A new Transformation in The Banking Industry

Harshit Chaturvedi CMS20MBA037

A dissertation submitted in partial fulfilment of the requirements Of Masters in Business Administration

In

Finance

Guided by Dr. HN Shylaja Associate Professor



Dayananda Sagar University Bangalore, Karnataka, India

April 2022

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DECLARATION BY STUDENT

I Harshit Chaturvedi, CMS20MBA037, hereby declare that I had	personally
carried out the dissertation titled "A new Transformation in The	e Banking
Industry ". No part of this dissertation has been submitted for the av	vard of any
Degree or Diploma prior to this date	
Date: Harshit Chatu CMS20MBA	
CMSZUMDA	037

FACULTY CERTIFICATE

Certified that this dissertation work titled "A new Transformation in The Banking Industry"." is a bona fide work of Harshit Chaturvedi, CMS20MBA037. He/she has carried out this work under my supervision. Certified further, that to the best of my knowledge, this report has not been submitted anywhere else for the award of any degree or award.

Date:

Dr. HN Shylaja Associate Professor

SCMS - PG

Prof. Capt. A Nagaraj Subbarao Dean Postgraduate Programs in Management

ABSTRACT

Today's economy, particularly banking, is dominated by the term "digital."

The term "digitalization" refers to the use of technology to dramatically enhance customer service. Now Banks no longer consist only of set delivery routes. Many digital technologies were taken over by banks. The digital strategy provides banks and businesses a competitive advantage with their customers. The primary goal of this project is to comprehend the notion of digitalization as well as its advantages.

Additionally, the research analyses the problems and potential related with bank digitalization in India. With financing, banking becomes a more data-intensive problem.

The influence of the big data age. Explore modern big data analysis technologies such as data mining (DM) technology, which is meant to extract useful information from banks and is the lynchpin of the banking sector. Massive amounts of data are being collected to improve strategic management and consumer happiness. A detailed, up-to-date overview of the present status of DM research in banking would be valuable in setting a strong path for future research and development. By gathering and analysing data on research goals, data sources, technological tools, and data analysis tools.

We will learn how small vendors, or those who are completely new to this technology, are dealing with the obstacles of digitalization, as well as how they are adjusting to the changes and the reasons for the changes, via this project report. We can learn about the good and bad effects of digital banking from this initiative, as well as how it will aid in the creation of a New India.

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1. INTRODUCTION

1.1 BACKGROUND:

Electronic banking, often known as online banking, refers to any online transactions between organizations, corporations, and people and their financial institutions. In the mid-1970s, electronic banking was originally suggested, and in 1985, several banks started providing it to their clients. The number of internet users, on the other hand, is small, and the costs of utilizing online banking are high. People got increasingly comfortable with performing online purchases after the Internet explosion in the late 1990s. Electronic banking has risen in tandem with the internet, despite the calamity.

Users of a retail or virtual banks, credit unions, or structured society's website may make financial transactions using online banking (also known as internet banking or electronic banking).

The process of executing financial operations or paying bills through the internet is known as internet banking.

People no longer need to leave their homes to shop, communicate, or conduct their banking thanks to technology, particularly the internet. Customers may pay deposits, withdrawals, and invoices online by using their mouse or clicking on the screen.



Figure 1

1.2 HISTORY

Many people were hesitant to perform financial transactions online when financial institutions started offering electronic banking services in the mid-1990s. Leading US corporations such as online, Amazon.com, and eBay have mostly abandoned e-commerce in order to spread the notion of paying for products and services online. Electronic banking services were accessible in 80% of US institutions by the year 2000. The number of clients who use the service has risen continuously. For example, it took 10 times longer for Bank of America to recruit 2 million bank clients. However, when the anxieties of the 2000s faded, a massive stylistic shift occurred. Bank of America was the first bank to surpass 3 million online banking clients in 2001, accounting for more than 20% of the company's overall customer base. Large government organizations, such as Citigroup, have claimed a whopping 2.2 million Internet connections, but JP Morgan Chase is said to have more than simply internet banking customers. Wells Fargo's online banking service is used by 2.5 million customers, including small businesses. Ordinary visitors were shown to be less pious and profitable than those who came over the internet. In October 2001, Bank of America customers made a total of 3.1 million electronic bill payments, totalling more than \$1 billion. According to a Gartner Group poll from 2009, 47 percent of individuals in the United States and 30 percent of banks in the United Kingdom use the internet.

Digital banking will be part of the move to online banking, which delivers online financial services. With varied degrees of financial service digitization, the move from conventional banking to digital services has been sluggish and continuous. Digital banking is defined by a high degree of process automation and web-based services, as well as APIs that enable businesses to customize services to supply financial products and simplify transactions. It gives consumers access to financial data through PC, mobile, and ATM services.

Digital banking refers to the automation of traditional financial services. Customers may obtain banking products and services through an electronic or online platform. The process of digitizing all banking operations and replacing the bank's physical presence with a permanent online presence, which eliminates the need for consumers to visit branches, is known as digital banking.

Benefits to the Bank:

- Improving customer service
- Improved brand awareness Simplified operations
- Increased revenue
- Customer retention
- Expanding the scope of your organization
- Improved management options
- Develop new goods and services more quickly.
- Work environment that inspires creativity and innovation

Benefit for the customer:

Smart banking application that allows you to handle all transactions from start to finish from your selected device. Access to a variety of services (savings, investment, insurance, loan and mortgage in foreign currency)

- Useful client service such a warning, notification, budgeting.
- Lower charges and it is cheaper for customer.
- Banking that meets the client needs.
- 69% of customer already use internet to buy financial product

1.3 TYPES OF DIGITAL BANKING PAYMENTS

- Unstructured Supplementary Service Data (USSD): To conduct mobile transactions without downloading an app or connecting to the internet, dial * 99
 #. It is a well-known national personality who advocates for greater economic inclusion on a local level. The service allows callers to traverse interactive voice menus and pick preferred choices on their phone's screen. The only issue is that the caller's mobile phone number has to be connected to his bank account.
- Bank Cards: In addition to cash withdrawals, bank cards may be used to make a number of other digital payments. The card may be used for both online and pointof-sale (PoS) transactions. Prepaid cards, which are not tied to a bank account and only operate with the money deposited on them, may be offered by banks.
- UPI (Unified Payments Interface): UPI is the most extensively utilized sort of digital banking at the moment. Customers may transmit money without providing their bank account details or IFSC codes using UPI's Virtual Payment Address (VPA). Another advantage of UPI apps is that they enable you to integrate all of your bank accounts into one easy-to-access location. Funding may be provided and received at any time of day or night, and there is no time restriction on when it can be done. In India, UPI-based applications include BHIM, PhonePe, and Google Pay. The BHIM app enables users to transmit money to another Aadhaar number in addition to virtual addresses and other bank accounts. Furthermore, UPI-based payments are entirely free.
- The Aadhaar Enabled Payment System (AEPS) would aid the consumer in commencing banking instructions when the Aadhaar number has been successfully validated.
- Online and Mobile Banking: Online financial services, often known as electronic banking, refers to the use of the Internet to get specialized banking services such as money transfers and account opening and closure. Internet banking is considered a subset of digital banking since it is confined to basic functions. Mobile banking, on the other hand, is the use of mobile-based apps to provide banking services.

- Mobile wallets make it unnecessary to remember four-digit card pins, input CVV information, or carry loose cash. Mobile wallets save your bank account and credit card information so you may add money to your wallet and pay other businesses using similar applications. Paytm, Freecharge, Mobiwik, and other famous mobile wallets are examples. The amount of money that can be stored in a mobile wallet is usually restricted. When transferring money from a mobile wallet to a bank account, there is a modest cost.
- Unstructured Supplementary Service Data (USSD): By calling * 99 # on a mobile phone, transactions may be performed without the need of an app or an internet connection. This number is valid across the United States and promotes global economic participation. On the phone screen, the caller may travel to the interactive speech menu and pick the relevant choice. The only stipulation is that the caller phone number match the phone number associated with the bank account.
- Bank cards may be used to make numerous sorts of digital payments in addition to cash withdrawals. The cards may be used for both online and in-store purchases. Prepaid cards, which are not tied to a bank account and only operate on deposits, may be offered by banks.
- Unified Payments Interface (UPI): UPI is the most widely used sort of digital banking at the moment. Customers may transmit money through UPI using a Virtual Payment Address (VPA), which eliminates the need for them to submit their bank account information or IFSC code. Another useful aspect of UPI is that the applications enable you to link all of your bank accounts in one spot. Money may be given and received at any time, with no restrictions on how long it takes. In India, UPI-based applications include BHIM, PhonePe, and Google Pay. Customers may use BHIM to send money to virtual addresses and other bank accounts, as well as to send money to another Aadhaar number. Furthermore, UPI-based payments are entirely free.
- The Aadhaar Enabled Payment System (AEPS) enables customers to execute banking instructions when their Aadhaar number has been successfully authenticated.

Calling four-digit card PINs, inputting CVV information, or carrying loose cash are not required with mobile wallets. Customers may deposit money into their mobile wallets and make purchases from other firms using similar applications by saving their bank account and credit card information. Paytm, Free charge, Mobiwik, and other famous mobile wallets are examples. The quantity of money that can be stored in a mobile wallet, on the other hand, is typically limited. From your mobile wallet, you may access your bank account. Calculate the start and finish times. Internet banking is considered a subset of digital banking since it is confined to basic functions. Mobile banking, on the other hand, is the use of mobile-based apps to provide banking services.



Figure 2

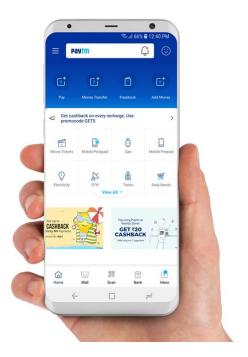




Figure 3



Figure 4

1.4 PLANNING

This project is divided into 5 Chapters

- Introduction
- Types of digital Banking payments
- Online Banking- An Overview
- Digitalisation and its impact
- Research Methodology
- Analysis and graphs
- Findings, Conclusion, and References

1.5 When It Started!

The following are key technological advancements in India's new era payment structures: debit and credit cards were launched in the 1980s and 1990s; computer usage in banks was adopted in 1984 and 1988; and MICR cheques were introduced in 1984 and 1988.

- ❖ In 1994, ICICI Bank launched online banking with a restricted range of services, such as account information and money transactions between branches.
- ❖ In 1987, HSBC Bank became India's first bank to provide ATM services; in 1990, RBI permitted ECS payments; and in 1991, India joined the Society for Worldwide Interbank Financial Telecommunication.
- ❖ The first shared payment network is built in 1997.
- ❖ In the year 2000, the Information Technology Act was passed.
- ❖ A smart card pilot project was launched in 1999 by the Reserve Bank of India, IIT (Mumbai), and IDRBT (Hyderabad).
- ❖ The Payment and Settlement System Act of 2007 was enacted in 2007, and the Cheque Truncation System, as well as operational guidelines for mobile banking transactions, were introduced in 2008.

- ❖ In India, SMS banking was the first kind of mobile banking in 2002. Special electronic financial transfers were first established in 2003. Real-time gross settlement was established in 2004. In 2005, Core banking systems were implemented in 11% of public sector bank branches, and nationwide electronic financial transfers were implemented.
- ❖ The Immediate Payment Service is started in 2010.
- ❖ 2009 Cash withdrawals from ATMs are no longer charged.
- ❖ Bharat Interface for Money (BHIM), a smartphone app based on the Unified Payment Interface, was introduced by the National Payments Corporation of India (NPCI) in 2016. (UPI).
- ❖ In August 2016, banks throughout the country started submitting their Bharat bill payment system and Unified Payments Interface interfaces.

1.6 Traditional Vs Electronic Banking

Customers must interact with conventional banking in person. Customers may conduct banking transactions without having to visit a branch; electronic banking enables them to do so. Using a computer or laptop to conduct banking transactions Sitting on a chair, either at home or at work. Customers have to spend Access bank branch money in electronic version Banks Help customers with banking transactions Simpler, faster, more convenient, and available everywhere No matter where the customer is, watch. inside in traditional banking, employees can only provide limited services with e-banking, the customer does not need to intervene Queue to cash a specific bank transaction.

In lower than a time, the lives of people worldwide changed from digital alternate to digital-first. Physical restrictions led to a sharp swell in online exertion and mass relinquishment of digital banking services. Coffer, quick, and accessible access to finances online came a banking point consumers would switch banks for.

Offering the capability to pierce, use and move plutocrat via mobile bias, digital banking apps lets guests see their account balances, pay bills, transfer plutocrat, apply for loans and make purchases on the go.

Then are the crucial benefits of digital banking

lower freights easier access saving time

1.7 Banks Vision on Shaping Digitalization: -

In most situations, the bank is going digital in order to become a "truly customer-centric association." The primary idea is to provide services, interfaces, and products that can be "interacted with on every digital channel," including online banking, mobile phones, and social media.

Take, for example, the bank's IRA (Intelligent Automated Assistant) and EVA robot (electronic virtual accessory). Customers at the IRA branch can be "directed" to the appropriate counter, answering frequently asked questions from drug addicts visiting the EVA Bank website.

The bank has also introduced a variety of payment options with different bots that allow drug users to make bills, recharge smartphones and book Ola or Uber taxis. The Bank's Digital Innovation Team is currently in the process of adding more capabilities, such as hotel reservations.

Banks and Digital India ensure that everyone can benefit from digital banking regardless of their age, location (urban / rural) or phone type (keyboard phones or high-end smartphones). Customers can find their account balance by calling the number provided by the bank without having to wait in line to check their balance.

if the client chooses to go to a traditional channel like a branch, banks have digitally enabled the branches. There are passbook printing machines where a person can self-check and print the passbook. Whether they're trying to do Commodity on the mobile phone or the internet or social media or whether they walk into a branch they are suitable to give them an analogous experience. Everything is so easy that the guests should be suitable to take a loan in the same quantum of time — whether they do it online or by visiting a branch.

