

**A STUDY OF CUSTOMER PERCEPTION TOWARDS DIGITAL  
BANKING SERVICES PROVIDED BY SELECTED PUBLIC  
SECTOR BANK IN CHENNAI (SBI, INDIAN BANK, CANARA  
BANK)**

Submitted in partial fulfillment of the requirements for the award of  
**MASTER OF BUSINESS ADMINISTRATION**

by  
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**DEPARTMENT OF BUSINESS ADMINISTRATION**  
**SCHOOL OF MANAGEMENT STUDIES**



**SATHYABAMA**

**INSTITUTE OF SCIENCE AND TECHNOLOGY  
(DEEMED TO BE UNIVERSITY)**

Accredited with Grade "A++" by NAAC | 12B Status by UGC | Category-1 university  
by UGC | Approved by AICTE

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### BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **HEMAND KRISHNA. R (42410161)** who carried out the Project entitled “**A STUDY OF CUSTOMER PERCEPTION TOWARDS DIGITAL BANKING SERVICES PROVIDED BY SELECTED PUBLIC SECTOR BANK IN CHENNAI (SBI, INDIAN BANK, CANARA BANK)**” under my supervision from October 2023 to December 2023.

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## DECLARATION

I **HEMAND KRISHNA.R (42410161)** here by declare that the Project Report entitled "**A STUDY OF CUSTOMER PERCEPTION TOWARDS DIGITAL BANKING SERVICES PROVIDED BY SELECTED PUBLIC SECTOR BANK IN CHENNAI (SBI, INDIAN BANK, CANARA BANK)**" done by me under the guidance of **DR.MOLI GHOSH** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

**DATE:**

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## ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my sincere thanks to **Dr. G. Bhuvaneswari, MBA., Ph.D., Dean - School of Management Studies** and **Dr. A. Palani, M.Com., M.Phil., M.B.A., Ph.D., - Head - School of Management Studies** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide **DR.MOLI GHOSH** for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **School of Management Studies** who were helpful in many ways for the completion of the Training.



**HEMAND KRISHNA. R**

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## **ABSTRACT**

The purpose of this study is to determine the customer's perception toward the digital banking services provided by selected public sector bank in Chennai. focusing on State Bank of India (SBI), Indian Bank, Canara Bank which were the largest public sector banks with numerous branches & ATMs and widespread customer base across states in India. A total number of 150 customer taken in the ratio of 50 from each bank for the study. Analysis of variance technique is employed to study the significant relationship between the Age of the customer and their perception toward the digital banking services and significant relationship between occupation of the customer and their perception towards digital banking services. The result of the study clearly shows that different age group of customer and different occupation group of customers have different perception toward the Digital banking services. The results also propose that demographic factors impact significantly the digital banking behaviour, specifically, occupation and age. Finally, this study underscores the importance of comprehending customers perceptions regarding the digital banking services offered by selected public banks. The insights gained from this study can significantly aid bankers in meeting customer needs more effectively, By understanding these perceptions, financial institutions can adapt and tailor their digital services to better align with customer expectations and requirements. This not only enhances customer satisfaction but also contributes to the overall improvement of digital banking experiences provided by the selected public banks.

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1. INTRODUCTION:**

The banking sector holds a pivotal role within an economy's financial system, serving as a vital pillar in creating and maintaining a robust payment infrastructure to meet the diverse needs of businesses, government entities, and the general public. Additionally, it functions as a means of delivering credit to those in need of financial resources. In essence, the banking sector forms the core of a nation's economic activities, making a strong and healthy banking system essential for overall economic growth.

Currently, the Indian banking sector is undergoing a profound transformation, characterized by an information technology (IT) revolution that is propelling it towards digitalization. The introduction of IT in the late 1980s marked a significant turning point, but the present phase of the IT revolution is even more dynamic and impactful. This transformation has the potential to not only reshape the banking landscape but also influence the broader economic structure and direction.

The modernization of the banking sector following the integration of IT and the internet has yielded benefits for both customers and banks. Banking transactions are no longer confined to physical branches but are accessible through hand held devices such as smart phones and tablets. This contemporary phase of banking can aptly be referred to as 'Digital Banking.' Familiar terms like 'E-banking,' synonymous with online banking, virtual banking, or internet banking, enable customers to perform a wide array of transactions, including fund transfers, loan payments, and cash deposits and withdrawals, all facilitated by the internet without the necessity of visiting physical bank branches.

Digital banking is often used interchangeably with these terms. Strictly speaking, digital banking implies the minimal use of paper currency, though paper currency remains in circulation. Automated Teller Machines (ATM's) continue to play a vital role in the banking system, facilitating cash withdrawals as needed. A digital economy is characterized by a significant reduction in cash transactions.

## **DIGITAL BANKING:**

Digital banking entails the transformation of traditional banking products, processes, and operations into digital formats, enabling customers to access these services through online channels. This digital shift encompasses various operations and activities, making it possible for customers to perform traditional banking functions 24/7 using mobile phones, computers, and other compatible smart devices, eliminating the need for physical presence at a bank branch. These activities encompass:

- Acquiring bank statements
- Withdrawing cash
- Transferring funds
- Managing checking and savings accounts
- Opening deposit accounts
- Handling loans
- Making bill payments
- Managing cheque
- Monitoring transaction records

Digital banking software significantly enhances the accessibility, comprehensibility, and manageability of these traditional services. This approach allows banks to experiment with lower-risk concepts before transitioning parts of their old legacy business to the new digital system.

Digital banking represents the full digitization of banking, spanning from the front-end customer interactions to the back-end operations. Consequently, digital banks leverage artificial intelligence to automate back-end tasks, including administrative duties and data processing, which reduces the burden on employees who would otherwise manage day-to-day operations. Beyond enabling remote account deposits and transfers, digital banks streamline the loan application process and offer personalized money management services, enhancing the overall customer experience.

## **HISTORY OF DIGITAL BANKING:**

The history of digital banking can be traced back to various key milestones. It began in 1960 with the launch of ATM and credit/debit cards. In 1994, Microsoft Money made bank accounts accessible to regular households. The groundwork for digital banking was laid in the 1980s with the emergence of the internet and early broadband, which connected retailers, suppliers, and consumers, leading to the development of early online catalogue and inventory software systems. In 1993, Temenos AG, a banking software system provider, was founded, setting the stage for future digital banking developments. In 1997 and 1998, digital-only banks were launched in Canada and the USA. By the 1990s, online banking started to become commonplace, and the early 2000s saw significant advancements with the improvement of broadband and e-commerce systems, leading to the modern digital banking landscape we know today. The proliferation of smart phones in the following decade opened the door for mobile transactions beyond traditional ATM. Over 60% of consumers now prefer using smart phones for digital banking.

The challenges for banks today revolve around meeting consumer demands for convenience and a seamless user experience. Customer Relationship Management (CRM) software plays a crucial role in fostering customer satisfaction and must be integrated into digital banking systems, enabling direct communication with customers. To stay competitive, banks need to continually enhance digital technology to provide agility, Scalability, and efficiency. This transition toward online banking has been driven by millennials and acquisitions by companies like Temenos of various competitors and mobile application leaders.

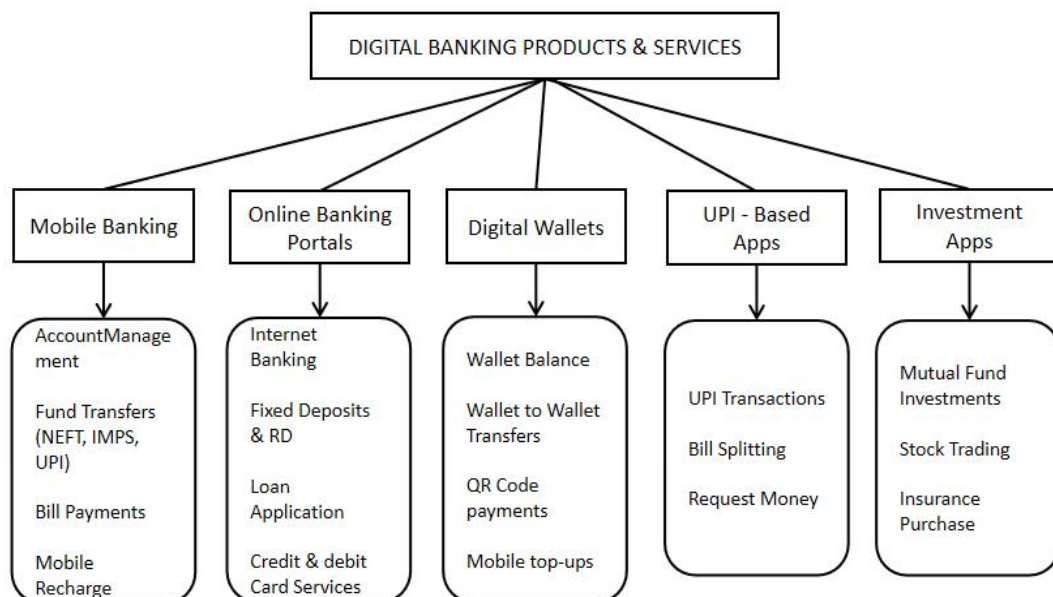
In India, the market regulator may introduce video-based verification to replace physical verification for Know Your Customer (KYC) processes. Additionally, several banks now offer digital savings accounts, similar to basic savings accounts but without the requirement to maintain a minimum balance, and these accounts come with virtual debit cards that can be converted into physical cards for added convenience.

## DIGITAL BANKING IN INDIA:

In India, the shift to electronic banking started in the late 1980s, with the Reserve Bank of India's committee on computerization setting the stage for automation. The liberalization of the Indian economy in 1991 expedited this process, leading to the adoption of Core Banking Solutions (CBS) and a transition from branch banking to bank banking.

