	West Tripura	United Bank of India
27	Uttarakhand	Almora	State Bank of India
28	Uttar Pradesh	Siddharth Nagar (Aspirational)	State Bank of India
		Firozabad	State Bank of India
29	West Bengal	Nadia	United Bank of India
30	Andaman & Nicobar	South Andaman	State Bank of India
31	Chandigarh	Chandigarh	Punjab National Bank
32	Dadra & Nagar Haveli	Silvasa	Bank of Baroda
33	Daman & Diu	Daman	Bank of Baroda
34	Delhi	New Delhi	Canara Bank
35	Lakshadweep	Lakshadweep	Canara Bank
36	Puducherry	Karaikal	Indian Bank
	Total	**42**	

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