The security features available to the customers include the following

- o For Login details: The first level of security is the login credentials you need to provide. And very first and most important is passcode While setting up a password, you have to compulsory choose an alphanumerical string that includes special characters, and it also suggests you an optimum password length which needs to be fulfilled.
- Security, i.e., encrypted data: The data is encrypted in a way that only you and your bank can understand and read when sent over the Internet. The strength of encryption is so complex that it can be difficult for a hacker to crack it.
- Comprehensive Account Management: Banks will issue additional checks if you want to add a new beneficiary or beneficiary, update your password or modify your address. As a result, the hacker will not be able to access your account, transfer money or obtain a new debit card.
- Sign out: You can only sign in to your bank from one device at a time. When your screen time expires, you will not be able to use this screen and it will be locked immediately. When you log out of a window or program, it closes immediately. The back button does not work in the browser or app. You need to follow the same procedure every time you want to access your digital banking website.
- Two-factor authentication: This feature is important for account security because it helps identify legitimate clients. It requires a password or PIN, as well as a card reader or smartphone, which generates a good one-time passcode in a matter of minutes.

Some of the general guidelines that all the banks need to follow:

- ✓ IPIN Security: When the system generates an IPIN, it sends it to the user via the tamper proof method. No one, not even the system administrator has access to it.
- ✓ Session Expired: If the user's website is idle for a long time (i.e., not in use), the user will be logged out immediately. The login procedure starts again from the beginning.

- ✓ Digital Certificate: The digital certificate identifies the Bank server website and assures customers that they are in the right place. As a result, customers are protected from disclosing private information on false or fraudulent websites.
- ✓ Virtual Keyboard: When filling out forms and entering passwords on your bank's website, use the virtual keyboard provided by the site to protect your credentials from keylogger software installed on shared computers.
- ✓ Instant SMS or email notifications will be sent to you as soon as you sign up for a specific transaction amount or when you add a beneficiary. A warning message will be sent to your phone or email every time you do something.
- ✓ Firewalls, intrusion detection systems, intrusion prevention systems, and antimalware systems are implemented as security solutions.
- ✓ Certification Extended EV SSL Certificate: Gives Visual Evidence The green address indicates a legitimate website, but the red bar indicates that the site is potentially dangerous.
- ✓ Some banks allow customers to set a maximum transaction limit or a daily limit for credit, debit or digital online banking transactions. This reduces the chance of a breach and gives you more control over your spending by allowing you to set cost limits.



Figure 5

1.8 Advantages of online banking

What we want an easy life, a life where people want to do things while sitting at one place and that can be done by cell phone, household appliances, or cars. But look what comes in to make our life much easier that is dealing with your savings, no more lines, no dealing with post office stamps, and no more chasing to find your balance these all comes with the arrival of online banking.

- Payments are easy whether it's a bill or a Rs 1 gum, you can do it all while sitting
 on your couch. For added convenience, you can set up bill payments automatically,
 which will help you manage your money by allowing you to log into your account
 and pay your bills.
- Funds transfer You may need to send funds to a customer or seller or you may need to transfer funds between accounts. You can mail the registered check and transfer money securely online without having to wait for it to settle.
- Deposit Checks You may deposit checks online in minutes rather than travelling to the bank and waiting in line. You may also bank on the fly since most financial institutions provide an app that simulates their services. Furthermore, some

banks provide customer service 24 hours a day, seven days a week, allowing you to contact a representative at any time.

- Why Low mortgage and loan rates Direct banks may pay greater interest rates
 on savings and provide lower mortgage and loan rates since their administrative
 and infrastructural expenses are cheaper. Some financial institutions also provide
 high-yield inspection accounts, high-yield certificates of deposits (CDs), and CDs
 with no early withdrawal penalties. Furthermore, certain accounts may be opened
 with no minimum deposit, no service fees, and no minimum deposit.
- Download or Print statements you can have every important receipt with you
 with a proper proof and you can view your account balance by clicking on your
 phone and download it.
- Safe money It is better to keep money in banks or get direct pay check instead of
 in hands which is even risky and with no interest of even 0.1 percent. But if the
 money is in saving bank account than at least you will get some interest of 3 to 4
 % which is better than nothing.

1.9 Disadvantages of online Banking

Everything is flawed and online banking is no exception. Online banking seems to be the obvious solution for those who want to avoid the hassles of traditional money management. However, there are potential problems unknown to consumers with online banking. Before subscribing to online banking, customers should consider the benefits as well as the risks. Here are some disadvantages of online banking:

• Banking Relationship - Your personal relationship with your bank is diminished as a consequence of internet banking. This link may assist you in obtaining business loans, new credit lines, fee exemptions, or changes to your present banking requirements. When a customer's personal circumstances change, the bank manager normally has considerable leeway in modifying the account conditions. Personal contact may assist in determining whether or not a consumer needs a service or financial security. Combining internet banking for day-to-day transactions with a personal contact with your bank to satisfy additional needs would be great. As a consequence, you have a broad range of options for supporting your business. The lender will also get knowledge of

the consumer and their unique requirements. This personal link is important if the customer has a company account and requires financing for growth. It is simple to get bank backing if someone understands about the client's firm and can verify their operating approach.

- Failed Transactions One of the major drawbacks of online banking is network problems, which can lead to loss of money due to failed transactions and waiting for 24 hours for bank confirmation. Power outages, server problems at your bank, or an interruption to your Internet if you are in a remote area can interfere with your ability to access your accounts. Site management means you will not be able to access your accounts and will have to search for another option.
- Security and Privacy Although every system offers a high level of security, nothing is perfect and there is always a risk that valuable information will be compromised. However, you can avoid this if you always use your mobile app and website directly and have a strong password consisting of numbers, symbols and letters. You will need to update your password frequently. Two-step authentication should always be used as it adds an extra layer of protection. The majority of banks now make available a scanned copy of a verified check online, which helps prevent and detect check fraud.
- Limited Services Some company owners must still visit the bank to 'sign the papers' since online banking does not offer all services. This covers loan and credit applications, as well as substantial cash withdrawals and deposits. You may be able to sign electronically in the future as internet banking technology advances. As company owners recognize the comfort and convenience of online banking, banks are continually modernizing and expanding their digital assets. Customize your online banking system to meet your company's particular requirements to take advantage of this fast-growing banking technology. If you believe internet banking may benefit your company, chat to your bank about the time and money you could save by digitizing.

1.10 Types of Online Banking

1.10.1 Core banking Solutions

As defined in the dictionary, core banking is a centralized system created by the bank to enable its customers to do business regardless of the location of the bank branch. This, in essence, removes the barrier to geo-specific transactions. CORE stands for "Centralized Online Real Time Exchange" and allows bank branches to access software hosted by Central Data Centres.

Simple Banking, a banking service offered via a network of bank branches, allows clients to access their bank accounts and execute basic transactions from any member location. Retail consumers are regarded as primary banking customers by most banks, and main banking services are usually associated with retail banking. Transactions are often managed by a company's corporate banking department. Core banking operations include core deposits and loans.

Basic banking services include transaction accounts, loans, mortgages, and payments. Banks provide these services in a variety of methods, including ATMs, online banking, mobile banking, and branch websites.

Computer and network technologies are widely used in basic banking services, allowing banks to authenticate their data and provide access to it from anywhere. The development of banking software has paved the way for the emergence of basic banking solutions.



Figure 6

Why it is Required?

- It adapts to the changing world of markets and consumer requirements by simplifying banking operations so that bank employees may concentrate on sales and marketing.
- It is incredibly handy for both clients and banks.
- To make financial transactions more efficient.
- To increase our footprint in rural and distant locations.

Customers may benefit from many types of CBS.

- ✓ Fund Transfers NEFT, RTGS
- ✓ Mobile Banking
- ✓ Internet Banking
- ✓ POS & kiosk systems
- ✓ ATM

Advantages of CBS

- Centralized Accounting System Each transaction has a direct impact on the bank's general ledger and profit and loss account, providing an accurate picture of the bank's financial position and position, allowing it to make quick and efficient decisions.
- Improve your procedures and the quality of your goods. Monitoring and Monitoring CBS Advanced Product Analysis is used for monitoring. Interest rate modifications, product changes, and interest application for all branches may all be consolidated from a single location. The bank is able to react rapidly to changing market circumstances and consumer demands. The bank gains a competitive edge as a result of this.
- The bank's clients, not the branch, will benefit from CBS Publications as their accounts will be centrally available to all banks in India, obtain complete data on their behaviour and use this variation by other branches for market expansion and strategies.
- Provide prompt service for day-to-day operations at the bank counter, including cash deposits, cash withdrawals, savings books, account statements, money orders and more.
- By removing the bank branch, you can handle banking transactions anywhere.
- Payments are processed quickly using online banking and mobile banking.
- Banking services are available 24 hours a day, seven days a week.
- ATM banking services are available anytime and anywhere.
- All branches have access to the software through a central server / data centre where customers can withdraw funds from anywhere in the world.
- People living in remote areas benefit greatly from CBS. Electronic payments, including subsidies, can be sent directly to farmers' accounts. Money is easily transferred from one city to another and vice versa.
- Certification of operations in banks and branches.
- Customer retention is enhanced by providing excellent customer service.
- Transaction accuracy and errors are minimized.
- Improved Document and Records Management Unified database makes data collection and MIS reporting much faster.

- Facilitate the submission of multiple reports to government and regulatory bodies such as the Reserve Bank of India.
- Convenient to implement policy changes such as creating accounts, processing cash, computing loan and interest services and adjusting interest rates among other things.

1.10.2 ATM Banking



Figure 7

FULL-SERVICE BANKING, 24 HOURS A DAY

ATMs were first used in London in 1967 and can now be found nationwide 50 years later. ATMs are available on-site or off-site. Local ATMs can be found at banks and other financial institutions. Consumers will benefit from greater diversity, convenience and accessibility, while banks will benefit from higher transaction revenue, lower operating costs and better utilization of human resources. Where cash is needed, over-the-counter ATMs can be found at airports, food and utility stores and retail malls. A database station with four outputs and two inputs is called an ATM. They need to interact and communicate with the host processor. The host processor works similarly to the Internet Service Provider (ISP), allowing bank account users to use credit or debit cards to access multiple ATM networks.

An automated teller machine, or ATM, is a customized computer that allows bank customers to handle their money more easily. Customers may check their account balances, make cash withdrawals or deposits, print account activity or transaction history, and buy stamps with it.

1.10.3 Yono



Figure 8

Launched on March 16, 2019, YONO Cash is a unique feature on the YONO platform (app and portal). It allows account users to withdraw funds instantly from any SBI ATM in India as well as from many SBI Merchant Point of Sale or Customer Service Point (CSP) terminals without the need for a physical card or withdrawal form.

Simply log in to the YONO platform and utilize the YONO Cash function to withdraw monies, acquire a reference number, and create a dynamic PIN code. Customers may use it to conduct transactions and withdraw cash from ATMs, POS terminals, and cloud computing service providers, among other places.

For a number of reasons, the response is unique.

It is useful: Customers who have lost their wallet at home and just have their phones may withdraw cash from an ATM, POS, or CSP. YONO cash transactions do not include ATM withdrawals.

Debit and credit cards are no longer manufactured because of this characteristic, which saves the environment from plastic trash.

It's secure: it avoids many of the dangers of physical cards, such as shoulder surfing, card entrapment, card skimming, and card/pin breakage. The PIN is created dynamically for each transaction.

1.10.4 UPI: Unified Payments Interface - Instant mobile payments

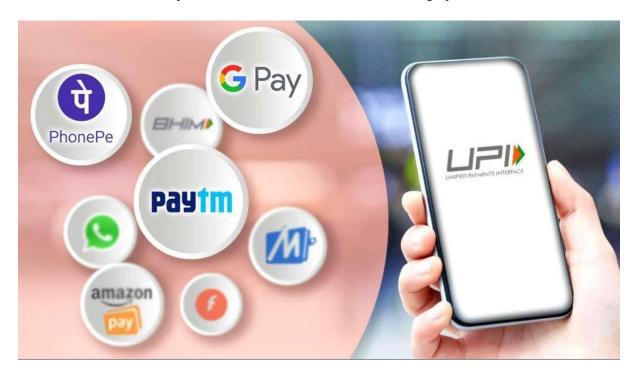


Figure 9

With the introduction of the Unified Payment Interface, India has taken a significant step towards achieving a cashless economy (UPI). You can now use your smartphone as a virtual open-end credit card in the new payment model. It also enabled direct cause and fundraising. The QR code concept completely eliminates the need for digital wallets. UPI can be a single platform that brings different types of financial services and capabilities under one roof. To send and receive money, all you need is a UPI ID and a PIN. Bank-tobank payments can be made at any time using a mobile phone number or Virtual Payment Address (UPI ID). National Payments Corporation of the Republic of India | Spices | Asian Country | The Unified Payments Interface (UPI) (IBA), in association with the Asian Nation (NPCI), the Federal Reserve of India and the Association of Indian Banks. Similar to Visa and MasterCard, NPCI is responsible for the payment infrastructure. It allows interaction between multiple banks and transfer of funds. NPCI's Instant Payment Service (IMPS) is one of their programs. Since UPI is an improved form of IMPS, they should be considered. UPI ID is a unique identifier for a checking account that is often used to transfer and receive cash. The UPI PIN is a four-digit personal identification number that must be entered to allow cash transfers through UPI. The client has the option to specify a PIN. UPI has made cash transfers much easier. You do not need to remember the recipient account number, account type, IFSC or bank name. Instead, you will only send money based on their Aadhaar number, mobile number linked to their checking account or UPI ID. In the UPI Service Application, you will create a UPI ID. The UPI ID usually starts with your phone number, followed by the "@" symbol and finally the app you are using. Your mobile number is 90xxxxxx60 and if you are using the Paytm app, your UPI ID may be "90xxxxx60 @ Paytm". The ID can be generated in the app by entering the basic details of your verification account. The application may send a one-time password (OTP) to your registered mobile phone number to confirm that you are an authorized user. You may be asked to create a PIN for the UPI ID after entering the one-time password. Once the registration is complete, you can select any mobile number from your contacts and transfer money. You can also request money from anyone on your contact list.

Benefits -

Online payments are now easier. UPI quick cash transfer payments can be used to pay for call order services, food delivery services and shopping sites. Online payments are accepted at nearby restaurants, grocery stores and department stores. Rental payments, cell phone recharges and utility bills are paid online instantly.

1.10.5 Digital Wallet



Figure 10

E-wallet (electronic wallet) is a software-based solution that securely stores user payment information and passwords for a variety of payment methods and websites. Customers may utilize NFC technology to make purchases swiftly and simply using digital wallets. They can even generate complex passwords without fear of forgetting them.