Digital banking gained momentum after 2011, driven by smartphone sales, 4G internet services, and government initiatives like the United Payment Interface (UPI) in 2016. UPI facilitates instant fund transfers between different bank accounts using virtual addresses, symbolizing increased efficiency and reduced transaction costs. Digital banking has become the future of the banking sector, enhancing customer experiences and driving efficiency.

## DIGITAL BANKING PRODUCTS & SERVICES:



**FIG 1.1 Digital Banking Products & Services**

## **MOBILE BANKING:**

Mobile banking is a service provided by financial institutions, primarily banks, through their smart phone apps for conducting digital transactions. The advent of UPI and mobile wallets has significantly expanded the scope of mobile banking. This service empowers clients and users to execute a wide range of transactions, the specifics of which may vary between institutions. The convenience of mobile banking has been greatly enhanced with the proliferation of mobile applications. Clients can now effortlessly check their account balances, access digital bank statements, initiate fund transfers, and even make prepaid service purchases.

### **Mobile Banking Application:**

The mobile banking application is designed with user-friendliness and convenience in mind, offering customers the freedom to access a range of banking services via their mobile phones. Within various mobile banking applications, account holders have the option to engage in mobile-based conversations with bank representatives should they have any queries or doubts. Mobile banking proves to be beneficial to customers in several ways:

1. **Access to Account Information:** With mobile banking, account holders can readily access their account details and savings at any time and from anywhere. This empowers better fund management, allowing users to perform the following services:

- Check their account balance (balance inquiry)
- Review transaction history
- Access e-statements
- Obtain loan statements
- View card statements
- Access e-passbooks

2. **Financial Transactions:** The ability to make payments and transfer funds from one account to another represents the core banking activities. As a result, these services are the most practical and highly sought-after features of mobile banking.

3. **Investment Management Services:** Mobile banking applications enable clients to manage their investment portfolios or obtain real-time views of their investment holdings.

4. **Support Services:** Users can employ support services to check the status of their card requests, inquire about loan or credit facilities, follow up on their card applications, and locate nearby ATMs.

5. **Content and News:** These features are designed to provide financial information and the latest offers from banks and financial institutions, keeping customers informed about relevant financial content and updates.

## **ONLINE BANKING:**

Online banking, also known as internet banking, web banking, or home banking, is an electronic payment system that empowers customers of banks and other financial institutions to conduct a wide range of financial transactions through the institution's website. This online banking system is typically connected to or integrated into the core banking system operated by the institution, thereby granting customers access to banking services either in addition to or in lieu of traditional branch-based banking. The adoption of online banking leads to significant reductions in operating costs for the bank, as it lessens the dependence on a physical branch network. Simultaneously, it offers enhanced convenience to customers, reducing the necessity of visiting a branch bank and allowing banking transactions to be carried out even outside regular branch hours.

Key features of online banking include:

- **Online Account Statements:** Access and review account statements online.
- **Fixed Deposit Account Opening:** Open fixed deposit accounts through the online platform.
- **Utility Bill Payments:** Facilitate payments for utility bills like water and electricity.

- **Merchant Payments:** Make payments to various merchants through the online banking system.
- **Fund Transfers:** Transfer funds between accounts, both within and outside the financial institution.
- **Cheque Book Ordering:** Request the issuance of a new cheque book through the online interface.
- **General Insurance Purchases:** Explore and purchase general insurance products.
- **Mobile/DTH Recharge:** Recharge prepaid mobile and DTH (Direct-To-Home) services through the online platform.

### **INTERNET BANKING:**

Internet banking, also known as online banking, is the process of conducting banking transactions conveniently from the comfort of your home or office using a mobile phone, laptop, desktop, or any device with an active internet connection. It encompasses a wide range of banking activities and allows customers to manage their finances online. Internet banking services are accessible round the clock, 365 days a year, making it a popular choice for digital payments and financial management.

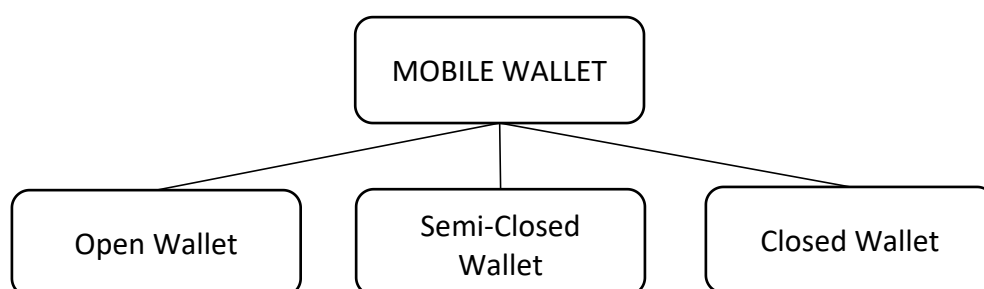
The features of net banking are:

- A secure and convenient method of banking
- Password – protected banking system
- Easy access to financial banking products/services
- Access your bank account anytime anywhere
- Track and manage bank balance, last transactions, statements, etc.
- Process bill payment quickly
- Transfer funds online via NEFT, RTGS, IMPS anytime
- Channelize or cancel automatic payments.

## MOBILE WALLET:

Mobile wallets stand as a popular payment alternative, enabling users to deposit money into a virtual wallet through debit or credit cards. The funds within this wallet are then used for conducting digital transactions. Essentially, a mobile wallet serves as a digital version of carrying cash. You have the option to connect your credit or debit card details to a mobile wallet application on your mobile device, or you can perform online transfers to fund your mobile wallet. This means you can make payments with your smart phone, tablet, or smart watch, instead of relying on physical plastic cards for purchases. To load money into the digital wallet, an individual's account needs to be linked. Many banks offer their own e-wallet solutions, and several private companies like Paytm, Airtel Money, and Jio Money provide similar services.

### Types of mobile wallet:



**FIG 1.2 Types of mobile wallet**

1. Open Wallets: Open wallets can be directly utilized by a bank or accessed through a third-party service. These wallets grant customers the freedom to use the funds stored in the mobile wallet for various transactions or even withdraw the deposited funds in the form of cash. A prime example of an open mobile wallet is PayPal, which permits users to make payments for both in-store and online purchases while also offering the option to withdraw the funds in cash.

2. Closed Wallets: Closed wallets are specifically associated with particular merchants. Users of closed wallets are limited to using the funds stored within for

making payments in transactions involving those specific merchants, as well as third-party service providers, or they can opt for cash withdrawals. An illustration of a closed wallet is Amazon Pay.

3. Semi-Closed Wallets: Semi-closed mobile wallets extend users the capability to employ the wallet funds for payments across multiple merchants, given that there exists a pre-existing agreement between the merchant and the mobile wallet provider. Users can also transfer funds to a bank account within the semi-closed wallet system. However, it's important to note that semi-closed wallets do not facilitate cash withdrawals.

## **TYPES OF DIGITAL PAYMENTS:**

### **BANKING CARDS:**

Banking cards deliver enhanced security, convenience, and control to consumers, surpassing many other payment methods. The extensive range of available cards, including credit, debit, and prepaid options, offers remarkable flexibility. These cards implement two-factor authentication methods, ensuring secure payments through mechanisms such as a secure PIN and OTP (One-Time Password). Examples of card payment systems encompass well-known names like Rupay, Visa, and MasterCard. Payment cards empower individuals to make purchases in physical stores, online, via mail-order catalogs, and even over the telephone. They not only streamline transactions but also save both customers and merchants valuable time and money, making the payment process notably convenient for all parties involved.

**Credit cards:** Credit cards are plastic cards, each bearing a unique identification number, that are issued by banks. These cards come equipped with a built-in black magnetic strip, which is used for reading the card's information through a card reader. Credit cards come with a predetermined spending limit, dictating the maximum amount a cardholder can use to purchase products or services. When a consumer makes a payment for a product or service using their credit card, the

bank essentially covers the cost on behalf of the cardholder to the seller. Subsequently, the customer is required to repay this amount to the issuing bank within a specified time frame. Banks charge credit card processing fees to customers for providing these credit card services. In essence, credit cards provide a convenient means for consumers to make purchases with the promise of repaying the bank at a later date, with fees associated with this service.

**Smart Cards:** The Smart cards, also known as Integrated Circuit Cards (ICCs), are similar in appearance to credit and debit cards but come with enhanced security features. What sets smart cards apart is their small microprocessor chips and embedded circuits, which enable the storage of information in an encrypted and highly secure manner. These cards have the capacity to store personal or work-related information in an encrypted form, which ensures the confidentiality and integrity of the data they contain.

To use a smart card, you typically need to input a Personal Identification Number (PIN) for authentication. Various types of smart cards are available, including:

- VISA Cash Cards
- Infosys Smart Card
- Metro Smart Cards
- State Bank Smart Payout Card

**Debit Cards:** It is like credit cards, are plastic cards issued by your bank. However, they differ in how they work. A debit card is directly linked to your bank account. When you use a debit card to make a purchase, the corresponding amount is immediately deducted from your bank account. For a transaction to be successful with a debit card, your bank account must have a sufficient balance. If there are insufficient funds, the payment will be declined with a message stating, "Insufficient funds in your account." In contrast to credit cards, where the bank temporarily covers the cost on your behalf and you repay it later, debit cards facilitate real-time payments by directly deducting the funds from your bank account at the time of the transaction. In India, debit cards have gained significantly more popularity when compared to credit cards. Several factors contribute to this preference for debit cards:

## **UNSTRUCTURED SUPPLEMENTARY SERVICE DATA (USSD):**

The innovative payment service \*99# operates through the USSD channel. This service facilitates mobile banking transactions using basic feature mobile phones, eliminating the need for mobile internet data connectivity. It aims to enhance financial inclusion by extending banking services to under banked communities. The \*99# service is designed to make banking accessible to every common individual in the country, offering a user-friendly and inclusive platform. To utilize \*99# services, banking customers can simply dial \*99# on their mobile phones. This code is a universal number available across all Telecom Service Providers (TSPs). Upon dialing, an interactive menu is displayed on the mobile screen, enabling users to perform various financial transactions. The key services offered under the \*99# service include interbank account-to-account fund transfers, balance inquiries, mini statements, and a range of other services.