Customers may make purchases using their mobile phones and digital wallets in combination with mobile payment systems. Digital wallets may also contain information from loyalty cards and digital coupons.

Apple Pay, Google Wallet, Samsung Pay, PayPal, Venmo, Alipay, Walmart Pay, Dwolla, Vodafone-M-Pesa, and others will be among the top digital wallet businesses in 2022 as a result, however Google, Amazon, and Apple will be at the forefront. Users may "save" money on their phones using Google Wallet, for example. Customers may utilize their money at in-store and online retailers who accept Google Payments. This is related to the near field communication technology, as previously stated (the ability to allow two smart devices to communicate when they are very close). If the firm has not yet accepted the Google payment system, the Physical Wallet Card, a debit card connected to Google Bank, has recently been released. Google Pay is a service that combines two of Google's most popular payment options (Android Pay and Google Wallet). Apple, on the other hand, has teamed up with Goldman Sachs to issue credit cards and increase the use of Apple Pay.

Apple Passbook is a digital wallet created by Apple. Apple Passbook 2D, which was introduced in iOS 6, uses barcode scanning to help you manage movie, concert, and airline tickets, as well as loyalty and discount cards from specific organizations.

As a consequence, when you are near a coffee shop where you can use your loyalty card or when your airline, movie, or concert ticket is due to expire, you will get notifications depending on your location and time.

Apps that support Passbook are used to store passwords (link opens iTunes). Instead, then bringing your shopping vouchers and loyalty cards with you, you may save them in your passbook. Bill Guard, unlike Google Wallet, does not allow you to use your debit or credit card to make in-store purchases, but it does allow you to view your bank balance and other financial data on your iPhone.

1.10.6 Digital Cash

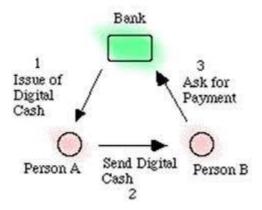


Figure 11

Digital currency acts as physical cash that cannot be printed on paper. Your bank account balance will be converted into a digital code. This digital code is stored on your computer's electronic chip, wallet card (such as a smart card) or hard disk.

The principle of privacy is at the heart of digital currency. Digital cash users can make anonymous transactions with any service that takes digital currency. You can use your unique bank account code to shop online or at any partner company. From banks to consumers to sellers, everyone involved in the transaction agrees to determine the value of the transaction, resulting in this new model or exchange.

1.10.7 Digital Currency -



Figure 12

Cryptocurrencies can only be accessed via a computer or a mobile phone since they are only available in electronic form. A basic digital currency is the most cost-effective method to transact money without the need of any middlemen. Digital currencies are not all cryptocurrencies, and cryptocurrencies are not all digital currencies. There are several benefits to digital currencies, including the ability to transfer money immediately and lower transaction costs. Digital currencies have a number of drawbacks, including the fact that they are volatile when exchanged and are prone to hackers.

Digital currency is regulated or unregulated currencies that can only be accessed in digital or electronic form.

Cryptocurrency -

Digital money that is not controlled and regulated by its creators, founding companies, or the network protocols that define it.

Cryptocurrency is a digital currency.

Cryptography is used to protect and verify transactions as well as to control and regulate the creation of new currency units in virtual currency.

1.10.8 Banking at the kiosk

Kiosk Banking is a Reserve Bank of India (RBI) programme aimed at improving financial integration and security in rural and remote parts of India where access to all banking services is limited owing to the lack of a bank branch. This is the most recent advancement in remote baking, commonly referred to as "touch screen" banking. A kiosk is a self-service banking equipment that takes both credit and debit cards. The debit / credit card may be swiped against the card reader at the kiosk after entering the ATM PIN, and the account can be accessed. Only a few banks, such as Citibank, now provide this service to its clients at certain ATM locations around the nation. Unlike ATMs, the kiosk is primarily used for cashless transactions such as check book requests, bank statement printing, and money transfers. The number of transactions a site must manage, as well as the sorts of transactions necessary, are critical considerations. Although ATMs and kiosks can easily perform the same cashless and deposit-free operations, there are significant differences in the amount of time and input required (financial kiosks

frequently have full keyboards and document printers, whereas ATMs do not) and queue problems (at most people, ATMs).

Shop owners, merchants, small business owners and individuals can also apply to set up a booth kiosk.

Store owners or small business owners can combine the booth kiosk with the CSP, but the small business must be registered as a small and micro business. The bank must provide the kiosk, the fingerprint scanning machine and the equipment needed to design the kiosk with computer-friendly software.

The Reserve Bank of India (RBI) has developed the NEFT (National Electronic Funds Transfer) system for online money transfer. This is a quick and easy way to transfer money through banks in India. In this case the NEFT must be enabled for the bank branch of the individual customer to transfer funds to another party.

1.10.9 Mobile banking

Mobile banking was mostly relied on text or SMS messages until the introduction and activation of mobile web services in 1999; this was known as SMS banking. European banks were among the first to provide mobile banking services, as well as support for mobile internet and WAP.

Text banking and mobile internet were the most popular mobile banking options until 2010. Mobile banking applications (apps) started to emerge with the launch of smartphones running the iOS or Android operating systems. Customers may use their smartphone to download a banking app with a more sophisticated user interface and additional transaction capabilities. Many financial institutions utilize SMS and mobile apps to keep consumers up to date on account activity, provide fraud warnings, and guarantee that updates and services are delivered consistently. A text message from a bank informing a client that their ATM or app has been unavailable for some time due to system maintenance, or a text message from a bank verifying a customer's mobile transfer are two instances. Application.

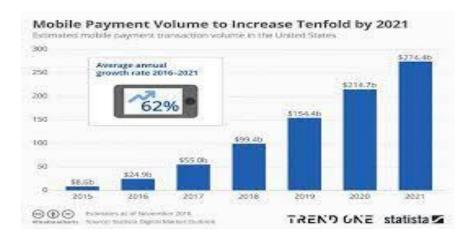


Figure 13

The process of executing financial transactions using a mobile device (cell phone, tablet, etc.) is known as mobile banking. This activity might include anything from sending bank fraud to a customer's mobile phone to paying payments and transporting cash worldwide. One of the benefits of mobile banking is the flexibility to bank at any time and from any location. Security concerns and restricted capacities are drawbacks as compared to personal banking or computer use.

1.10.10 Smart Card/Store Value Card



Figure 14

A smart card is a plastic card with an embedded computer chip - memory or microprocessor - those stores and transfers data. The card chip stores and processes this information, which is sometimes coupled with value, information, or all. A computer system reader is used to communicate information from cardboard. Smart cardenhanced systems are being used in a variety of complicated applications, including health care, banking, payments, and transportation. All applications will benefit from the additional features and security given by cheap cards. Global credit card shipments are

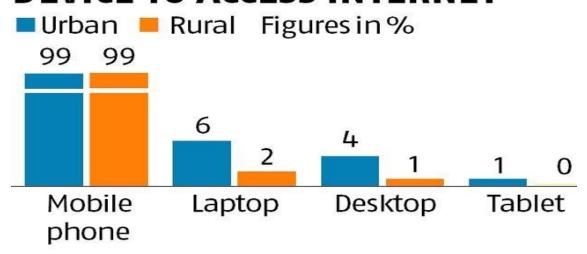
expected to increase by 100% in 2010, reaching 5.455 billion cards, according to the Reasonable Monetary Unit.

1.11 Online Banking with Indian Economy -

The volume of mobile wallet transactions was about four billion in financial year 2021, a significant increase from about 32.7 million transactions in financial year 2013. The growth in transaction volumes dipped in financial year 2021 due to the covid-19 pandemic

- Digitization speeds up the economic process and makes it easier to generate employment: in 2011, it boosted global economic activity to \$ 193 billion and resulted in the creation of six million jobs. The influence of digitalization varies according to the economy's stage of growth. In affluent nations, it has a quarter higher influence on economic activity than in underdeveloped countries.
- In comparison to emerging nations, job growth in developed countries has been moderate. While digitalization has increased productivity in a variety of areas, it has had a mixed effect on employment. As a consequence of digitization, nontradeable sectors, which are generally substantial in industrialized nations, are expected to lose employment.
- We think that digitalization has enhanced overall productivity and production, while lowering job losses in manufacturing and financial services and boosting employment gains in retail and hospitality, based on the strategic considerations of the six developed nations.
- Policymakers must develop digitization policies for various sectors that account for the various effects of economic development and the industry.

MOBILE, THE MOST PREFERRED DEVICE TO ACCESS INTERNET



Source: India internet 2019 Report: IMAI

As of January 2022, there were 467.0 million social media users in India.

By the beginning of 2022, social media users in India will represent 33.4 per cent of the total population, but it is important to remember that social media users are not always represented by different people (see our detailed notes on why).

According to Capios research, the number of social media users in India increased by 19 million (+ 4.2%) between 2021 and 2022.

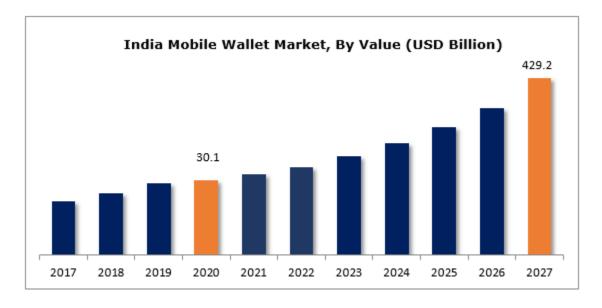


Figure 16

1.12 Government Initiative for developing the internet banking -



Figure 17

The government is launching a number of initiatives to help ensure sustainable digital infrastructure. Some of the programs that fall under this category are as follows:

- Aadhaar: As part of the 'Digital India' program, each Indian citizen will be assigned a unique identity number.
- Bharat Broadband Network (BBNL): The guardian of Digital India is Bharat Broadband Network (BBNL). The National Fiber Optic Network (NOFN) is a licensed network in India.
- COE-IT (Center of Excellence for Internet of Things): This center's major goal is to improve field competitiveness and create novel applications.
- ER CERT-IN: This organization was established with the aim of securing Indian cyberspace.

- Partnership Service Centers (CSCS): Partnership service centers are access centers for key public utilities, health care, social care, finance, education and agricultural services.
- Cyber Cleanliness Center: Its mission is to create a secure cyberspace in India by detecting and reporting botnet infections, cleaning and storing end-user computers to prevent new infections.
- Deen Dayal Upadhyaya Gramajyoti Yojana: This is one of the major projects of the Ministry of Power with the objective of providing uninterrupted power supply to the rural areas of India.
- Digi Locker: Digital Wallet aims to empower people digitally.
- Digital Literacy Campaign (DISHA): The program aims to educate 52.5 million people in information technology.
- Digitize India Platform: This platform allows users to digitize scanned or physical documents.

To increase access and accessibility, the government has launched several online services:

- Accessible India Campaign and Mobile Application: This guiding national campaign aims to provide universal access and equal access to persons with disabilities.
- Agri Market App: This mobile application is designed to keep farmers informed about crop prices from time to time and to avoid selling their crops at a loss.
- Betty Bachao Betty Padao: This initiative seeks to provide every girl with an equal opportunity to be born and learn.
- BHIM (Bharat Interface for Money): It makes UPI payments simpler and faster.
- Crime and Crime Tracking Network and Systems (CCTNS): The project aims to provide nationwide network infrastructure for advanced IT-enabled tracking system development focused on "criminal investigation and identification".
- Crop Insurance Mobile App: This app may be used to determine the insurance premium for a reported crop based on the coverage area, quantity, and borrowed farmers' loan amount.
- Digital AIIMS: Each patient attending AIIMS receives a unique health identification number generated by the Aadhaar platform.

• E-Library, e-Panchayat, e-Hospital, e-School, and e-Prison: These services include digitalization of libraries, hospitals, schools, and prisons.

1.13 Frauds in Online Banking



Figure 18

Security difficulties and scams, rather than using internet banking, are one of the most serious challenges facing internet banking. Without question, online baking can be beneficial, but it also presents many barriers.

Security in the bank

When we think about the current state of internet banking, we can see that security is a huge issue that everyone deals with, even companies and banks that deal with people who are not financially viable. One of them is cyber security. As a result of these vulnerabilities scams and other types of irregularities are taking place and the incidence of bank frauds is increasing every year.

Here are some examples of hazards:

Mobile Banking Risks -

- Over the past five years, mobile banking has grown in Asian countries. The amount
 of cash transferred through mobile banking has increased by 108 per cent over
 the previous year. On the other hand, mobile banking offers many security issues.
 It has been observed that the security provided by online banking does not work
 properly on mobile phones.
- Viruses are also common on smartphones and they bypass the security settings of the application. As a result, the app needs constant upgrades to ensure that bugs and viruses are fixed. If the user does not update their application, they will become helpless.

DDoS (Distributed Denial of Service) assaults are a kind of distributed denial of service attack.

DDoS (Distributed Denial of Service) assaults are what they're termed. It's possible that this is a well-coordinated cyber assault. Criminals may overwhelm the internet banking system and information by placing a huge number of orders and transactions. It has an impact on bank servers, slowing down the whole banking procedure. As a consequence, if the shopkeeper attempts to utilize any bank services, he or she will be unable to.

Pishing

This is mostly a question of bank security. Scammers may use black market and unethical methods to obtain your bank account information. They will "see" your bank account information. They may try to deceive bank customers by email or phone.

Duplicate emails or messages may warn of impending account cancellation or security issues. He persuades them to fill out a form with their bank information. Phishing is sometimes effective because emails and, as a result, forms look real to customers.

Exploitation

Scammers just create a phony bank website and post it on the internet. They employ the same logos, colour schemes, fonts, and videos as the first page. The consumer might be tricked into providing personal information and passwords to the website. This information might be used by the fraudster to fool clients.

Acquisition of company account

The focus of this type of banking security threat is on commercial accounts. Since these accounts usually contain larger amounts than a bank account, they are vulnerable to scammers. They target employees or executives, stealing their credentials to gain access to a company account. To get this evidence, they use phishing, ransomware and social media hacking.

They will also be able to emulate senior executives and access their email accounts to retrieve important data from employees or organizations. Business email compromise is the term for this case.