The \*99# service is presently provided by 51 leading banks and is accessible through all GSM service providers. Additionally, it is available in 12 different languages, including Hindi and English (as of November 30, 2016, according to the National Payments Corporation of India - NPCI). \*99# is a unique interoperable direct-to-consumer service that brings together a diverse ecosystem of partners, including banks and Telecom Service Providers (TSPs), to create a more inclusive and accessible mobile banking platform.

## **AADHAAR ENABLED PAYMENT SYSTEM (AEPS):**

AEPS is a banking model that is initiated and operated by banks, providing a platform for online, interoperable financial transactions at points of sale (POS) or micro-ATMs, facilitated through business correspondents (BCs). AEPS offers a range of banking transactions that can be performed, including:

- Balance Inquiries: Checking the balance in one's bank account.
- Cash Withdrawal: Withdrawing cash from the bank account.
- Cash Deposit: Depositing cash into the bank account.
- Aadhaar to Aadhaar Fund Transfers: Transferring funds between two bank accounts based on Aadhaar verification.

## **UNIFIED PAYMENTS INTERFACE (UPI):**

The Unified Payments Interface (UPI) is a system that consolidates multiple bank accounts into a single mobile application provided by any participating bank. It seamlessly combines various banking functionality, facilitates smooth fund transfers, and enables merchant payments within a single platform. UPI also accommodates "peer-to-peer" collect requests, which can be scheduled and paid at the user's convenience. Each bank offers its UPI app for Android, Windows, and iOS mobile platforms. UPI is a contemporary digital payment standard that allows users with a bank account to transfer money to any other bank account using a UPI-based app. UPI transactions are available around the clock, every day of the year. Payments are processed using a Virtual Payment Address (VPA). To utilize UPI services, individuals need a bank account with a registered mobile number.

## **POINT OF SALE (POS):**

Point of Sale (POS) terminals are installed in retail shops or stores to enable payments for purchases using debit and credit cards. There are physical POS terminals and mobile POS solutions. Mobile POS eliminates the need for physical devices. On a macro scale, a POS can refer to a shopping mall, a market, or even an entire city. On a micro level, retailers consider a POS to be the specific location where a customer completes a transaction, such as a checkout counter. This is often referred to as the point of purchase.

## **ELECTRONIC CLEARING SERVICE (ECS):**

In the mid-1980s and early 1990s, the Reserve Bank of India (RBI) initiated various technological solutions for the banking system. One of these initiatives, introduced in 1990, was the ECS (Electronic Clearing Service) credit scheme designed to handle bulk and repetitive payment requirements, such as corporate salary disbursements, interest payments, and dividend distributions. To further streamline the ECS system, RBI introduced the ECS debit scheme, offering an expedited method for periodic and repetitive utility payment collections by companies. RBI consolidated these systems with the introduction of the National

Electronic Clearing Service (NECS) and the Regional Electronic Clearing Service (RECS). These services have played a significant role in automating and simplifying various payment processes for businesses and institutions.

### **NATIONAL ELECTRONIC FUNDS TRANSFER (NEFT):**

NEFT (National Electronic Funds Transfer) is a payment system in India operated by the Reserve Bank of India (RBI). It is part of the Centralized Payment System and connects 222 member banks and their branches. NEFT allows for versatile fund transfers with no specific amount limits. In December 2019, it became a 24/7 service as part of RBI's Payment System Vision. It operates in half-hourly batches, providing continuous availability. Users can transfer funds for various purposes, including buying goods, paying bills, and settling dues. NEFT combines features of both retail and large-value payment systems, offering round-the-clock transfers. Member banks maintain accounts with RBI for settlements and have access to liquidity facilities. Positive confirmation messages are sent for successful transactions. NEFT plays a crucial role in India's payment infrastructure, ensuring accessibility, security, and affordability for fund transfers.

### **IMMEDIATE PAYMENT SERVICE (IMPS):**

IMPS is a 24/7 "fast payment" system introduced in 2010. India was the fourth country, following South Korea, the UK, and South Africa, to implement such a payment system. The IMPS system allows for real-time fund transfers between the sender and the beneficiary, with a deferred net settlement between banks. It facilitates push transactions and has a per-transaction limit of ₹2 lakh. IMPS is a multichannel system accessible through mobile devices, ATMs, internet banking, bank branches, and business correspondents (BCs). Apart from banks, the system permits non-bank entities, such as Prepaid Payment Instrument (PPI) issuers, to participate and facilitate remittances from digital wallets to recipient bank accounts. Initially, both the remitter and beneficiary needed to be registered for mobile banking, which limited growth. Consequently, the system was enhanced to enable fund transfers using other parameters, such as the recipient's account number and IFSC (similar to NEFT), or by using a bank account-linked Aadhaar number.

## FEATURES OF DIGITAL BANKING SERVICES:

Digital banking services offer a wide range of features and benefits that make managing your finances more convenient and accessible. These features can vary by institution and region, but here are some common features of digital banking services:

- **Online Account Access:** Access to your bank accounts 24/7 through a secure website or mobile app.
- **Account Management:** View account balances, transaction history, and statements.
- **Funds Transfer:** Transfer money between your accounts, pay bills, and send money to other individuals or businesses electronically.
- **Mobile Banking:** Access your accounts, make transactions, and manage your finances using a mobile app on your smartphone or tablet.
- **Remote Check Deposit:** Use your mobile device's camera to deposit checks by taking a picture of the front and back of the check.
- **Bill Pay:** Schedule and pay bills electronically, often with the option to set up recurring payments.
- **Account Alerts:** Receive notifications via email or text message for various account activities, such as low balances or large transactions.
- **Personal Finance Tools:** Tools and calculators to help you budget, track expenses, and save money.
- **E-Statements:** Electronic versions of your account statements that can be accessed online or via email.
- **Account Linking:** Connect external financial accounts to get a consolidated view of your finances.
- **Security Features:** Multi-factor authentication, encryption, and fraud monitoring to keep your accounts secure.
- **Customer Support:** Access to customer support through chat, email, or phone, often available 24/7.
- **ATM Locator:** Find nearby ATMs or branches for cash withdrawals.
- **Investment and Wealth Management:** Access to investment and wealth management services, including trading and portfolio management.

- **Credit Services:** Monitor credit scores, apply for loans, and access credit-related information.
- **Customization:** Some digital banking services allow you to customize your app or online dashboard to suit your preferences.
- **Contact less Payments:** Use digital wallets or contact less payment methods like Apple Pay, Google Pay, or Samsung Pay for in-store and online purchases.
- **P2P Payments:** Send and receive money from friends and family easily through peer-to-peer payment options like Venmo, PayPal, or Zelle.
- **International Banking:** Access foreign exchange and international money transfer services for cross-border transactions.
- **Rewards and Loyalty Programs:** Earn rewards, cashback, or discounts for using specific digital banking services and associated credit or debit cards.

## **DIGITAL BANKING RISKS:**

While digital banking has brought numerous benefits to the financial industry, there are several risks and challenges that must be considered. Managing and mitigating these risks is essential for the continued growth and success of digital banking while providing a secure and convenient experience for customers.

**Operational Risk:** This is the most common risk in e-banking and includes various transactional risks. It encompasses issues such as incorrect transaction processing, compromise of data integrity and privacy, unauthorized access to the bank's systems, and challenges related to contract enforceability. Operational risks can stem from technological errors, human negligence (both customers and employees), employee fraud, and external threats like hackers.

**Security Risk:** Ensuring the security of banking transactions is crucial. Customers expect their transactions to be confidential. However, with all information online, there is a risk that unauthorized parties could access and misuse data. Security risks in e-banking include hacking threats and unauthorized access to the bank's systems.

**Money Laundering Risk:** E-banking transactions are conducted remotely, making it challenging for banks to use traditional methods to detect and prevent criminal activities like money laundering. While there are rules in place for electronic payments, their effectiveness can be questionable, exposing banks to money laundering risks.

**Strategic Risk:** This risk pertains to issues related to business planning, resource availability, the credibility of vendors in the case of outsourced activities, the impact of changes in the work environment on employees, and the level of technology used in comparison to available technology. Strategic risk management is crucial for the success of e-banking operations.

**Reputation Risk:** Reputation risk is particularly important for any business. In e-banking, a failure to meet customer expectations or perform critical functions can lead to a loss of reputation. Reputation risks include security breaches, misinforming customers about e-banking processes and policies, and communication issues that hinder customer access to accounts.

**Legal Risk:** Legal risk arises when there are violations of laws, regulations, or established practices, or when the legal rights and obligations of the parties involved in a transaction are unclear. E-banking is relatively new, and there is often uncertainty and ambiguity surrounding certain laws and rules, increasing legal risk.

**Other Risks:** Many of the risks present in traditional banking, such as credit risk, interest rate risk, liquidity risk, and market risk, also exist in e-banking. However, in e-banking, these risks can be amplified due to the use of electronic channels and the absence of geographical boundaries.

## **1.2 INDUSTRY PROFILE:**

The Indian banking sector is currently experiencing a profound transformation driven by an information technology (IT) revolution that is steering it toward digitalization. While the introduction of IT in the late 1980s marked a pivotal moment, the current phase of the IT revolution is even more dynamic and impactful. This transformation not only has the potential to reshape the banking landscape but also to influence the broader economic structure and direction.

The modernization of the banking sector, spurred by the integration of IT and the internet, has yielded benefits for both customers and banks. Banking transactions are no longer confined to physical branches but are accessible through hand held devices such as smart phones and tablets. This contemporary phase of banking is commonly referred to as 'Digital Banking.' Terms like 'E-banking,' synonymous with online banking, virtual banking, or internet banking, enable customers to perform a wide array of transactions, including fund transfers, loan payments, and cash deposits and withdrawals. All these transactions are facilitated by the internet, eliminating the necessity of visiting physical bank branches.

### **Market conditions**

The digital banking market in India has experienced rapid growth due to factors like increased smart phone penetration, improved internet connectivity, and governmental efforts to promote a cashless economy. The Unified Payments Interface (UPI) has revolutionized digital transactions, enabling seamless money transfers. Popular mobile wallets and payment apps such as Paytm, PhonePe, and Google Pay have gained widespread popularity. Government initiatives like Digital India and demonetization have fueled the adoption of digital banking services, leading to substantial growth in the fintech sector. Challenges include cyber security concerns and the need for continuous technological upgrades. The market is competitive, with traditional banks and fintech firms vying for market share through digital transformation and innovation.

## **Opportunity and development**

The digital banking sector in India is undergoing dynamic developments, with opportunities emerging in areas such as fintech collaborations, AI integration, block chain exploration, and digital lending. Open banking initiatives, cyber security measures, and a focus on financial inclusion are notable trends. Regulatory developments, including guidelines from the Reserve Bank of India, play a crucial role. Customer-centric innovations, such as user-friendly interfaces and personalized services, are priorities for banks. The potential introduction of 5G technology is expected to further enhance digital banking capabilities.

## **Market Challenges**

Public sector banks in India encounter a set of challenges and opportunities in their journey toward digital transformation. Challenges include dealing with legacy systems, addressing cyber security concerns, and keeping up with the rapid evolution of technology. Operational efficiency, technology adoption, management of non-performing assets (NPAs), and competition from private sector banks and non-banking financial institutions also pose significant challenges.

## **Government initiatives**

Initiatives such as Digital India and Pradhan Mantri Jan Dhan Yojana, have been pivotal in motivating public sector banks to adopt digital services in India. These initiatives focus on integrating more individuals into the formal banking system and fostering the widespread use of digital transactions.

## **Regulatory Framework**

The regulatory framework for public sector banks in India is overseen by the Reserve Bank of India (RBI). Operating within this framework, public sector banks are subject to guidelines set by the RBI to ensure the stability, security, and efficiency of the banking sector. The RBI plays a crucial role in regulating digital banking services, regularly updating regulations to align with technological advancements and maintain the security and stability of the financial system. As the digital banking landscape evolves, the RBI continues to introduce measures to govern these services.

## 1.3 COMPANY PROFILE:

### **SBI - State Bank Of India**

The State Bank of India, popularly known as SBI is one of the leading banks in India. The State Bank Group, with over 16,000 branches provides a wide range of banking products through its vast network of branches in India and overseas, including products aimed at Non-Resident Indians (NRIs).



The headquarter of SBI is at Mumbai. SBI has 14 Local Head Offices and 57 Zonal Offices that are located at important cities throughout the country. It also has around 130 International branches out of the country. It has a market share among Indian commercial banks of about 20% in deposits and loans. The roots of the State Bank of India rest in the first decade of 19th century, when the Bank of Calcutta later on renamed the Bank of Bengal, was established on 2 June 1806.

The Bank of Bengal was one of three Presidency banks, the other two being the Bank of Bombay (incorporated on 15 April 1840) and the Bank of Madras (incorporated on 1 July 1843). With the result of the royal charters all three Presidency banks were incorporated as joint stock companies and received the exclusive right to issue paper currency in 1861 with the Paper Currency Act. They retained this right till the formation of the Reserve Bank of India.

The Presidency banks amalgamated on 27 January 1921, and renamed Imperial Bank of India. The Imperial Bank of India remained a joint stock company. The State Bank of India was constituted on 1st July 1955, pursuant to the State Bank of India Act, 1955 (the "SBI Act") for the purpose of creating a state-partnered and state-sponsored bank integrating the former Imperial Bank of India.

In 1959, the State Bank of India (Subsidiary Banks) Act was passed, enabling the Bank to take over eight former state associated banks as its subsidiaries. The State Bank of India's is largest bank, with approximately 9,000 branches in India and 54 international offices. Its Associate Banks have a domestic network of around 4,600 branches, with strong regional ties. The Bank also has subsidiaries and joint ventures outside India, including Europe, the United States, Canada, Mauritius, Nigeria, Nepal, and Bhutan. The Bank has the largest retail banking customer base in India.

**VISION:** Be The Bank Of Choice For a Transforming India

**MISSION:** Committed To Providing Simple, Responsive And Innovative Financial Solution

**VALUES:**

1. **S** - Service
2. **T** - Transparency
3. **E** - Politeness
4. **P** - Sustainability

| S.NO | SUBSIDIARIES/JOINT VENTURES                                |
|------|------------------------------------------------------------|
| 1.   | SBI LIFE INSURANCE COMPANY LIMITED (SBI LIFE)              |
| 2.   | SBI GENERAL INSURANCE COMPANY LIMITED (SBI GENERAL)        |
| 3.   | SBI CARDS AND PAYMENT SERVICES LIMITED (SBICPSL)           |
| 4.   | SBI FUNDS MANAGEMENT LIMITED(SBIFML)                       |
| 5.   | SBI CAPITAL MARKETS LIMITED ( SBICAPS)                     |
| 6.   | SBICAP Securities Ltd (SSL)                                |
| 7.   | SBI Payment Services Pvt Ltd. (SBI Payments)               |
| 8.   | SBIPENSION FUNDS PRIVATE LIMITED                           |
| 9.   | STATE BANK OPERATIONS SUPPORT SERVICES PVT. LTD. (SBOSS)   |
| 10.  | SBI SG GLOBAL SECURITIES SERVICES PRIVATE LIMITED (SBI SG) |

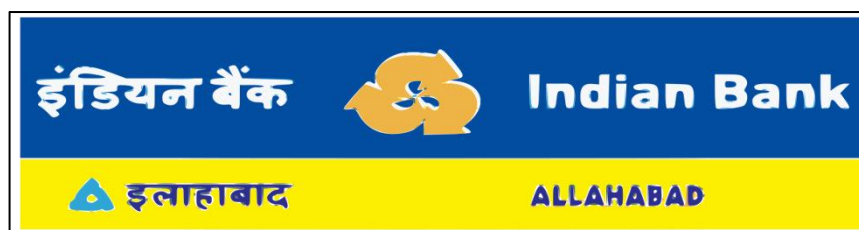
**TABLE 1.1 Subsidiaries & Joint Ventures of SBI**

## AWARDS & ACHIEVEMENTS:

- ✓ SBI honored with India's Best Annual Report Awards-2022 by Free Press Journal.
- ✓ SBI honored with three Gold Awards at ET Human Capital Awards
  - HR Leader of the Year - Large Scale Organization
  - Excellence in Business Continuity Planning & Management
  - Most Valuable Employer During COVID-19
- ✓ SBI won two Awards from NASSCOM -DSCI
  - Best Security Operations Centre of the Year
  - Cyber Security Awareness
- ✓ Gold & Silver awards in The ET HR World Future Skill Awards
- ✓ SBI awarded "Issuer of the Year - Private Placement" at the 5th National Summit & Awards on Corporate Bond Market 2022 by ASSOCHAM
- ✓ SBI won Gold category in Public Sector Bank in Outlook Money Awards 2022.

## INDIAN BANK:

Indian Bank, established in 1907 and headquartered in Chennai, Indian Bank is a leading public sector bank in India. With an extensive presence, it serves over 100 million customers through 5,814 branches, 4,929 ATMs, and Cash deposit machines. As of March 31, 2023, the bank's total business has reached ₹1,094,752 crore (US\$140 billion). It has a global footprint with branches in Colombo and Singapore, along with Foreign Currency Banking Units in Colombo and Jaffna. The Government of India has owned the bank since 1969. Following a merger with Allahabad Bank on April 1, 2020, as announced by Finance Minister Nirmala Sitharaman, Indian Bank became the seventh largest bank in the country.



**VISION:**

“Delivering excellence in financial services through customer focus, employee engagement and sustainable growth.”

**MISSION:**

- Bring the best of innovation and technology in our offerings
- Be responsive to the unique needs of every customer through all channels of choice
- To provide value to stakeholders
- Empower and engage our employees

**PROFILE OF THE INDIAN BANK:**

|                                    |                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Industry</b>                    | Banking, Financial services                                                                                                                                                                                                                                                                                                                         |
| <b>Established</b>                 | 15 August 1907; 116 years ago                                                                                                                                                                                                                                                                                                                       |
| <b>Founder</b>                     | S. Rm. M. Ramaswami Chettiar                                                                                                                                                                                                                                                                                                                        |
| <b>Headquarters</b>                | Chennai, India                                                                                                                                                                                                                                                                                                                                      |
| <b>Number of Locations</b>         | <ul style="list-style-type: none"> <li>• 5,815 branches</li> <li>• 2,964 ATMs</li> <li>• 1,772 BNAs</li> </ul>                                                                                                                                                                                                                                      |
| <b>CEO &amp; Managing Director</b> | Shanti Lal Jain (MD & CEO)                                                                                                                                                                                                                                                                                                                          |
| <b>Products &amp; Services</b>     | <ul style="list-style-type: none"> <li>• Consumer Banking</li> <li>• Corporate Banking</li> <li>• Finance and Insurance</li> <li>• Mortgage Loans</li> <li>• Investment banking</li> <li>• Merchant banking</li> <li>• Private equity</li> <li>• Private banking</li> <li>• Savings</li> <li>• Wealth management</li> <li>• Credit cards</li> </ul> |
| <b>Financial Revenue (2023):</b>   | ₹52,085 crore (US\$6.5 billion) (Increase)                                                                                                                                                                                                                                                                                                          |
| Operating income                   | ₹15,271 crore (US\$1.9 billion) (Increase)                                                                                                                                                                                                                                                                                                          |
| Net income                         | ₹5,282 crore (US\$660 million) (Increase)                                                                                                                                                                                                                                                                                                           |
| Total assets                       | ₹710,500.73 crore (US\$89 billion) (Increase)                                                                                                                                                                                                                                                                                                       |
| Ownership                          | Government of India (79.86%)                                                                                                                                                                                                                                                                                                                        |
| <b>Number of Employees</b>         | 41,645 (2023)                                                                                                                                                                                                                                                                                                                                       |
| <b>Subsidiaries</b>                | <ul style="list-style-type: none"> <li>• Ind Bank Merchant Banking Services Limited</li> <li>• Ind Bank Housing Limited</li> </ul>                                                                                                                                                                                                                  |
| <b>Capital Ratio</b>               | 16.49%                                                                                                                                                                                                                                                                                                                                              |