Fast reading

Credit card scammers use this method to obtain your important financial credentials such as your account number and PIN. When the customer swipes their master card, a skimming device is mounted on the machine. It collects and maintains your non-public financial information. Scammers use this information to make purchases online or change your card PIN.

Keyloggers

Keylogger malware collects keystrokes and other data, enabling a hacker to steal your password as you write. Updating antivirus software on your company's machines, as well as setting your network's firewall to monitor outbound traffic to assist identify the infection, may help prevent this malware from gaining foothold. Because certain keyloggers and viruses transmit through email, putting antivirus protection on your business email server will make it simpler to avoid these assaults.

1.14 Some issues have made cyber security a major concern in digital banking.

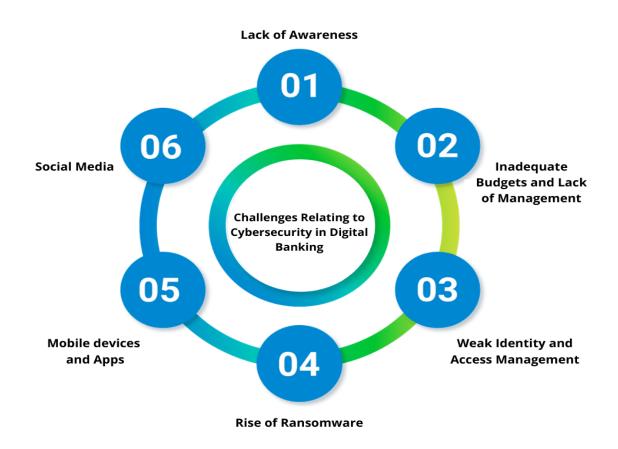


Figure 19

Lack of Awareness

People know nothing about cybersecurity and some organizations spend money on training and raising awareness among the general public about cybersecurity.

False budgets and management are not equal

Cybersecurity is given low priority and, as a result, is often overlooked in the budget. Cybersecurity is of paramount importance to senior management and its support is of paramount importance. This may be one reason to underestimate these risks.

Lack of adequate identification and access management

Identity and access management have always been an important part of cyber security, especially in these times when hackers gain the upper hand; A single hacked certificate is

sufficient to gain access to a business network. Although there has been some progress in this area, much work still needs to be done in this area.

Ransomware is on the rise.

Recent attacks on computers have drawn our attention to the growing ransomware threat. Cybercriminals have started using technologies to avoid falling into the termination security code trap that focuses on potential files.

Mobile apps and devices

The majority of financial institutions have adopted mobile phones as a way of doing business. As the base is growing regularly, it has become an attractive choice even for freelancers. Despite the increase in mobile phone transactions, mobile phones have become an attractive target for hackers.

Internet and social media

The widespread use of social media has prompted hackers to use a variety of techniques. Less savvy customers put their information to someone for verification, which was misused by cyber criminals.

1.15 Wi-Fi is not secure!

Connecting to an unsecured Wi-Fi network may seem like an advantage, but it comes with the cost of security. Due to the sensitivity of business information, risks are multiplied when a company uses business processes. Unsecured Wi-Fi vulnerabilities are often associated with cognitive disruption and network intrusion.

Wi-Fi is not encrypted

An insecure Wi-Fi connection does not use any security secret script. If Wi-Fi channels are encrypted no one will be able to access the linked devices or the link. Any secure network emits an audio signal, so it is easy to spot an insecure associate in a nursing network.

Login data interrupted

Using services that demand login credentials to access unsecured Wi-Fi poses a significant danger. Third parties may be able to intercept data exchanged via an

unprotected Wi-Fi network. These third parties take advantage of the gaps in your awareness to steal your login information and passwords, which they then use to access your services unlawfully. This covers online banking, email, and other fraud-prevention services.

Interruption of sensitive data

There is also a risk that your login credentials will intercept any information sent over an unsecured Wi-Fi connection. Data provided through instant chats, emails and other data transmission methods may be interrupted and used for malicious purposes. This can be a particularly serious security issue if critical enterprise data is transmitted.

Bandwidth theft

If your company uses an unsecured Wi-Fi network, you may also be vulnerable to data theft. When others join your network, the work they do can consume some of the available information. Depending on the number of unauthorized users connected to your network and the number of people already using it illegally, users may experience slowdowns. This will reduce productivity and cause a lot of inconvenience to your employees.

Illegal use

If you have unsecured Wi-Fi, an unauthorized user may use your network for illegal purposes. Major offenses include black market file transfers and downloads, using your network to spread malware, and using your network to obtain pornographic or other black-market items. The perpetrator is a victim of your network so any criminal investigation can go back to your network. As a result, your company will be liable for any penalties resulting from these violations, even if no legal users are involved.

Knowledge network theft

Hosting an insecure Wi-Fi network can also put data on your company's computers at risk. Unauthorized persons may contain information about insecure resources on your electronic network, as well as any associated devices.

2 LITERATURE REVIEW

Online banking is a relatively new phenomenon; It has gained prominence in recent years as a result of new media technologies, rapid and widespread use of the Internet. "System that allows customers to conduct banking operations from home using the Internet" (Investor Regulations, 2005) or "Services that facilitate banking transactions electronically" (Investor Regulations, 2005) (BitPipe, 2005). After a few years of trials, Presidential Savings Bank launched an online banking service on October 6, 1995, the first of its kind in the United States. Pew Research recently estimated that more than 50 million people in the United States operate online banks. Sullivan (2005, paraphrased) The rapid uptake of internet banking may be attributed to a number of distinct advantages it offers.

- To begin with, it's a boon since it allows for round-the-clock, year-round access.
- As long as you have an Internet connection, you may access your account anywhere.
- Transactions take just seconds to complete and confirm, thus it's quick.
- As you can manage all of your accounts and transactions from a one location, it's convenient.
- As many banking websites may provide advanced tools, information, and interface with local software packages. It is effective.

There are certain disadvantages to online banking that are being addressed over time, such as the lengthy and difficult process of getting started, and the fact that users may have to go through a steep learning curve before they can utilise the service to its full potential.

In addition, users must be familiar with the fundamentals of using a computer and the Internet, as well as be connected to an ISP (ISP).

Some people have declined to create internet accounts because they lack trust. Three degrees of trust are at play here: the supplier, the technological platform's ability to deliver without faults or failure, and the user's ability to use the system correctly. Developing trust in software and a faceless network of computers is a process that

takes time. Although Internet banking has had many hurdles, it has been hailed as "one of the most significant innovations in the retail financial business in the previous hundred years..." despite these difficulties. (Hiltunen, Heng, Helgesen, 2004, 119)

Banks in more developed countries, such as the United States, provide customers with online banking options as standard. In the Netherlands, for example, Internet banking is available from every bank. As a result, the Internet has become the primary battleground for both attracting and retaining clients. An account may be created or closed with only a single click.

Customer acquisition and loyalty are becoming less important because of the lack of human touch between consumers and staff members, strategically positioned workplaces, and awe/confidence inspiring buildings. Most banks have the difficulty of creating an online experience that differentiates them from their competitors. When it comes to banking, personalization is one of the most important methods being implemented.

1. Malik, S. (2014). Technological innovations in Indian banking sector: changed face of banking. International Journal, 2(6), 45. Indian banking system moonfaced the various challenges like increasing competition, pressure on spreads, and general changes to align with international standards have necessitated a reevaluation of methods and processes in order to stay competitive during this dynamic atmosphere Development of refined product with low value technology is that the key.

This concerns in- depth analysis of client desires the market and contestant trends; it can be rightly aforesaid that productivity and potency are going to be the watch words within the banking system within the years ahead. Strategizing organizational effectiveness and operational potency can govern the survival and growth of profits; besides transferral changes in the mental attitude of the workers, that is imperative with the ever-changing times.

2. Parimala (2001) 14, Ph.D. His perspective highlighted the credit card transaction in Trichirapalli. Its initial consequences are not enough to impress credit card holders with credit card holders, and cardholders are losing out on good marketing, marketing and information about all the offers offered through

- corporate channels. His proposals are developing to overcome these and significantly reduce annual penalties, hobbies and rates, and boost the credit card market.
- 3. Gauba, R. (2012). The Indian banking industry: Evolution, transformation & the road ahead. Pacific Business Review International, 5(1), 85-97. Indian banking sector still features a massive market unexplored. With the Indian households being one in every of the highest savers within the world accounting for sixty-nine of India gross national saving of that solely forty seventh is accessed by the banks quite half the Indian population still unbanked with solely fifty-five per cent of the population have a time deposit account and nine per cent have credit accounts with banks. Bharat has the best number of households (145 million) excluded from Banking & has only 1 bank branch per fourteen thousand people. Indian banking industry must face up Challenges of financial inclusion, deregulation and more interest on savings deposits, slow industrial growth, Asset quality management, adding pressure to some Sector, Transition to International Finance Reporting and implementation of Basel II, etc. exist.
- 4. Uppal, R. K. (2011). E-Age Technology "New Face of Indian Banking Industry: Emerging Challenges and New Potentials. Journal of social and development sciences, 1(3), 115-129. Banking transformation can useful to cope with new economic and monetary policies of the banks. IT is taking part in an important role to produce the forceful changes in the banking trade significantly in the new personal sector and foreign banks. The personal banks take a huge share of cake; our public sector banks square measure still insulation behind concerning the numerous monetary parameters. The huge opportunities square measure conjointly obtainable for the public sector banks if they change/modify and adopt new policies to combat the various recent challenges. It may be complete that mere introduction of IT alone cannot be decent to bring necessary performance improvement and to get the competitive edge. Intelligent individuals square measure needed to use such intelligent tools. Thus, despite the fact that IT management could be a challenge flow in future banking state of affairs, selling not technology goes to be the challenge

- 5. Swarnalatha (2002) 15, in Ph.D. Intellectual Perspective and the Consequences of Credit Card Offers. This research is mainly based on the opinion set regarding credit card holders identified from various banks outside the Chennai gates.

 These discoveries and studies are mainly based entirely on the idea of the Female Cardol They are much less happy than the maximum card holders. In addition, the developments also indicate that there are cardholders playing cards in banks and various international locations in India who have a great knowledge of the offerings and are extremely happy.
- 6. C. Prakash (2003) 16, in his book, examines the principles of credit playing cards in India and the impact of credit playing cards on the way money is spent for its emergence. Negotiation plan provided for three hundred credit card holders. Common percentage tests, F, ANOVA and chi-rectangular tests were used to search the collected data. The majority of respondents, no matter how much they earned, agreed that their shopping power increased when they started using their credit cards. Playing credit cards is only available for very small areas, including airports, earning shops and restaurants.
- 7. UV Anita K. Anita (2003) 17, a look at buyer acquisitions, and delight in the offers offered by Citibank Media in terms of its form and performance. The dealer company should be invited to accept large playing cards. Concluded that Carriers must establish appropriate relationships with their customers and allay their concerns and clarify their doubts regarding accommodation.
- 8. Murugesan (2007) 18, Ph.D. Entitled "Research on Credit Card Tradition in Chennai City", his opinion analyzes whether the credit score card business provides ample space for growth and development. Many new easy schemes must be brought in to ensure that big men have credit cards to play with. To reduce the burden on existing cardholders and reduce tastes and various costs, financial institutions that provide credit score cards should offer a promotion plan to their clients.

- 9. Joji, Alex N (2010) 19, At Kochi Municipal Corporation: Try to see the resale effect on credit score and credit card type, materials, compulsive purchases, credit card use strategies and credit score errors among buyers.
- 10. Mandeep Kaur (2011) 20, Opinion of Cardholders and Member Institutions on Plastic Cash in India Examining the Attitudes of Customers and Member Institutions on the Use of Plastic Cash. It specializes in the critical situations faced by customers and banks, the importance of plastic cash management and various key issues that include the various aspects that attract plastic cash consumption and consumption. It also analyzes the growing situation and trends in plastic cash in India.
- 11. Sudhakara, AM (2012) 21 The inspiration for this idea is to study the technological advances made by the Indian banking institution in providing security to customers due to the ongoing cyber race between security needs hunters and security grade fraudsters.
- 12. Cuesta, C., Ruesta, M., Tuesta, D., & Urbiola, P. (2015). The digital transformation of the banking industry. BBVA research, 1-10. In the process of gradually digitizing banking business, it is necessary to build corresponding indicators Common throughout the financial system and transparently applied to the marketplace. this should Do it in such a way that it is possible to check whether the investments made are appropriate and whether They achieve expected results, provided they do so across institutions and under comparable conditions nation. This work should be carried out by the banking institution to document its progress and an authority that regulates the financial system.

We have known 3 ordered phases within the medical aid method of a bank: the first involving the event of recent channels and product, whereas the second means that adapting technology infrastructure and also the last needs deep organisational changes for strategic positioning within the digital setting. Those

establishments that have kicked off this method earlier, and are currently at an additional advanced stage, are better-placed to satisfy the new demands of consumers and to be competitive in comparison with the new digital monetary service suppliers.

13. Kearney, A. T. (2014). Going digital: The banking transformation road map. October, Chicago, IL. The future can bring a brand new banking paradigm: a brand new delivery model wherever digital groups square measure integrated with existing personnel, associate degreed wherever some pure digital players might add physical branches to showcase their brands; recently fashioned IT with an app-focused front, a central core info connected and hosted within the Cloud, and a rear wide industrialised and outsourced; and a digitized culture, wherever all workers square measure "digital certified," and wherever time and value square measure given to adapting skills and count to take care of competitive and margin pressures.

Compared to the means digital disruption is touch different industry sectors less protected by regulation and domestic specificities—such as media, telecom, and retail—it appears that retail banks at now have solely addressed the tip of the iceberg once it involves digital transformation. Current efforts in terms of selling and distribution to make banks' digital image and to stay digital customers from slippery away appear to be providing short facilitate, however there remains a lot of work to be done to make sure profits square measure protected within the future.

14. Omarini, A. (2017). The digital transformation in banking and the role of FinTechs in the new financial intermediation scenario. The big distinction between the evolution of net throughout the 90's and also the digital transformation, at present, regards the actual fact that digital has been dramatically reshaping, however individuals bank since the evolution of mobile has entered the market, and wherever code and net property became the principles for developing platforms and digital ecosystems. Platform area unit a form of a plug-and-play business model that permits multiple participants (producers and consumers) to attach to that, move with one another, and make and exchange worth on the opposite hand there's a totally new approach towards information, given the new

model of interaction between suppliers and customers. The iPhone, as an example, could be a key platform on which that app system operates. there's each reason to expect monetary services to form an analogous transition to a more and more interconnected digital world.

FinTech developers would like banks somewhere within the stack for such things as the access to shopper deposits or connected account data; access to payment systems; credit origination; or compliance management.

banks may need to reconsider their standard practice of offering the full range of banking products. Because it is not going to be the technology itself that will be the disruptor, but rather how firm deploys the technology that will cause the disruption.

15. Winasis, S., Riyanto, S., & Ariyanto, E. (2020). Digital transformation in the indonesian banking industry: Impact on employee engagement. International Journal of Innovation, Creativity and Change, 12(4), 528-543. Research by Anderson and Anderson (2010), expressed that once corporations create radical changes, the method may have an effect on staff showing emotion. The workers' perceptions of the possibility and risk of labour reduction and declining career opportunities, and a decrease in level of self effectualness, as a results of changes in procedures, conversion processes and changes in alternative conditions have the potential to be the supply of job stress, as expressed by Keane, Chiesa, Van Dijk and Burgess supported their analysis (Keane 20182016, Burgess 2016, Van Dijk et al 2009). The research by Hornstein (2015), expressed that to confirm the absence of obstacles to alter, it is necessary to require into consideration all doable and future aspects and conditions. Job satisfaction is additionally an awfully vital facet for staff within the industry as a result of workers United Nations agency are glad with their jobs can offer smart service to their customers, according to analysis by St. George (2015). a sign of job discontentment could be a high turnover intention rate. Yakin (Yakin et al, 2012) and princess (Maharani et al 2013), found a positive relationship between job satisfaction and worker engagement, wherever a high level of engagement is very smitten by the extent of worker job satisfaction.

According to Andrews (Andrews J et al 2015), corporations would like employees United Nations agency have special experience in their field, have a broad understanding and are in a position to solve issues with high complexness. corporations would like staff that are engaged and fully support the method, acting as agent of amendment that may share optimism and positive thoughts among alternative staff. Engaged staff are ready to produce a culture wherever innovation naturally happens throughout the method of amendment and also the culture is then ready to bind all worker among identical goal. staff United Nations agency have a high level of engagement can work passionately associated have an emotional attachment to the corporate. they're expected to offer maximum creative thinking and talent in order that they'll make sure the company's performance and sustainability, expressed Markos (Markos et al 2010). On the opposite hand, corporations should support and provide the resources required for the method and supply leaders that are reliable, have excellent leadership skills and have a confirming angle to help staff throughout the process.

- 16. Kaur, R. (2012). An impact of IT on branch productivity of Indian banking in the era of transformation. Journal of Internet Banking and Commerce, 17(3), 1. Growing competition has become a challenge for Indian banks, but it also brings challenges. A thoughtful approach to developing banking according to international standards. Technology is key to success for Indian banks, India can tap into Online Banking Faster Than US, Provided Indian Banks Rob It Chance. It can be seen that the post-electronic Banking period has greatly improved Increase productivity through increasing use of IT, especially mobile banking Internet banks and fully IT-centric banks are the biggest beneficiaries of IT However, some IT-oriented banks show productivity gains in post-electronic banking but it has yet to harmonize with a fully IT-oriented bank. So based on technology Banking is a need of the hour that cannot be ignored except at the expense of elimination from the game.
- 17. Dhanwani, S. K. (2014). Recent trends in Indian Banking industry. ABHINAV, National monthly refereed journal of research in commerce & management, Volume no., Issue, (3). Today's banking industry is being redefined and transformed through the use of information technology and it is certain that the future of banking will provide more sophisticated services Customers continue to

- innovate with products and processes. So, there is a paradigm The industry shifts from a seller's market to a buyer's market, and is ultimately Bankers shift their approach from 'traditional banking to convenience banking' and "Public Bank to Class Bank". This shift also improves accessibility a simple person.
- 18. Malar, D. A., Arvidsson, V., & Holmstrom, J. (2019). Digital transformation in banking: exploring value co-creation in online banking services in India. Journal of Global Information Technology Management, 22(1), 7-24. To remain competitive, today's corporations' area unit progressively engaged in co-creation useful with customers through use of self-service technologies. Different major factors embrace quality and customers' difficulties in acquiring needed info in associate acceptable format. Thus, flexibility and user-friendliness should be primary components of any IT strategy involving a client interface, as a result of customers area unit invariably cocreators useful in line with SDL and that they will solely derive value-in-use through the interface. There is huge and increasing potential for co-creating worth with customers through interactive self-service systems, but this is often among notable risks useful co-destruction, driven by many mechanisms as illustrated by the case study. Therefore, IT methods and repair systems should be fastidiously tuned to customers' wants in multiple dimensions to spice up value-in-use.
- 19. Chopra, N. (2016). E-Business Transformation in Banking Industry: Opportunities and Value Assessment. International Journal of Advanced Research, 4(3), 1986-1991. In India, people from villages or who are not financially literate are not with this dynamic market. there's still a great deal required for the banking industry to form reforms and train their customers for victimization web and mobile for his or her banking account. Banks have invested with in computer network portals, eLearning systems and institutional preparation with a mix for a lot of informal learning techniques like virtual schoolroom, blogging, etc.to publicize data, coaching on their core banking systems. Thus, E commerce has remodelled the manner banks conduct their business, be it by suggests that of diversity within the delivery channels or by suggests that of innovation revolutionary money instruments.
- 20. Ayeswarya, R. B., & Varghese, M. R. (2021). A STUDY ON GOING CASHLESS WITH CRYPTOCURRENCY IN INDIA AND ITS IMPACT IN BANKING INDUSTRY.

Information Technology in Industry, 9(3), 751-754. An important point from an Indian perspective is the introduction of virtual currencies. This further raises the big question as to why India cannot regulate these currencies like other countries by changing tax laws, Foreign Exchange Management Act (FEMA) etc. and what an agency like RBI or Securities and Exchange Board of India appointed SEBI thinks about the deal Yes, the mere adoption of the digital rupee does not guarantee that there will be no fraud or money laundering. The future of cryptocurrencies is entirely in the hands of lawmakers, whether they ban the currency or not. Apart from this, the decision to go further is to introduce a digital rupee or to normalize the industry. It's an hour of need to make it a viable opportunity for investors and consumers.

21. Dara, S. (2017). Digitalisation in Indian Banks. World Wide Journal of Multidisciplinary Research and Development. Traditional money payments area unit being replaced by "Digital Wallets" with medical care. several different aspects of banks area unit either being reworked or being evolved into one thing new. therefore, the major question that is required to be Answered here is that to "What extent would banks be ready to utilize the intensive opportunities arising out of the medical care"? Utilizing digitalization in an economical manner holds a good importance in Asian nation. it's additionally portrayed by the quote of Nassim Nicholas Taleb, "Banking could be a terribly treacherous business as a result of you don't notice it's risky till it's too late. it's like calm waters that deliver huge storms."

2.1 PROBLEM STATEMENT

Due of the inherent hazards connected with online banking, one of the most significant challenges that internet banking marketers confront is security. Cyber-attacks and fraudulent activity may be virtual, but economies are almost impregnable. Many users, on the other hand, are unaware that their online activity puts them at danger.

Banks and people have the most difficulty adapting to changes; during the outbreak, online banking use skyrocketed. The British bank TSB has experienced a 137 percent rise in internet banking enrolment since March 2020. As a consequence of the lockdown limitations, internet banking use has surged, with 80 percent of clients preferring it over visiting the bank, and banks throughout the globe have started to shut their physical offices. Despite social distance norms, the expansion of contactless solutions has been accompanied by an increase in the usage of digital financial services. Contactless transactions are expected to expand by 40% globally by 2020, according to MasterCard. As more people go digital and companies increase their e-commerce capabilities, the need for entirely virtual contactless banking solutions will rise.

When we utilize the Internet, there is a chance that technology and services may be disrupted. System stability and efficiency may be hampered if your connection is sluggish or unavailable, limiting your ability to access your accounts. Similarly, bank servers are still prone to purposeful and unintended outages, regardless of how sophisticated the technology is. Users are unable to make payments or transactions while the system is down, and there are also concerns about data and money security.

Lack of human interaction with banks - Despite the fact that 73 percent of the world's population uses online banking at least once a month, meeting even the most important client expectations via digital banking is tough. Bankers can frequently enable talks on challenging financial topics, which is one of the advantages of having a personal connection with your bank. Customers may weigh their options and identify solutions that are suited to their specific requirements via a personal banking relationship, which is difficult to do with self-service.

Fear of job loss - The labor force is declining as a result of technological advances, which is causing concern among current and potential workers about the possibility of declining employment opportunities in some sectors in the future.

2.2 OBJECTIVE

- To Acknowledge the concept, features, of E-banking and its impact on Bank.
- To study and analyse the progress made by Bank's in adaptation of technology in the Banking
- Understanding the satisfaction level of the people from this new step regarding usage of digital Product of Banks.
- To study how Banks Adapt these changes from traditional to modern banking.
- To identify various E-Banking services offered by bank.
- To analyse the views and response of the population in general about the digital Banking through sampling methods

2.3 Some alternatives -

Because the financial services industry is strictly regulated, banks spend time, money, and effort implementing highly efficient systems that are difficult to maintain. Switching to integrated security where all components cooperate and communicate E very useful to each other. Analytics is a key component in boosting cyber resistance. A new generation of security analytics has emerged, capable of storing and evaluating a wide variety of security data over time. As long as security is considered a valuable asset, the idea should move in that direction. Security threats and the potential for their consequences must be evaluated and only then can the true need for security be generally understood. Banks and other financial institutions need to identify exploitative practices and behaviours and invest in corrective technology. Information is now stored on various devices and in the cloud, so every system containing sensitive data must be secure.

• Tip: - Install the latest security software: Prevention is better than cure and it applies to any online transaction. The internet is full of malware, spam and

spyware and the best way to prevent your security from being compromised is to use a good antivirus software package. Instead of antivirus, you can get the comprehensive version of security software that protects against phishing, malware and trojans.

- Use the automatic update for all software: If you think your online security is secure because of all the security software you have installed, think again. Any small error in the software packages now in use can lead to a hacking attempt. Email clients and web browsers are the most vulnerable software packages. Verify that your browser and mail clients such as Spirit and Firefox are always updated to the latest version. Application programming companies often release patches and upgrades to hide any security vulnerabilities in the software product. If you find that manually inspecting and updating the software package is laborious, activating the automatic update option for all software packages on your laptop or computer is the most effective way.
- Search for code tags: Before entering any important information or advice on the
 website, check that the site uses the correct code. Encoding is a type of security
 that helps protect data as it travels through the various networks on the Internet.
 Encryption requires an IP or Global Resource Locator address beginning with
 https (where s means security), as evidenced by the padlock locked in the right
 corner of the screen.
- Use different passwords: According to a recent survey, the majority of people use the same password for a variety of transactions, including sensitive transactions such as online banking and credit cards. You're vulnerable to misusing the same password, because if hackers gain access to at least one password, they can gain access to any or all of your accounts. Using different passwords for different transactions is the most effective way to keep yourself safe in the virtual world.
- Cash on Delivery Option: If any site has a cash on delivery option, take advantage of it as it is a useful security tip at no cost. Many sites have this option; However, many users ignore it due to our negligence in getting all the information.
- Dealing with Offers: You can get a large number of promotional emails and discounts in the mail from retailers. However, when using such deals, it is recommended that you go to the seller's website instead of diving into the contents of the coupon link provided by third parties.

- Check the Digital Certification of the Website: Before dealing with online merchants or bourgeois websites, check whether the website has a secure digital certificate. For example, Verizon is a well-known authentication service provider that helps users ensure that the website they are dealing with is authentic and not dishonest.
- Avoid abuse. Public Computers: Complete any financial transactions online using
 electronic devices such as personal computers or phones or tablets. Never use
 public computers or a friend's phone for such sensitive transactions, as their
 security may be compromised. Also, make sure you are always connected to the
 Internet via a password-protected Wi-Fi connection. Conducting financial
 transactions via public Wi-Fi is risky and not recommended.
- Keep a safe distance from phishing emails. Any promotional messages from your bank or any third-party websites or suppliers requesting your sensitive financial information should be ignored as spam. Thousands of innocent people have been deceived in the past by phishing websites, emails and websites of banks, Reserve Bank of India, IT branches and other institutions. Lottery is not jeopardized.

3. RESEARCH METHODOLOGY

3.1 DATA COLLECTION

- Different types of data both primary and secondary data Primary data will be collected via a structured questionnaire.
- Secondary data sources like catalogue of the company, various internet sites such
 as google, Idea official website, research books and available related materials
 have been used.
- Will use tableau and excel for creating charts, graphs, pivot table, and if needed than excel tools.

3.2 Sampling methodology

The primary data is collected through a survey in the form of questioner on a sample of 120 people of Bangalore which include fruits, vegetables vendors, small retailer shops and ola auto persons. From the 105 Respondents 93 use digital banking. On the basis of this Analysis is done.

3.3 Limitations of Study

Some of the major limitations of the Study are as follows -:

- I. The sample size is very less in comparison with the population so a proper inference is not drawn because of the number of 120 Respondents.
- II. I have not use moderns' tools for study the samples.
- III. The respondent preferences can be change in future so the analysis will be a major reason for limitations.
 - **3.4 Expected outcomes** from this project we can get to know about the positive and negative effect of digital banking and how it is helping to make a New India.

RBI Guidelines - Online Banking in India



Figure 20

Customers of co-operative banks should follow these guidelines when using the online banking service.

Licensed StCBs, DCCBs and UCBs required to provide Internet banking services to their clients must:

- 1. The Bank will develop the Internet Banking Policy with the approval of the Board of Directors.
- 2. The policy must comply with the Bank's overall IT and information security policy and maintain the confidentiality of records and the security system.
- 3. The policy should outline the steps that must be taken to comply with KYC standards.
- 4. In addition to technical and security requirements, the policy addresses the legal, regulatory and regulatory challenges listed in this Annex.

- 5. Banks should implement robust internal control systems and consider operational risks related to service delivery.
- 6. Prior to providing facilities, customers must be exposed to risks, liabilities and liabilities.