**TABLE 1.2 Company profile of the Indian bank**



## EVOLUTION OF INDIAN BANK:

|             |                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1907</b> | <ul style="list-style-type: none"> <li>✓ The bank received its incorporation on March 5, 1907, with an authorized capital of Rs 20 lakhs, officially commencing business on August 15, 1907.</li> <li>✓ In 1907, the Indian Bank Ltd. adopted the 'Banyan' tree as its emblem, symbolizing comprehensive progress, widespread growth, and ever-increasing prosperity.</li> </ul> |
| <b>1921</b> | ✓ The bank increased its capital from Rs 20 lakhs to Rs 60 lakhs.                                                                                                                                                                                                                                                                                                                |
| <b>1932</b> | <ul style="list-style-type: none"> <li>✓ The bank marked its Silver Jubilee.</li> <li>✓ It initiated its first overseas operations in Colombo.</li> </ul>                                                                                                                                                                                                                        |
| <b>1941</b> | ✓ The Singapore branch was established.                                                                                                                                                                                                                                                                                                                                          |
| <b>1957</b> | ✓ The bank celebrated its Golden Jubilee.                                                                                                                                                                                                                                                                                                                                        |
| <b>1967</b> | ✓ The Diamond Jubilee was commemorated.                                                                                                                                                                                                                                                                                                                                          |
| <b>1978</b> | ✓ Approval was granted for the bank's logo featuring three circling arrows around a central point.                                                                                                                                                                                                                                                                               |
| <b>1982</b> | ✓ The Platinum Jubilee was celebrated.                                                                                                                                                                                                                                                                                                                                           |
| <b>1990</b> | ✓ The Bank of Thanjavur Ltd. (BoT) with 157 branches amalgamated with the bank.                                                                                                                                                                                                                                                                                                  |
| <b>2006</b> | ✓ The bank underwent an Initial Public Offer in February.                                                                                                                                                                                                                                                                                                                        |
| <b>2007</b> | ✓ The bank underwent an Initial Public Offer in February.                                                                                                                                                                                                                                                                                                                        |
| <b>2008</b> | ✓ The bank achieved 100 percent Core Banking Solutions (CBS) compliance.                                                                                                                                                                                                                                                                                                         |
| <b>2019</b> | <ul style="list-style-type: none"> <li>✓ Tamil Nadu Grama Bank' commenced operations on April 1, 2019, following a successful amalgamation of Pandyan Grama Bank of Indian Overseas Bank with the bank's Pallavan Grama Bank.</li> <li>✓ The Government of India announced the amalgamation of Allahabad Bank, a bank with a 155-year legacy, into Indian Bank.</li> </ul>       |
| <b>2020</b> | ✓ The bank began its operation as an amalgamated entity from April 1, 2020. The integration of CBS systems from both banks was completed on February 14, 2021.                                                                                                                                                                                                                   |
| <b>2022</b> | ✓ The bank's Global Business surpassed Rs 10 lakh Crores.                                                                                                                                                                                                                                                                                                                        |
| <b>2023</b> | ✓ The bank's Global Business reached Rs 10.95 lakh Crores.                                                                                                                                                                                                                                                                                                                       |

**TABLE 1.3 Evolution of Indian bank**

## CANARA BANK:



Canara Bank, renowned for its customer-centric approach, was established in July 1906 by Shri Ammembal Subba Rao Pai, a visionary and philanthropist, in Mangalore, a small port town in Katakana. Over the course of its century-long existence, the bank has experienced significant growth and transformation.

Following its nationalization in 1969, Canara Bank achieved national prominence, expanding its geographical reach and clientele segments. The 1980s marked a period of diversified business for the bank. In June 2006, the bank celebrated a century of operations in the Indian banking industry.



### VISION:

To emerge as the Best Bank to Bank with by pursuing industry benchmarks in profitability, operational efficiency, asset quality, risk management and digital innovation.

### MISSION:

To provide State-of-the-Art Banking solutions, leveraging technology, aiding Ease of Doing business and enhancing value for all stakeholders through inclusive growth.

## PROFILE OF CANARA BANK:

|                                    |                                                                                                                                                                                                                                               |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Industry</b>                    | Banking and Financial services                                                                                                                                                                                                                |
| <b>Founder</b>                     | Shri Ammembal Subba Rao Pai                                                                                                                                                                                                                   |
| <b>Established in</b>              | 1906                                                                                                                                                                                                                                          |
| <b>Headquarters</b>                | Bengaluru, India                                                                                                                                                                                                                              |
| <b>Number of Locations</b>         | <ul style="list-style-type: none"><li>• 9,518 Branches</li><li>• 13,423+ ATMs (2023)</li></ul>                                                                                                                                                |
| <b>CEO &amp; Managing Director</b> | K Satyanarayana Raju                                                                                                                                                                                                                          |
| <b>Non-Executive Chairman</b>      | Vijay Srirangan                                                                                                                                                                                                                               |
| <b>Products &amp; Services</b>     | <ul style="list-style-type: none"><li>• Asset management</li><li>• Commercial banking</li><li>• Credit cards</li><li>• Investment banking</li><li>• Mortgages</li><li>• Pensions</li><li>• Private banking</li><li>• Retail banking</li></ul> |
| <b>Revenue</b>                     | ₹111,209.76 crore (US\$14 billion) (Increase)                                                                                                                                                                                                 |
| <b>Operating income</b>            | ₹27,974.28 crore (US\$3.5 billion) (Increase)                                                                                                                                                                                                 |
| <b>Net income</b>                  | ₹10,807.80 crore (US\$1.4 billion) (Increase)                                                                                                                                                                                                 |
| <b>Total assets</b>                | ₹1,381,029.56 crore (US\$170 billion) (Increase)                                                                                                                                                                                              |
| <b>Ownership</b>                   | Government of India (62.93%)                                                                                                                                                                                                                  |
| <b>Number of Employees</b>         | 86,919 (March 2022)                                                                                                                                                                                                                           |
| <b>Capital Ratio</b>               | 13.36%                                                                                                                                                                                                                                        |

**TABLE 1.4 Company profile of Canara bank**

## SUBSIDIARIES/JOINT VENTURES

- CANBANK FACTORS LIMITED
- CANARA ROBECO ASSET MANAGEMENT COMPANY LIMITED
- CANBANK FINANCIAL SERVICES LIMITED
- CANARA BANK SECURITIES LIMITED
- CANBANK COMPUTER SERVICES LIMITED
- CAN FIN HOMES LIMITED
- CANBANK VENTURE CAPITAL FUND LIMITED
- Canara HSBC Life Insurance Company Limited
- HEFA - Higher Education Financing Agency
- Andhra Pragathi Grameena Bank
- Karnataka Gramin Bank
- Kerala Gramin Bank
- Karnataka Vikas Grameena Bank

## **1.4 STATEMENT OF THE PROBLEM**

In the age of digital transformation within the banking sector, the adoption and perception of digital banking services play a crucial role in shaping the success and competitiveness of financial institutions. This study is designed to address the following key areas regarding customer perception, and customer satisfaction towards digital banking services and challenges faced by the customer while using digital banking provided by three major public sector banks in Chennai - State Bank of India (SBI), Indian Bank, and Canara Bank.

## **1.5 OBJECTIVE OF THE STUDY**

- To understand the concept of digital banking services.
- To study and identifying the overall customer perception towards the digital banking services in selected public bank (State Bank of India (SBI), Indian Bank, and Canara Bank) in Chennai.
- To analyses degree of satisfaction of consumers towards digital banking services.
- To identify the problems faced by the customer while using digital banking services.

## **1.6 SCOPE OF THE STUDY**

This research focuses on studying the customer perceptions of digital banking services offered by 3 major public sector banks in Chennai: State Bank of India (SBI), Indian Bank, and Canara Bank. The study, conducted exclusively in Chennai, aims to understand customer attitudes, service satisfaction levels, and challenges faced during digital banking usage. It includes an analysis of adoption patterns, security concerns, and the effectiveness of communication strategies. The study aims to provide actionable recommendations for refining digital banking services and fostering a more customer-centric approach in Chennai.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 REVIEW OF LITERATURE

**Rajesh Kumar Srivastava's (2007)** study validates the internet banking model, emphasizing factors affecting non-usage. Findings from 500 bank customers show education, gender, and income significantly impact adoption. The study highlights the need for skill enhancement and reveals minimal effects of inhibitory factors like trust and security on consumer attitudes.

**Neha Dixit (2010)** research investigates the acceptance of e-banking services among Indian adult customers, highlighting factors such as security, privacy, trust, innovative, familiarity, and awareness. With 200 respondents aged 35 and above, the study utilizes statistical analyses to demonstrate that, despite security concerns, adult customers are open to adopting online banking with appropriate guidance from banks. The results suggest market segmentation based on age groups and recommend that banks offer necessary guidance to facilitate the adoption of online banking services.

**Berndt's (2010)** quantitative research assessed customers' readiness for new banking technology adoption. Findings showed optimism and innovation as significant drivers, while discomfort and insecurity acted as inhibitors in determining technology readiness. The majority of respondents embraced modern technology, but a portion hesitated. The study recommends banks educate and enhance services to cater to all customers' needs and facilitate the adoption of new banking technology.

**Himani Sharma's (2011)** study surveyed 192 bankers in Northern India, exploring their perspectives on e-banking. Findings revealed customers primarily engage in e-banking due to bankers' influence, with the user base comprising professionals, the business class, and middle-aged males. Bankers expressed confidence in e-banking's ability to enhance relationships and improve overall bank performance.

**Vijay M. Kumbhar (2011)** research paper, titled "Factors Affecting Customer Satisfaction in E-Banking: Some Evidences from Indian Banks," explores key factors, including service quality, brand perception, and perceived value, that impact customer satisfaction in the context of e-banking services. The study also assesses the interplay between service quality, brand perception, perceived value, and overall satisfaction within the e-banking service environment.

**Ayed AL-Muala's (2012)** study investigated factors influencing individuals' adoption of internet banking services in Jordan, utilizing the Theory of Reasoned Action (TRA). The study involved 700 employees of Jordanian public universities who used internet banking services. Confirmatory Factor Analysis and structural equation modeling were applied, highlighting the TRA model's robust predictive capacity. The results indicated a significant correlation between customers' attitudes, subjective norms, and their intention to adopt Internet Banking Service Adoption (IBSA).

**Mohd Shoki Md Ariff's (2013)** study examines the relationship between e-Service Quality (e-SQ), e-Satisfaction, and e-Loyalty in internet banking. It identifies key e-SQ elements, including website aesthetics, efficiency-system availability, and contact-responsiveness. The study, based on 265 users of a Malaysian commercial bank, emphasizes the crucial role of visual appeal and effective guidance on bank websites in shaping user satisfaction and loyalty in internet banking.

**Ihab Eli Ei-Qirem (2013)** conducted a study to assess the influence of critical factors on the adoption of E-banking services. The study aimed to gather primary data from a convenient sample of 3000 respondents. The proposed model suggested that various factors, including effort expectancy, convenience, accessibility, quick service delivery, security, privacy, trust, content design, and the simplicity of the banking website, as well as anxiety, lack of reliability, fees and charges, and E-service quality, had a direct impact on the behavioral intention to adopt financial services.

**Fozia's (2013)** survey, involving 196 participants, explored perceptions of e-banking services. The analysis revealed notable relationships between occupation and customer perceptions, as well as age and customer views on e-banking. The study highlighted distinct perceptions across age groups and occupations, emphasizing the influence of demographic factors on internet banking behavior. It concluded by recommending a deeper understanding of customer perceptions, aiding banks in meeting customer needs, particularly in both public and private banking sectors.

**Lilesh Gautam and Sanjeev Kumar Khare (2014)** identified primary challenges in e-banking: Technological Issues, Security Issues, and Implementation Issues, including sub-segments like Security, Privacy, Authentication, and Divisibility within Technological Issues. To retain and attract customers, addressing these concerns is crucial. Simplifying processes and providing customer training are recommended strategies to minimize challenges in e-banking.

**Trivedi (2014)** report on banking services, particularly the impact of online banking on customer retention at HDFC Bank, revealed crucial findings. Gaurang's research highlighted that internet banking influences customer loyalty through variables such as quality of service, responsiveness, privacy protection, reliability, and trustworthiness at HDFC Bank.

**Dao, Phuong Nam (2014)** investigates the implementation of e-banking services in Vietnam, focusing on motivations and challenges. Employing a deductive approach and qualitative methods such as semi-structured interviews, the study finds that the main reasons for adopting e-banking are to improve customer satisfaction and broaden the market. Nevertheless, challenges arise from customer hesitancy due to limited knowledge and an underdeveloped infrastructure.

**Fink and Beck (2015)** assert that internet banking websites should offer interactive platforms specifically designed for senior citizens to eliminate the need for external assistance. In parts of Somalia, awareness was initiated through religious leaders. The identified research gap suggests that previous studies

mainly focused on providing observations or personal solutions, whereas this study aims to use an economic theory to explain the impact of teaching internet banking to senior citizens.

**Frost & Sullivan (2015)** conducted research on SunTrust Bank, revealing that over 100 million individuals, nearly 40 percent of mobile users, are expected to use mobile banking by 2020. The appeal of mobile banking is its convenience, providing flexibility for users to access accounts anytime and anywhere. Financial writer Kimberly Palmer highlights the ease of monitoring spending, enabling users to review their accounts frequently with online and mobile banking.

**Kevin Ogonji Harris Muluka (2015)** studied the impact of digital banking on customer satisfaction at the National Bank of Kenya in Bungoma County. Factors like transaction speed, accessibility, adaptability, and affordability were assessed. With a sample size of 417, the study found positive correlations between transaction speed, accessibility, and adaptability with customer satisfaction. Affordability, however, showed a negative correlation. The study recommends strategic investments in robust systems, user-friendly applications, promotion of ICT skills, and regular customer satisfaction surveys.

**N. Mari Anand (2015)** examines the shift from conventional banking to E-banking, driven by factors like the internet, technology, deregulation, and globalization. Banks adopt alternative distribution channels for a competitive edge. The chapter provides insights into E-banking trends in India, guiding banks in formulating effective channel management strategies.

**Yeremenko and Rudskaya (2016)** conducted a conceptual paper where they examined the innovations introduced by the banking industry in Russia. Through theoretical foundations, they delved into the concept of digital banking, encompassing innovations in banking and payment systems, progressing from traditional cards to digital banking. The researchers argued that banks should embrace cutting-edge technology to deliver services at a reasonable cost, thereby fostering customer loyalty to online services. This, they posit, would ultimately encourage customers to adopt modern banking technology.

**Kavitha and Fatima Razia (2016)** conducted an analysis of the factors influencing customers in choosing e-banking services, focusing on Coimbatore City. In their paper, "Factor Analysis of Consumer Preferences in E-Banking Services," they initially identified twenty parameters but consolidated them into six server variables. These variables include Encryption and Credibility, Belief in e-services, and Browser design.

**G. Kumar and V. M. Shenbagaraman (2016)** studied the impact of information technology advancements on the banking industry in India. They highlighted the internet's growing role in customer-bank interactions. The shift to online banking prompted an examination of e-service quality, revealing the importance of factors like compensation, recovery, access, personalization, and assurance. The research, involving 98 respondents in Chennai City, India, established a positive correlation between customer satisfaction and loyalty.

**Massilamany and Nadarajan (2017)** explored the factors influencing the adoption of digital banking services in Malaysia. The study identified digital banking adoption as the dependent variable, with independent variables including trust, security, knowledge, self-efficacy, and convenience. Results showed a significant impact of these factors on digital banking adoption, emphasizing the crucial role they play in influencing customers' decisions.

**Ramesh and Muthumani (2017)** underscored the challenges and opportunities in electronic banking in India, drawing insights from secondary data. Despite earnest efforts by Indian banks in advancing e-banking, they found that widespread acceptance among the masses remains elusive. However, the younger generation is increasingly embracing and benefiting from these services. The authors anticipate that e-banking is on track to become not just an acceptable mode but a preferable one in the near future.

**Mahbub Rahman's (2017)** report assesses the status, challenges, and potential of E-banking in Bangladesh, with a focus on Dutch-Bangla Bank Limited. The study gathers insights from 100 registered e-banking clients, revealing the advantages of e-banking but highlighting a knowledge gap among DBBL

customers. The report aims to guide improvements in electronic banking services in Bangladesh for enhanced customer satisfaction and competitiveness

**Vijay Rathee (2017)** study delves into the influence of digital banking on perceived service quality. The research, conducted with 180 customers from NCR (Delhi, Noida, Gurugram), identifies dimensions like responsiveness, reliability, assurance, empathy, system availability, and privacy as significant in the realm of digital banking. With 130 valid responses, the study reveals differing levels of perceived significance for these dimensions. These findings provide valuable insights to assist banks in improving the quality of their digital banking services.

**Nayak Raghavendra's (2018)** assessment of digital banking challenges in rural areas highlighted obstacles such as financial illiteracy, inadequate infrastructure, limited smartphone usage, disinterest, network issues, low literacy rates, high financial service costs, and customer reluctance to new technology. The study recommended creating awareness about digital banking benefits, providing financial literacy, and engaging youth through schools and colleges to enhance country growth through digitization.

**Shivangi Agarwal and Rajesh Kothari's (2018)** research explores the impact of internet banking on retail banking in India, focusing on adoption patterns among urban and rural customers. The study, conducted with 210 participants in Jaipur and Meerut, reveals variations in internet banking usage due to language barriers, education levels, and technical knowledge. Despite differences, the research highlights a positive customer perception of internet banking, suggesting that increased awareness and improved services could enhance adoption in both urban and rural settings.

**Mahesh Kumar's (2019)** study evaluates e-banking users' risk perceptions in public, private, and foreign banks in India using the Analytical Hierarchy Process (AHP). Security is the primary concern, followed by privacy and trust. Public sector banks are perceived as the safest, especially in security. The study suggests practical implications for private and foreign banks to enhance user perception through targeted marketing strategies.

**Dhanalakshmi Arumugam Malar's (2019)** study explores the impact of information technology (IT) on service delivery and competitive advantages. It adopts a service-dominant logic perspective, considering customers as co-creators of firm value. Focused on online banking services in India, the study identifies risks, tensions, and socio-technical challenges associated with IT-enabled online services, providing insights for IT strategy research.

**Alex Fahrur Riza's (2019)** study explores the influence of age, specifically focusing on the Millennial Generation, on the adoption of digital banking. The research investigates how perceived usefulness and perceived ease of use impact attitudes and behavioral intentions toward digital banking adoption. Data collected from Millennial Generation Islamic bank customers in Indonesia (aged 22 to 38) revealed significant positive effects for all variables. The study emphasizes the necessity for Islamic banks to boost digital banking services to cater to and increase Millennial customers.

**Dr. Singh Shamsher and Rana Ravish's (2019)** study investigates customer perceptions and adoption of digital banking. Focusing on awareness, preferences, and influencing factors, it reveals digital banking's popularity among the youth, emphasizing benefits like convenience and time savings. The research also addresses security concerns as a key obstacle and highlights factors influencing consumer perceptions of digital payments.