As a result, the Bank has issued the following guidelines for implementation.

Safety and technical standards:

- a) The Board of Directors of cooperative banks must adopt an information security policy. Separate duties should be assigned to the Information Technology (IT) and Information Security (IS) departments. The IT department is in charge of computer systems. A single information security officer who is solely accountable for the security of information systems should be appointed. The information systems auditor also does audits on information systems.
- b) In line with the IS audit method appropriately authorized by the Board of Directors, banks should appoint a network and database administrator with clearly defined tasks.
- c) Logical access restrictions to data, systems, application software, utilities, communication lines, libraries, and system software are required, among other things.
- d) Banks should make sure that the internet and financial systems are not linked.
- e) Banks must have robust security measures in place to prevent system and network breaches.
- f) All undesirable services, such as file transfer protocol (FTP) and telnet, must be deactivated on the application server. Separate the application server from the email server.
- g) All access to the computer, including the connections received, must be monitored. Security violations (whether suspected or attempted) must be documented and followed. Banks need to invest in solutions to protect their systems and networks from breaches and attacks. To prevent security breaches, these tools should be used regularly. Banks should regularly review and improve their security structure and policies based on their own experience and emerging technology.

- h) Periodic penetration testing of the system should be performed by the data security administrator and the information system auditor and should include:
- 1. Use password crackers to guess passwords.
- 2. In Programs, look for tailgate traps.
- 3. Use Distributed Daniel Off Service (DDoS) and Daniel Off Service (DoS) attacks to defeat the system.
- 4. Check the program for known errors, especially in the browser and email applications.

2. Legal concerns

- a) Banks can provide internet banking services only on customer request based on written or certified electronic request and positive receipt.
- b) Given the current legal situation, banks need to not only verify the customer's identity, but also inquire about the customer's integrity and reputation when choosing online banking.
- c) From a legal standpoint, the security technology used by banks to verify consumer identity must be recognized by law as an alternative to signing. When providing online banking services, the provisions of the Information Technology Act 2000, as well as other regulatory obligations, must be strictly adhered to.
- d) Under the present system, banks are expected to keep the accounts and information of their customers private and secret. The danger of banks failing to meet the aforementioned requirement in the online banking environment is quite significant due to a variety of factors.

Other concerns and statements: Online banking products should be available to customers only. Services must provide goods only in local currency. When consumers use the Internet to conduct banking activities, co-operative banks are required to disclose risks, liabilities and liabilities. Banks are required to comply with the KYC / Anti-Money Laundering Requirements, as well as the regulations and orders issued under PMLA 2002, when providing Internet banking.

4. DATA ANALYSIS AND INTERPRETATION

4.1 Profile of the Surveys



Figure 21

For the project "Impact of Digitalization in Banking Industry," a survey was performed from January to March, with the questioner centered on the usage of digital wallets by small merchant stores, taxi and car drivers, and vegetable and fruit vendors. A total of 105 people were included in the sample.

The primary goal of this study was to collect data on digital wallet and online banking users' behaviour, views, preferences, and expectations. Whether the users are pleased with the adjustment or whether they are under duress. The question was created in such a manner that it covers all of the areas that are relevant to this study. After conferring with my project guide, I and my buddies did the field work and data analysis. I owe them a debt of gratitude.



Figure 22

Duration of survey	January to March
Target population	Small vendors, fruit and vegetable sellers, and Cabs and auto drivers of Bengaluru
Survey method	face to face, phone call
Effective Response	93 out of 105 i.e., 88.57% use mobile wallets

5.2
Analysis and Interpretation

♣ 4.2.1 AGE

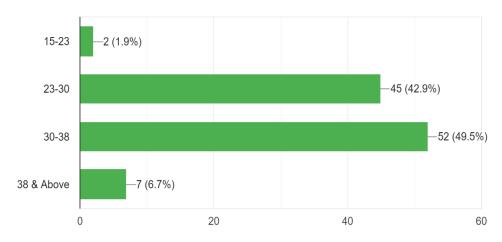
Table 1

	AGE	
AGE	Respondents	% of Respondents
15-23	2	1.90%
23-30	45	42.90%
30-38	52	49.50%
38 & Above	7	6.70%

Table -1: Showing Age groups of the Respondents

Graph i





Interpretation: -

Out of 105 respondent 2 are in below 15 to 23 Age group, 45 (42.9%) are in 23-30 age group, 52 (49.5%) are in 30-38 age group, and 7 respondents in above 38 age group. This is shown by the help of Bar chart and from Table- 1

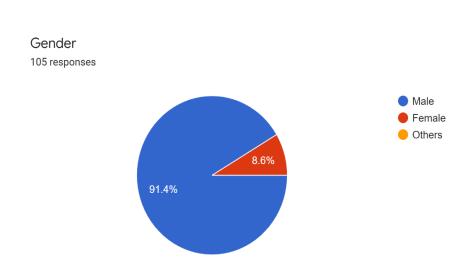
4 4.2.2 Gender

Table 2

	GENDER	
GENDER	Respondents	% of Respondents
MALE	96	91.40%
FEMALE	9	8.60%
OTHERS	0	0.00%

Table-2: Showing Gender of the Respondents





Interpretation: -

Data collected from 105 Respondents, out of which 96 i.e., 91.4% are male and 9 i.e., 8.6% are females. It's not like females are less or they don't use or aware of online banking but they were more praising about digitisation then men respondents it is because of the work role as my analysis was from cabs and auto drivers more.

4.2.3 Use of Mobile Banking

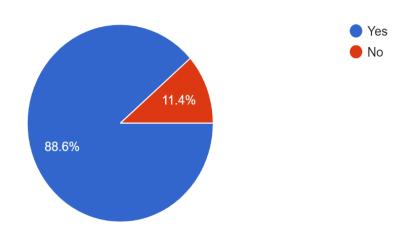
Table 3

Use of Mobile Banking				
	Respondents	% of Respondents		
YES	93	88.57%		
NO	12	11.43%		

Table-3: Showing the Use of Mobile Banking

Graph iii

Do you use NetBanking/MobileBanking/PhoneBanking/Mobile Wallets? 105 responses



Interpretation: -

While doing this survey it was found that most of the respondent use mobile banking out of 105, 93 people were using mobile banking and rest 12 were not.

The outcome which can be interpretated can be that awareness was more to in people who are less qualified but are using the technology with more enthusiasm than others people.

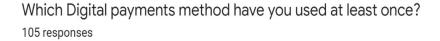
4.2.4 Digital wallet

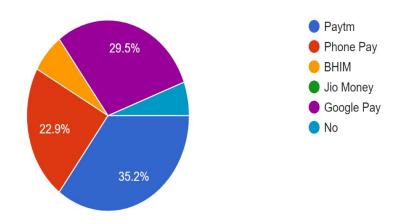
Table 4

Most used Wallets				
	Respondents	% of Respondents		
Paytm	37	35.24%		
Phone Pay	24	22.86%		
BHIM	7	6.67%		
JIO Money	0	0.00%		
Google Pay	31	29.52%		
No	6	5.71%		

Table-4: Showing most Used Mobile wallets

Graph iv





Interpretation: -

According to the survey we can see that Paytm, google pay, and phone Pay is most used app by the respondents Paytm users were 37, google pay users were 31, and 24 users from phone Pay out of 105. And rest were using other apps. While doing the survey respondents were finding the technology difficult but they were little satisfied with the google pay and Phone pay service.

4 4.2.5 Mostly used online feature

Table 5

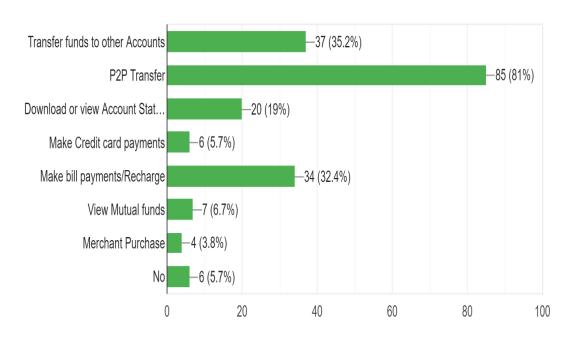
Which Online Feature Is Used Most				
	Respondents	% of Respondents		
Transfer funds to other Accounts	37	35.24%		
P2P Transfer	85	80.95%		
Download or view Account Statements	20	19.05%		
Make Credit card payments	6	5.71%		
Make bill payments/Recharge	34	32.38%		
View Mutual funds	7	6.67%		
Merchant Purchase	4	3.81%		
Other	6	5.71%		

Table-5: Showing the most used feature of online banking

Graph v

Which online features do you use regularly? Please select them all.

105 responses



Interpretation: -

From the survey we can clearly see that most of the respondents who are small shop owners, vendors, cabs and auto drivers are using digital payments for personto-person transfer about 85 out of 105 were using. And 34 out of 105 were using for mobile recharge and payments. This shows the interest and enthusiasm of people to learn every day and get updated with this dynamic world.

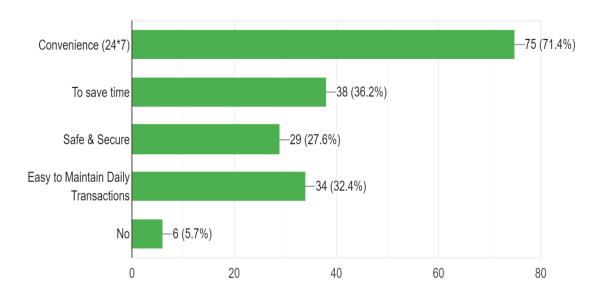
4.2.6 Why internet Banking

Table 6

Reason For Choosing internet Banking				
	Respondents	% of Respondents		
Convenience (24*7)	75	71.43%		
To save time	38	36.19%		
Safe & Secure	29	27.62%		
Easy to Maintain Daily Transactions	34	32.38%		
NO	6	5.71%		

Table-6: Showing the reason for using Online Banking





Interpretation: -

According to the survey about 71.4 % of respondents feels like internet banking is convenient because it provides 24*7 service. And 36 % respondent thinks that its time saving because of its fast transfer of money without the tension of fake note or change issues. 27% feels that it is safe and secure in spite of technology difficulty they are happy and feel safe to use. And 32% respondent thinks it is easy to maintain daily transactions they can easily check their rides taken or the road side vendors are not facing difficulty of money loss or theft because of online banking.

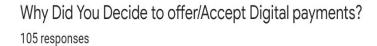
4.2.7 Reason for Adoption

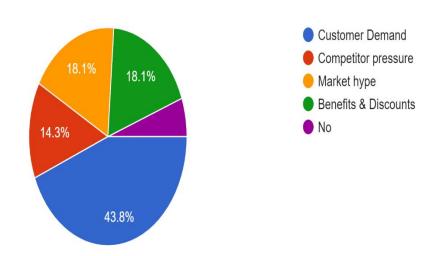
Table 7

Why You Decide To Opt For Digital Payments				
	Respondents	% of Respondents		
Customer Demand	46	43.81%		
Competitor pressure	15	14.29%		
Market hype	19	18.10%		
Benefits & Discounts	19	18.10%		
No	6	5.71%		

Table-7: Showing the Reason for Opting Digital Payments

Graph vii





Interpretation: -

As per the survey while talking to various people they told they were using digital payments because of Customer demand as per the chart we can see that 43.8% people were using for the same reason. And for market hype, competitor pressure,

and benefits and discount their 15,19,19 Respondents out of 105. While interacting with them I got to know their frustration of learning the technology and facing issues like internet loss they were keen to accept the difficulty and process it further.

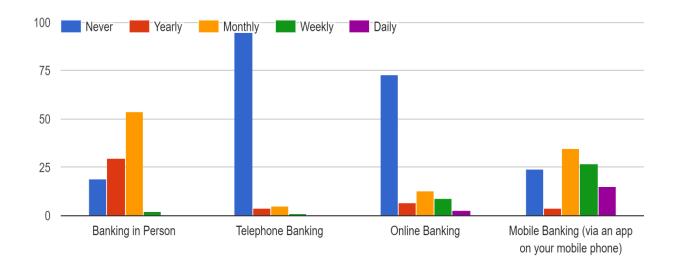
4.2.8 Visiting Bank

Table 8

RESPONDENTS					
BANKING	NEVER MONTHLY YEARLY WEEKLY DA				DAILY
BANKING IN PERSON	19	54	30	2	0
TELEPHONE BANKING	95	4	5	1	0
ONLINE BANKING	73	7	13	9	3
MOBILE BANKING	24	4	35	27	15

Table-8: showing the data regarding how often the respondent contact with their banks.

How do you bank and how often?



Interpretation: -

With the help of this survey, we have analysed that our respondents were not comfortable with online banking more or mobile banking they were doing mobile banking because to check their daily or monthly account statements but they were happy with visiting bank monthly for depositing money or withdrawal from account. About 95 out of 105 were not using telephone banking, 54 out of 105 were visiting bank monthly, 73 out 105 were never doing online banking, 35 out of 105 prefer mobile banking. For more details refer to the Table 1.2.

4.2.9 Communication With bank

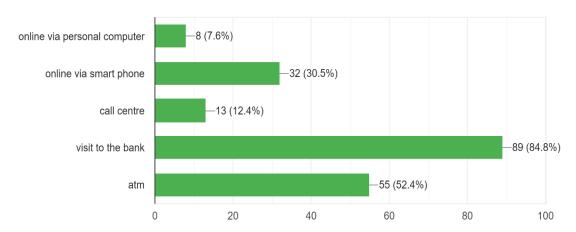
Table 9

Communication With Bank				
	Respondents	% of Respondents		
online via personal computer	8	7.62%		
online via smart phone	32	30.48%		
call centre	13	12.38%		
visit to the bank	89	84.76%		
Atm	55	52.38%		

Table-9: Showing How the Respondents prefer communication with the bank.

Graph ix

What is your preferred communication with your bank? (you can choose many) 105 responses



Interpretation: -

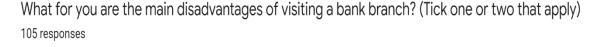
Interaction with banks and being updated about your account balance and any new information or changes is must and now a days internet is leading into it by the help of advertisement all over the phones, web, phone apps, television. But people like small workers are not much familiar so visiting banks or communication with banks is must important and with the help of survey it is analysed that most of the people prefer personal visit to bank as per the chart 89 out of 105 prefer to go to bank and with that 55 people visit to ATM for communication with bank out of 105. And 32 out of 105 communicate through online via smart phone and basically for checking statements and being updated.