**Santhiya and Radhika's (2019)** study examines challenges faced by customers using internet banking services from the State Bank of India (SBI). While awareness is widespread, issues such as fear of fraud, security concerns, and obstacles related to confidence and knowledge hinder customer adoption. The study also notes a significant relationship between gender and internet banking usage.

**Oanh Thi Nguyen's (2020)** study on factors influencing digital banking adoption in Vietnam, based on data from 201 users, found that attitude and perceived usefulness positively impact usage intention. Surprisingly, convenience had no significant effect. Perceived risk negatively influenced attitudes, and ease of use

positively impacted perceived usefulness. The study suggests strategies for improving customer understanding of digital banking benefits, emphasizing the importance of addressing perceived risks to enhance customer attitudes.

**Dr. Varsha Agarwal (2020)** research explores the shift from traditional banking to mobile banking, emphasizing its convenience and innovations. Mobile apps like ICICI iMobile and SBI's YONO have significantly influenced customer preferences. Government and RBI support, especially during COVID-19, has accelerated the adoption of mobile wallets and digital payments. The study aims to identify the surge in mobile banking during the pandemic and assess its role in addressing challenges posed by COVID-19.

**Debasish Naskar's (2020)** study explores the impact of digitalization on the banking sector in the Indian economy. It emphasizes the shift toward digital banking in response to changing customer preferences, citing technologies like UPI, plastic money, and mobile banking. The study highlights advantages such as reduced cash-related risks, modernized payment systems, and lowered service costs, aiming to uncover trends, opportunities, and challenges in India's digital banking transformation.

**Bhadrappa Haralayya's (2021)** insights underscore the impactful transformation of the banking sector through digitalization. The shift to paperless operations, driven by technological advancements, has not only enhanced transaction efficiency but also reshaped customer interactions. The events of 2020 further emphasized the urgent need for the banking industry to swiftly embrace digital technologies.

**Dr. T. Ravisankar (2021)** emphasize the pivotal role of the banking system in the modern sector, crucial for progress in each state. The focus on card transfers has gained significance due to global modernization, market forces, and regulatory innovations. Recent developments, particularly in electronic payments, have significantly contributed to the economic growth of the banking sector. the research specifically delves into the effects influencing customer engagement with

e-banking services, with keywords including Digital Banking Services, Customer Satisfaction, and Quality Services.

**Sulemana Bankuoru Egala's (2021)** study investigates the impact of quality digital banking services on customer satisfaction and retention intentions in Ghana during the COVID-19 pandemic. Using constructs from E-S-QUAL and BSQ models, the research employs structural equation modeling to analyze 395 responses. Results reveal a significant correlation between satisfaction with digital banking services and customer retention decisions. The study emphasizes the importance of prioritizing high-quality digital banking services in developing countries for a competitive advantage.

**Dr. Ranjith P.V.'s (2021)** study explores consumer perceptions of online and digital payments, with a focus on transaction safety in the global context of digitization. The research qualitatively analyzes consumers' attitudes toward cashless transactions, revealing insights for marketers. The findings indicate a growing acceptance of digital transactions in India, outlining both the advantages and challenges faced by consumers in adopting digital payment methods.

**Mehmood Ali's (2021)** study investigates challenges in the banking sector from the customer's perspective, emphasizing insufficient promotion of e-banking services affecting customer awareness. Recognizing technology's transformative impact, particularly in finance, the study addresses obstacles in implementing online banking. Despite acknowledging limitations, the research offers a distinctive customer-focused perspective, seeking to understand customer preferences for mutual benefit.

**Ram A. Cnaan's (2021)** research, focused on rural Indian villages, examined officially declared cashless villages. The survey across seven states indicated minimal digital financial inclusion, with comparison villages performing similarly to cashless ones. The study emphasizes the importance of factors like financial literacy and online access in predicting engagement in digital banking activities. It cautions against a hasty transition to cashless societies, highlighting the risk of excluding marginalized populations.

**Neeraj Kumar and Dr. Rajesh Mehrotra's (2022)** study explores challenges in the digital banking sector, examining the relationship between customer demographics, dissatisfaction, and adoption. Using statistical tests, the research aims to understand the barriers to universal digital banking adoption and assess customer awareness in this evolving landscape.

**Nitin Bansal (2022)** study focused on the impact of customer training programs on the acceptance of digital banking services in India. Using factor analysis and multiple linear regression, the research revealed a positive correlation between training programs and the usability and acceptance of digital banking, ultimately reducing customers' banking costs.

**Mehmood Ali Gul's (2022)** study in Karachi, Pakistan, explores internet banking infrastructural challenges, emphasizing gender and computer awareness. With 300 responses, the research highlights unanimous opinions on online banking among males and females without computer course experience. The study emphasizes the importance of effective communication to enhance understanding between customers and service providers, suggesting further research expansion for accuracy and incorporating consumer perspectives.

**Haitham M. Alzoubi's (2022)** study focuses on cybersecurity threats in digital banking, emphasizing the need for robust security systems, multiple verifications, authentication processes, and data encryption to counter criminal activities. The research highlights the prevalence of cybersecurity issues in digital banking, noting a lack of awareness among individuals. Using a theoretical analysis method and secondary sources, the study proposes hypotheses for further exploration in future research.

**Rajakrishnan's (2023)** study on digital banking emphasizes its online nature and accessibility through various devices. The COVID-19 pandemic heightened awareness, leading to increased use of digital wallets, bank apps, and contactless payments. Key terms include Digital Banking, Online Payments, Phone Wallets, and UPI.

**Kah Boon Lim's (2023)** study investigates the factors influencing Malaysian consumers' intention to use digital banks. Utilizing an eight-construct model, the research highlights the impact of factors like hedonic motivation and performance expectancy. With 203 collected questionnaires, the study informs policymakers and developers about consumer intentions, guiding the enhancement of digital banking in Malaysia.

**Anwar Musadad Rusydi's (2023)** study, involving 210 Indonesian digital banking users, focuses on security and service experience. Utilizing online questionnaires and PLS-SEM, the research emphasizes the significant impact of customer experience and perceived technology security on continued usage and the intention to recommend digital banking services. The study recommends prioritizing security systems to enhance the overall customer experience.

**Ida Claudia Panetta (2023)** study employs bibliometric and scientometric measures to analyze 723 articles on digital payments from 1985 to 2021. The research highlights a focus on mobile payments and predominant use of technology adoption models in analysis methodologies. The study, notable for its substantial sample size and methodology, contributes to understanding the evolution of innovative payments and provides guidance for scholars exploring diverse research models.

**Juan-Gabriel Martínez-Navalón (2023)** investigates the impact of privacy, ease of use, and trust on digital banking, considering potential variations based on users' nationality. The study finds that privacy positively influences trust and perceived ease of use, leading to increased consumer trust with higher ease of use. However, the research does not provide substantial evidence supporting the direct influence of nationality differences on users' trust, privacy, and ease of use in digital banking.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 METHODOLOGY:**

Research Methodology serves as a systematic approach to addressing a research problem and can be considered as the scientific study of how research is conducted. The present study is focused on the Study Of Customer Perception Towards Digital Banking Services Provided By Selected Public Sector Bank (SBI, Indian Bank, Canara Bank) In Chennai.

#### **3.2 RESEARCH DESIGN:**

##### **Descriptive Research Design**

Descriptive research is focused on providing an accurate depiction of the participants or phenomena under study. It aims to offer a detailed account of the characteristics, behaviors, and attributes of the subjects involved in the research. Rather than seeking to establish cause-and-effect relationships, descriptive research is primarily concerned with presenting an objective and comprehensive overview of the observed elements.

#### **3.3 SOURCE OF DATA :**

Data collection is a methodical process aimed at acquiring information from diverse sources to construct a comprehensive and precise understanding of a specific area of interest. In this study, responses are gathered through two distinct sources, forming the basis for the data collection process. The identified sources of data collection include:

- **Primary data-** A structured questionnaire were prepared to collect data.
- **Secondary data-** Data were collected from journals reports, books, record of banks, websites, magazines etc.

### **3.4 RESEARCH INSTRUMENT:**

The research instrument employed in this study is a questionnaire. A questionnaire is a document comprising queries related to specific aspects under investigation, through which the researcher collects data. Respondents are provided with the questionnaire to fill out which is sent through Google forms.

#### **QUESTIONNAIRE:**

The primary data was collected using structured questionnaire. The structured questionnaires were framed and designed consists of

- Multiple choice questions
- Likert 5-point scale
- Ranking method

### **3.5 SAMPLING TECHNIQUES:**

The convenience sampling method is a primary category within non-probability sampling approaches used to select the samples for research. It comprises individuals who are easily accessible, forming a sample based on convenience.

### **3.6 SAMPLE SIZE:**

The total size of the sample is 150 respondents from public sector bank in Chennai.

- SBI - 50 Respondent
- Indian Bank - 50 Respondent
- Canara Bank - 50 Respondent

### **3.7 AREA OF STUDY:**

The study was carried in selected public sector bank (SBI, Indian Bank, Canara Bank) In Chennai.

### 3.8 HYPOTHESIS

**The study is based on the following hypotheses:**

To find the relationship between demographic variables of the respondents like Age, Occupation, and their perception regarding digital banking services provide by public sector bank in Chennai

#### **HYPOTHESIS 1:**

- H0: There is no significant relationship between Age of the customer and their perception toward the digital banking services.
- H1: There is a significant relationship between Age of the customer and their perception toward the digital banking services.

#### **HYPOTHESIS 2:**

- H0: There is no significant relationship between occupation of the customer and their perception toward the digital banking services.
- H1: There is significant relationship between occupation of the customer and their perception toward the digital banking services.