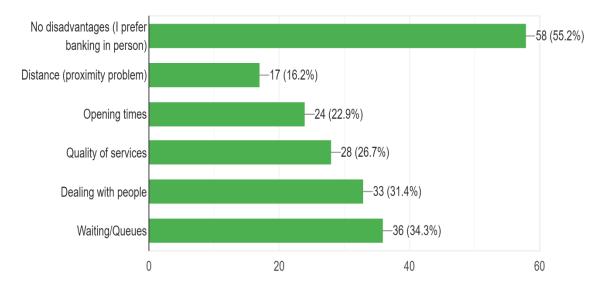
4.2.10 Disadvantage of Visiting Bank

Table 10

Disadvantage Of Visiting Bank			
	Respondents	% of Respondents	
No disadvantages (I prefer banking in pe	58	55.24%	
Distance (proximity problem)	17	16.19%	
Opening times	24	22.86%	
Quality of services	28	26.67%	
Dealing with people	33	31.43%	
Waiting/Queues	36	34.29%	

Table-10: Showing the disadvantages of visiting bank





Interpretation: -

As per the survey 58 out of 105 feels no disadvantage in visiting bank in person but with that there are people who also feels that waiting in queue is the bigger disadvantage for visiting in person as most of the people told that talking with bank person and understanding things individually gives them more satisfaction than telephone banking or online banking. As per the chart 17 people face the problem of Distance, 24 from opening times, 28 suffers with quality of service and 33 people were facing problem with the rest of the customers who visit bank and the bank staff. And 28 were disappointed with the quality of service provided by the Banks.

4 4.2.11 Barriers on online Banking

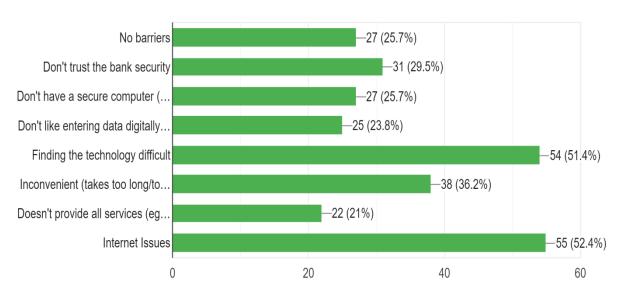
Table 11

Major Barriers Of Online Banking				
	Respondents	% of Respondents		
No barriers	27	25.71%		
Don't trust the bank security	31	29.52%		
Don't have a secure computer (e.g. shared computer)	27	25.71%		
Don't like entering data digitally (or leaving a data trail - big brother watching!)	25	23.81%		
Finding the technology difficult	54	51.43%		
Inconvenient (takes too long/too many questions)	38	36.19%		
Doesn't provide all services (eg Cheque Deposit)	22	20.95%		
Internet Issues	55	52.38%		

Table-11: Showing the major barriers of online banking.

Graph xi

What for you are the major barriers of online banking? (Tick one or two that apply most) 105 responses



Interpretation: -

While conducting the survey and talking with the people most of them were very disappointed with finding the difficulty they face by using the digital wallet as they feel it is complicated to understand it, this was because they are less educated and has lack of knowledge. Most of them were annoyed because of the internet issue. They told that due to internet issue they have lost money and due to connectivity problem while receiving payment from customers they face disagreement with them that impact there rating from the customers.

As per the chart 54 out of 105 were facing the technology difficult, 55 out of 105 were facing the internet issue, 31 out of 105 do not trust the bank security, 25 out of 105 do not like to enter data digitally, 38 out of 105 feels inconvenience because while registering or doing KYC it asks a lot of question. 22 responded were disappoint because of not getting all the services by the bank i.e., online cheque deposit.

And the best thing was that 22 out of 105 finds no barrier in online banking that shows people are updating with the latest update.

4.2.12 Respondent thoughts

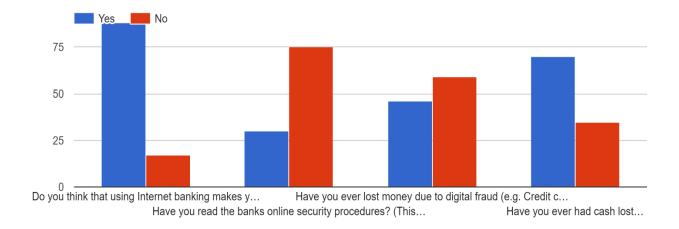
Table 12

Which Of The Following Apply To You				
	Yes	No		
Do you think that using Internet banking makes your life easier?	88	17		
Have you read the banks online security procedures?	30	75		
Have you ever lost money due to digital fraud	46	59		
Have you ever had cash lost or stolen?	70	35		

Table-12: Showing about the view point of respondents

Graph xii

Which of the following apply to you?



Interpretation: -

According to the survey 88/105 respondent agree that use of internet banking makes their life easier as during the survey they told that carrying money creates a problem and when it comes to give the change sometimes conflict happen between them and the customers and sometimes torn notes creates an issue as customers gave that to them and fight if they refuse or tell them they will go without giving the money. There is also problem at the time of monsoon season as the weather in Bangalore can't be predicted so sudden rain can make the paper notes wet that can lead to money loss. This was the verbal feedback from the auto drivers and some of this I have personally experienced.

The second question was about reading the security procedure by the customer and it was analysed that 75/105 didn't read the security procedure and in normal life we also do the same but for them they said that their account is created by some other person not by them so they were not much aware about the same.

Third question which they answered was losing money digitally or digital fraud so 59 said no and 46 said yes out of 105 as most of them lost money due to internet issues. They on daily basis check their account statement and are updated about their daily earning.

But when asked about the cash loss 70/105 said yes that they loss cash and 35/105 said no for the same.

Cash is the big issue and cash in hand is better than digital cash one of the respondents said because he feels most of the people are less educated in India and that creates a problem but now, they all have understand the importance of education and they are earning to spend on their children education.

4.2.13 Overall Analysis of E-payments

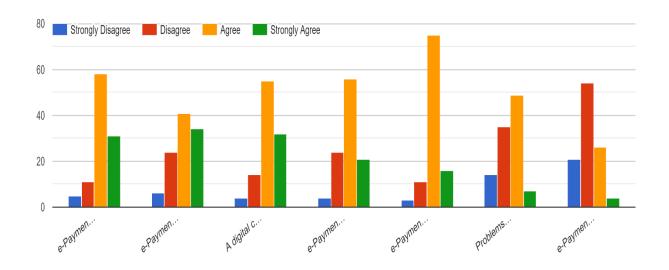
Table 13

RESPONDENTS				
Overall Analysis	Strongly Disagree	Disagree	Agree	Strongly Agree
E payments saves your Time and Money	5	11	58	31
Are Better than Cash	6	24	41	34
Alert to security issue	4	14	55	32
Great choice to consumer and merchant	4	24	56	21
E payments cost are hidden from consumer	3	11	75	16
Problem will not arise if Debit Card is Stolen	14	35	49	7
Easily understood and adopted	21	54	26	4

Table-13: Showing Overall Analysis of digital banking.

Graph xiii

Overall analysis of e-Payment (digital and online payment) systems.



Interpretation: -

As per the survey it is clearly visible that 54 and 21 respondents out of 105 believes that E-payments are not easily adopted and understood.

49/105 believe that if the debit card is stolen than the problem will not arise because of wallets but 14/105 Strongly disagree for this statement and tell their concern that connection and battery loss for mobile is inevitable than only cards can put to use if one is traveling to some distance.

87/105 said for security alert and that is the main issue which people are facing and according to the latest experience of using phone pay this feature is already

there as if the connectivity or beneficiary bank is not responding phone pay will not send the money as further process will be decline by the app.

75/105 told that it is better than cash carrying money creates a problem and when it comes to give the change sometimes conflict happen between them and the customers and sometimes torn notes creates an issue as customers gave that to them and fight if they refuse or tell them they will go without giving the money. There is also problem at the time of monsoon season as the weather in Bangalore can't be predicted so sudden rain can make the paper notes wet that can lead to money loss. But 30/105 feels that cash is much better than e-wallets.

89/105 says that it saves time because the payment is faster with no Hussle and it is secure that money will reach to the account of beneficiary when it shows green tick to the payer account.

91/105 believe that E-payments cost are hidden from the users.

4.2.14 Occupation

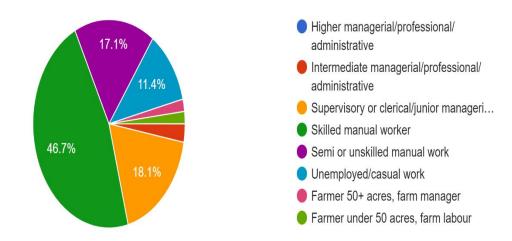
Table 14

Occupation		
	Respondents	% of Respondents
Higher managerial/professional/administrative	0	0.00%
Intermediate managerial/professional/administrative	3	2.86%
Supervisory or clerical/junior managerial/professional	19	18.10%
Skilled manual worker	49	46.67%
Semi or unskilled manual work	18	17.14%
Unemployed/casual work	12	11.43%
Farmer 50+ acres, farm manager	2	1.90%
Farmer under 50 acres, farm labour	2	1.90%

Table-14: Showing the occupation of the respondents

Graph xiv

Occupation of chief income earner in the family: 105 responses



Interpretation: -

According to the survey 46.7% were skilled manual labour, 18.1~% were clerical junior, 17.1~% were unskilled manual worker and 11.4~% were unemployed/casual work.

- **4.2.15** what Feature or Change do you want in your favourite mobile wallets?
 - 2 responses
 - **❖** Alert at the time of payment if connectivity is low.
 - **Alert** if internet issues are there.

4.3 INDIA SMART MOVE ON UPI

Due to latest war in Ukraine- Russia, various services are prohibited but India is not affected by all because of smart move by our government

In payments, India has developed enormous capabilities since the introduction of the RuPay debit card under the NPCI, which processes far more transactions than Visa/Mastercard," said a regulatory ruling. The ATM network is also Isolated as it doesn't depend on the global network as all banks need space to be a member of the domestic network. Likewise, account-to-account transfers are made through the Unified Payments Interface (UPI), so get these on the domestic payment rail Transactions. However, when it comes to credit cards, the Indian market is dominated by the Visa-Mastercard duopoly. While RuPay debit and credit cards will join India, cardholders will be at odds with overseas transactions as the Indian card network is not as established as China UnionPay International or regional network. In Russia, there square measure reports that native banks can begin provision cards on their home-grown Mir network in conjunction with UnionPay — China's transnational payment network. In India, the run has insisted on payment networks storing knowledge domestically. Visa has complied with the rules when payment many various greenbacks. Mastercard continues to face a ban from the regulator from provision recent cards. "However, knowledge localisation doesn't mean that continuity of services is maintained if a transnational player set to withdraw," same the official. Officials said that as things stand, withdrawal of services by payment networks would produce an interruption starting from six months to at least one year in providing various card networks to banks. On the payment acceptance facet, most business person effort banks check in outlets on all 3 networks together with RuPay, which might mean that there's no disruption at the merchant-end. whereas UPI doesn't have a cross-border dependency, 2 payment apps in hand by multinationals — Google Pay and PhonePe have a disproportionate share of UPI transactions.

Finally, an oversized a part of the fintech infrastructure in India that has

been designed by start-ups has been on the rear of funding from transnational nonpublic equity corporations. Incidentally, within the wake of the Russian crisis, some fintech's have received queries from investors on their exposure to Russia.

4.4 Real Story: -

Due to the growing popularity of Google Pay, PhonePe and other apps, the Unified Payments Interface or UPI has made money transfer much easier. While UPI is promoting new ways to make digital payments, it has also opened up new opportunities to deceive fraudulent customers. A recent acquaintance of our dad at OLX, who wanted to sell his bike, taught me how these UPI scams are so prevalent.

The trick went like this: Our dad, who lives in a small village in Uttar Pradesh, got a call from a man from a nearby city expressing interest in buying a motorbike. He promised to pay Rs 10,000 in advance and pay the rest in cash on arrival within two days.

Despite our dad's assurance that he would not contract with anyone else at the time, this guy turned down the bike offer and insisted on paying the advance. The caller kept asking our dad to give him his UPI address so that he could send money. It aroused Dad's interest as he cut him off.

He checked the ad a week later and got a call within an hour, following the same thing. Our dad now knows for sure that this is a scam, but he does not understand how giving up his UPI ID can lead to a scam. When I searched for "UPI OLX scam" on Google, I found many examples of how these scams work.

However, I quickly realized that deceiving people was not the only way. At work, I got a call from someone claiming to have cash back in my PhonePe account. The caller said: Do you want me to pay the money or do I want to refuse it? "When should I accept my cashback", "Why is my cashback being kept" and "Why did I get my cashback in the first place?" The answers to my questions like are not clear to him.

The person also issued a payment request via PhonePe, the usual three options being 'Pay', 'After' and 'Reject'.

After the fraudster displays the UPI ID, the user will receive a payment request. The scammer may have promised to deliver you money for the item advertised on the classified site, but instead sends you a request for money.

The scammer argues that he transferred the funds and that you must accept this request. He noted that pressing the "Pay" button would receive funding, but pressing the "Reject" option would cancel the transaction.

However, in a UPI transaction, the recipient does not have to do anything to collect their money. People, unaware of the situation, pay money to scam artists in the hope of making money. You have been exposed to the UPI scam as a result of a small mistake you made.

5. FINDINGS, CONCLUSIONS, SUGGESTIONS

5.1 FINDINGS-:

As India's population is very large and its level of education is very low, clients need more personalized services. Banks should take into account the attitudes of the customers in adopting online banking. According to my study and interviews most people are aware of the need for security and privacy to accept online banking, yet despite being aware that people are aware of security issues, not all types of scams are clear. According to a recent study, buyers are less inclined to adopt new technologies or processes that cause less risk. As a result, banks need to build their websites with security and trust in mind.

A total of 105 people from the Bangalore area participated in the study, including Uber, Ola, auto drivers, small retailers and fruit and vegetable sellers. As a result, we cannot assume that these represent national trends in internet banking.

People are very hesitant to rely on online banking. Hesitant about their preferences. People like online and offline banking, but the truth is that they are more secure with offline banking and only use online banking due to customer pressure.

When I show people the questionnaires to fill out during the survey, they usually fill them out without considering the scope of the research, however I do fill them in by asking them questions and that they understand the question and asking for responses. Many were not interested, others were completely dissatisfied with online banking, so they could not respond.

Another problem is that individuals do not actually share their personal information. As a result, they gave a lot of answers. Due to time constraints, it is not possible to retrieve data from all types of people.

According to the report, ATM banking is the most popular service, but wallets are only used to transfer money and receive money from customers.

5.2 CONCLUSION-:

The goal of this research was to determine the impact of digitalization. At the conclusion of the research, it was discovered that variables such as cash transfer, data records, and cellphone recharge contribute to consumer satisfaction with mobile banking services. Customers, on the other hand, are generally dissatisfied with most services. Customers' discontent, as well as what they want and need, are studied from this perspective. It is a very important quest that people need to learn to take advantage of technology. Most people know how to check SMS for money and use YouTube and some other applications. In addition, the focus of this research is on how banks are changing and how small businesses such as sellers and drivers are using online banking.

5.3 RECOMMENDATIONS-:

Suggestion to Bank

We can see how times are changing and how we are now embracing technology, but there are still many perceptual barriers preventing typical technological advances, which is why internet banking is so rudimentary.

Advice for banks:

- ❖ Banks should adhere to RBI guidelines and provide services accordingly. Banks on the other hand have not fully implemented this. Our respondents have expressed dissatisfaction with the failure of their banks to provide instant feedback on online transactions. Customers' interest in online services will decline if they do not receive enough feedback. As a result, banks need to take appropriate steps to develop their own feedback services.
- ❖ All banks and branches should provide online banking services.
- ❖ At this site, there are very few credit unions and these types of companies still do not have basic banking capabilities. As a result, these banks are losing customers. As a result, co-operative banks must be part of the core banking system.
- ❖ Banks should launch public awareness campaigns for online banking and provide appropriate training to customers. Customers should be encouraged to use online banking frequently to reduce cash consumption in the economy.
- ❖ Banks now use two-factor authentication, which involves sending a password to a phone number that registers a one-time transaction; However, since hackers bypass the two-factor authentication system, they need to upgrade to three-factor authentication.
- ❖ Banks need to work with IT professionals to make their websites more user friendly, with fewer questions and a more intuitive interface, even for the less educated to use them.
- ❖ Banks need to instill confidence in the security of their customers' accounts as many people feel that online banking is insecure.
- Connection disconnect is an important issue, especially in UCO Bank, where critical business operations are damaged. As a result, banks need to update their software for now.
- ❖ To minimize customer inconvenience, most banks are currently implementing automatic balance update devices, but everyone should unsubscribe from the system as soon as possible. Banks need to expand their services not only in cities but also in rural areas.
- ❖ Banks should increase the number of ATMs in urban and rural areas.
- ❖ Defendants stated that there were plenty of ATMs in the neighborhood, but most of them had no cash. This is a major issue when conducting this survey. As a result,

banks need to expand this service. Consumers need fair treatment. The staff should be helpful, polite and aware of the customer's concerns.

Advice For Customers:

- ❖ Do not respond to emails requesting banking access credentials such as account information, account verification, or usernames, passwords, PIN numbers, and other similar information to any person or website, unless proven to be secure and trustworthy.
- ❖ Do not communicate important information to anyone using e-mail (or e-mail-based fax systems such as FACsys).
- ❖ Install a specialized network firewall that is effectively managed to reduce the risk of unwanted access to your network or computer and only visit websites that are securely specified in your browser. Use Figure 2 antivirus software and check your computer regularly for viruses to keep it healthy.
- Log out of your online banking session before checking your email or accessing the web if you use the same computer or phone for online banking, email, and web browsing. Computer viruses are now disseminated through email attachments and websites, where merely uploading a picture is enough to install scripts that steal your online banking credentials (user ID and password) and prevent hackers from taking funds from your account. Maintain the most recent version of your antivirus program.
- ❖ Always use the actual operating system and paid antivirus, as opposed to a free trial or cracked version.
- ❖ If you have a computer that runs various operating systems (such as Ubuntu, DOS, or Windows), you'll need to install a separate antivirus program for each one.
- ❖ Without having to enter anything, create a strong password that is simple to remember. It's also a good idea to update it on a regular basis, including numbers, symbols, and capital letters wherever feasible.
- ❖ To improve security, change your password combination regularly.
- ❖ It is advisable to install a spyware detection tool.
- ❖ Before you start your online banking session, clear your browser cache to clear copies of web pages stored on your hard drive and check your browser for secure

- sessions (https or non-https). Avoid automatic login options that save your personal information.
- ❖ Finally, many survey respondents reported receiving a call from their mobile service provider or elsewhere claiming to have won a lottery ticket or a huge bonus for \$ 25 million. However, it is true that these callers want the customer's bank or credit card information to send large sums of money, and when someone is caught sharing their most private information, the scam happens when the customer sees the bank balance displayed there. Not good at all, this is shocking news for them. As a result, do not rely on such phone calls or emails. Cheated.
- ❖ When entering the secret code of your mobile wallet, try to hide your phone.
- Customer banking login sites and online account activities can be monitored and monitored using specialized software available in the market.
- ❖ The mobile banking application can use this technology to indicate various business logic issues, strange activities or illegal access for further investigation. An email or text notification informing the customer about suspicious behavior or a call from the bank for further investigation of the suspicious activity can be used for further investigation. On your phone, always activate location alerts and Gmail alerts.
- ❖ Another option to improve the security of the mobile banking application is to use secure digital authentication. Installing an electronic signature can help in a variety of industries, including e-commerce, decision centers and retail branches.
- This technology allows mobile devices to transfer large amounts of paperwork, allowing financial institutions to offer a variety of benefits to mobile banking customers. In particular, it eliminates fraud cases, thereby increasing the level of security.

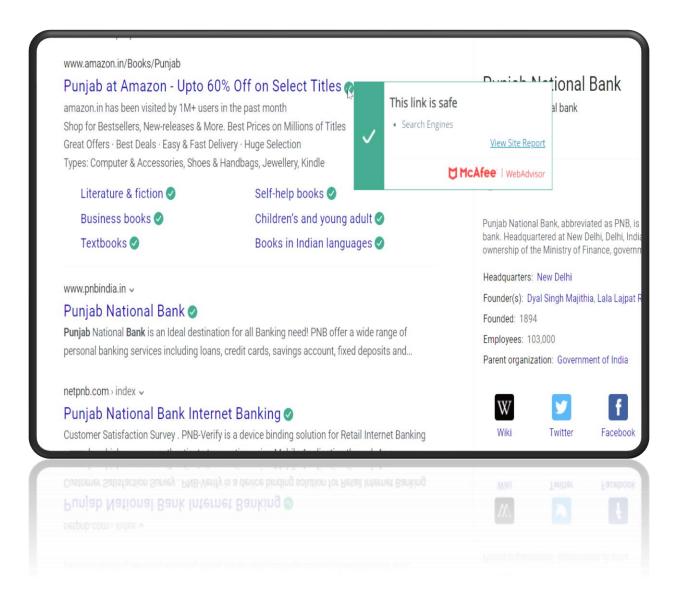


Figure 23

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7. ANNEXURE

Questionnaire -

Digital India

Data Innovation is steadily altering the banking business throughout the globe, thanks to the New and Transformed India. Banks have new possibilities and problems as a result of digital banking. What are the key success factors for digital banking adoption?

* Required

Name *

Your answer

Age *

15-23

23-30

30-38

38 & Above

Gender *

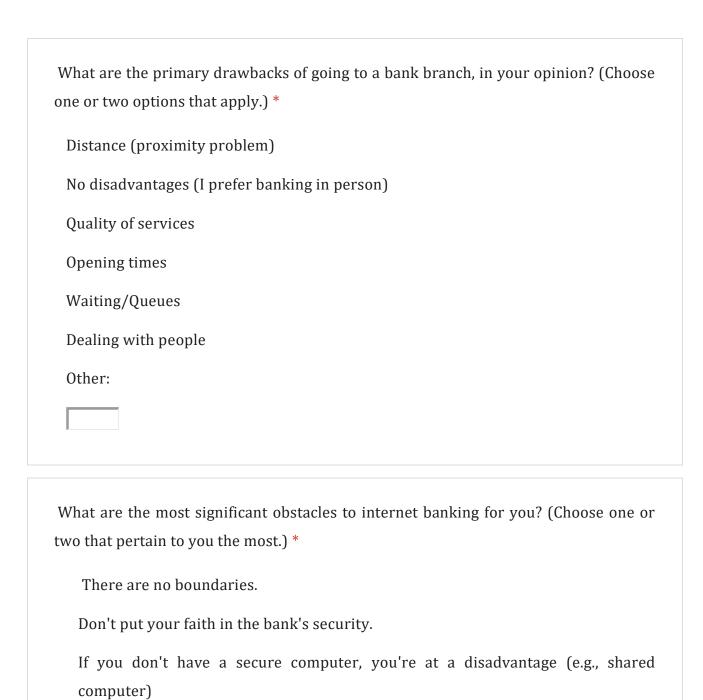
Male
Female
Others
Do you use Net Banking/Mobile Banking/Phone Banking/Mobile Wallets? *
Yes
No
Which Digital payments method have you used at least once? *
Paytm
Phone Pay
ВНІМ
Jio Money
Google Pay
Other:
Which online features do you use regularly? Please select them all. *
P2P Transfer
Transfer funds to other Accounts
Make Credit card payments
Download or view Account Statements

Make bill payments/Recharge
Merchant Purchase
View Mutual funds
Other:
What are the most important reasons you opted for Net Banking account? *
Convenience (24*7)
To save time
Safe & Secure
Easy to Maintain Daily Transactions
Other:
Why Did You Decide to offer/Accept Digital payments? *
Customer Demand
Competitor pressure
Market hype
Benefits & Discounts
Other:

How do you bank and how often? *
Yearly
Never
Weekly
Monthly
Banking in Person
Daily
Online Banking
Telephone Banking
Mobile Banking (via an app on your mobile phone)
Telephone Banking
Banking in Person
Online Banking
Mobile Banking (via an app on your mobile phone)
What kind of contact do you prefer with your bank? (You have a lot of options.)) *
online via smart phone
online via personal computer
visit to the bank

call centre

ATM



Don't like inputting data digitally (or leaving a data trail - big brother is keeping an

It's inconvenient (it takes too long/there are too many inquiries)

Not all services are available (egg Cheque Deposit)

eye on you!)

Internet Issues

Other:

Technology is tough to get by.

Which of the following apply to you? *

Yes

No

Do you believe that banking online makes your life easier?

Have you read the bank's security rules for online transactions? (This was sent to you or displayed to you electronically when you signed up for your account, and it's also accessible online.)

Have you ever lost money due to internet troubles or digital fraud (e.g., credit card theft, online bank account hacked)?

Have you ever had money stolen or lost?

Do you believe that banking online makes your life easier?

Have you read the bank's security rules for online transactions? (This was sent to you or displayed to you electronically when you signed up for your account, and it's also accessible online.)

Have you ever lost money due to internet troubles or digital fraud (e.g., credit card theft, online bank account hacked)?

Have you ever had money stolen or lost?

An examination of e-Payment (digital and online payment) systems as a whole. *

Disagree

Strongly Disagree

Agree

Electronic payment methods help you save time and money.

Electronic payment mechanisms are preferable than cash.

When utilizing e-Payment systems, a digital client must be aware of security concerns.

Consumers and merchants have more options when it comes to sending and receiving payments via e-Payment.

Users are unaware of the expenses of electronic payment transactions.

If your debit card is lost or stolen, you won't have any issues.

e-Payment systems are simple to understand and implement.

Electronic payment methods help you save time and money.

Electronic payment mechanisms are preferable than cash.

When utilizing e-Payment systems, a digital client must be aware of security concerns.

Consumers and merchants have more options when it comes to sending and receiving payments via e-Payment.

Users are unaware of the expenses of electronic payment transactions.

If your debit card is lost or stolen, you won't have any issues.

e-Payment systems are simple to understand and implement.

Occupation of the family's main source of income: *

Managerial/professional/administrative positions at a higher level

Intermediate management, professional, and administrative skills are required.

clerical/junior managerial/professional supervisory or clerical/junior managerial/professional

Manual labourer with extensive experience

Manual labor that is semi-skilled or unskilled

Unemployed or working on a part-time basis

Farmer with more than 50 acres and farm manager

Farmer with less than 50 acres, farm labor

what Feature or Change do you want in your favourite mobile wallets?

Your answer

A new transformation in the banking industry

by Harshit Chaturvedi

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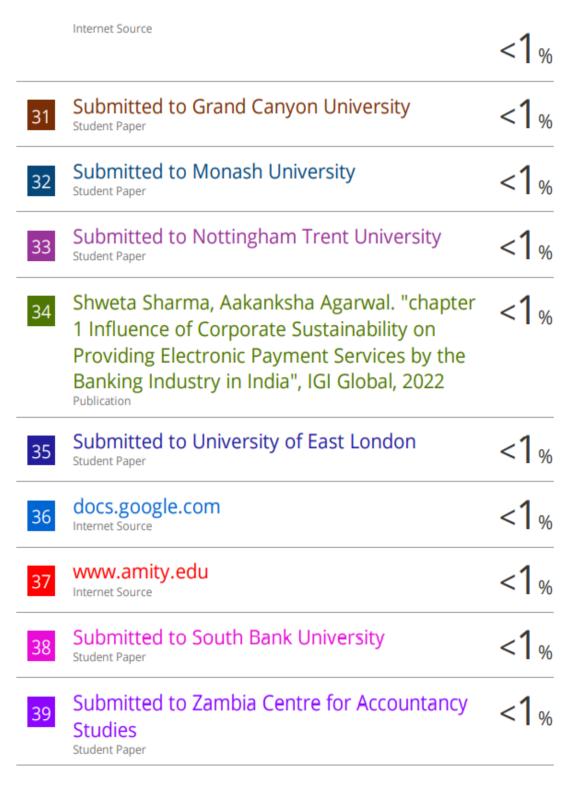
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