### 3.9 TOOLS FOR ANALYSIS:

- Data collection systems were used for the analysis and processing of the findings.
- **Percentage analysis method:**

Research questions are typically addressed using descriptive statistics, such as percentages or means. Percentages are particularly useful for indicating the proportion of participants with specific responses. This reporting approach is commonly applied in summarizing research findings.
- **Analysis of variance (ANOVA)**

One-Way ANOVA, or analysis of variance, is a statistical method that compares the means of two or more independent groups to ascertain if there is significant statistical evidence indicating differences in the associated population means. This parametric test is alternatively referred to as One-Factor ANOVA.

## CHAPTER 4

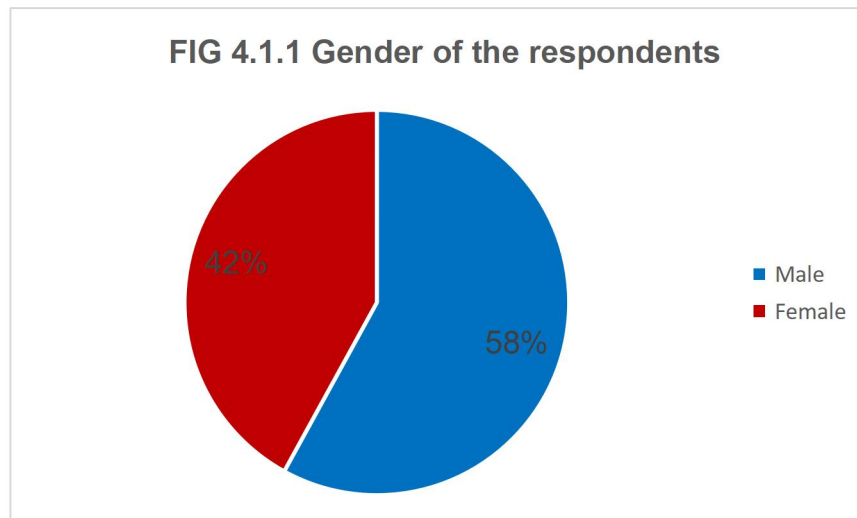
### DATA ANALYSIS AND INTERPRETATION

#### 4.1. PERCENTAGE ANALYSIS

**TABLE 4.1.1 Gender of The Respondents**

| GENDER       | NO OF RESPONDENTS | % OF RESPONDENTS |
|--------------|-------------------|------------------|
| Male         | 87                | 58%              |
| Female       | 63                | 42%              |
| <b>TOTAL</b> | 150               | 100%             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 58% respondents are male, and 42% respondents are female.

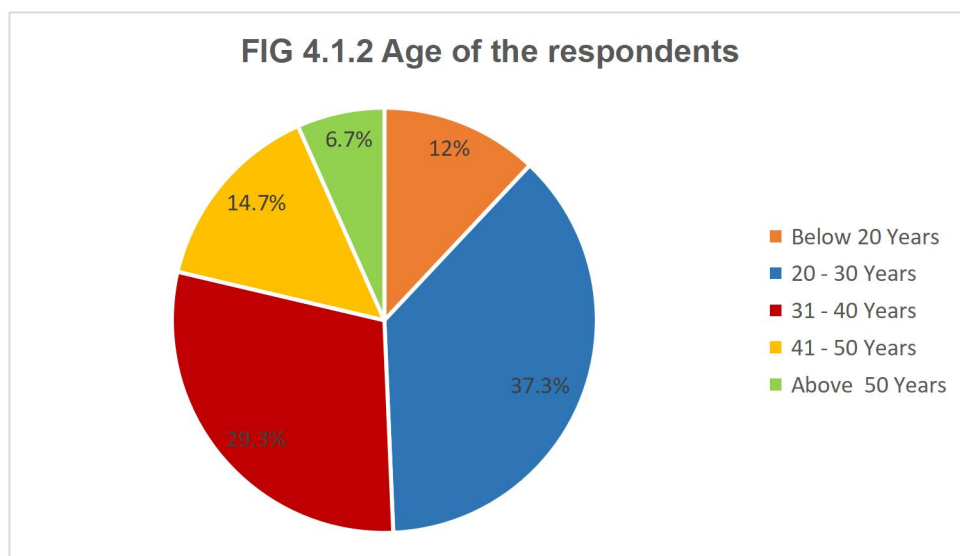
**INFERENCE:**

- Majority 58% of the respondents are male.

**TABLE 4.1.2 Age of The Respondents**

| S.NO         | PARTICULARS    | NO OF RESPONDENTS | % OF RESPONDENTS |
|--------------|----------------|-------------------|------------------|
| 1            | Below 20 Years | 18                | 12%              |
| 2            | 20 - 30 Years  | 56                | 37.3%            |
| 3            | 31 - 40 Years  | 44                | 29.3%            |
| 4            | 41 - 50 Years  | 22                | 14.7%            |
| 5            | Above 50 Years | 10                | 6.7%             |
| <b>TOTAL</b> |                | 150               | 100%             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table it is interpreted that the number of respondents Below 20 ages of respondents are 12%, between 20-30 age of respondents are 37.3%, between 31- 40 age of respondents 29.3%, between 41-50 age of respondents are 14.7%, and above 50 ages of respondents are 6.7%

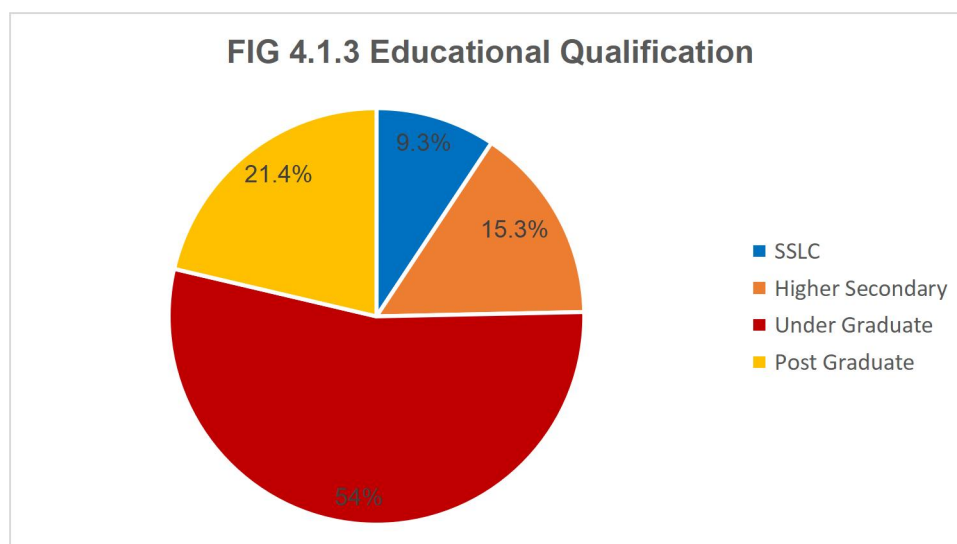
**INFERENCE:**

- Majority 37.3 % of the respondents belong to the age group of 20-30category.

**TABLE 4.1.3 Educational Qualification of The Respondents**

| S.NO  | PARTICULARS      | NO OF RESPONDENTS | % OF RESPONDENTS |
|-------|------------------|-------------------|------------------|
| 1     | SSLC             | 14                | 9.3%             |
| 2     | Higher Secondary | 23                | 15.3%            |
| 3     | Under Graduate   | 81                | 54%              |
| 4     | Post Graduate    | 32                | 21.4%            |
| TOTAL |                  | 150               | 100%             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 9.3% of the respondents falls under the category of SSLC, 15.3% of the respondents falls under the category of Higher Secondary school, 54% of the respondents from the category of Under Graduate , and 21.4% of the respondents falls under the category of Post Graduate.

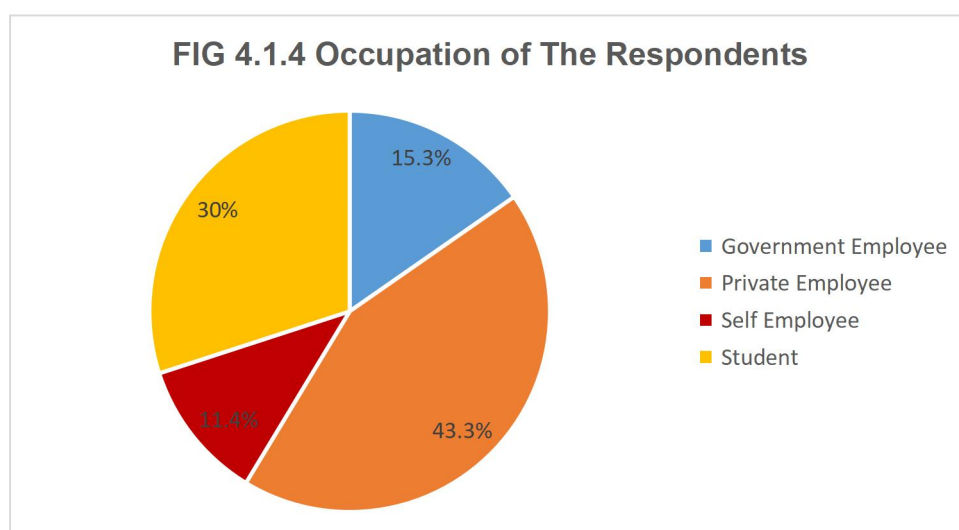
**INFERENCE:**

- Majority 54 % of the respondents belong to the category of Under Graduate.

**TABLE 4.1.4 Occupation of The Respondents**

| S.NO  | PARTICULAR          | NO OF RESPONDENTS | % OF RESPONDENTS |
|-------|---------------------|-------------------|------------------|
| 1     | Government Employee | 23                | 15.3%            |
| 2     | Private Employee    | 65                | 43.3%            |
| 3     | Self Employee       | 17                | 11.4%            |
| 4     | Student             | 45                | 30%              |
| TOTAL |                     | 150               | 100%             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table it is interpreted that 15.3% of the respondents are falls under the category of Government Employee, 43.3% of the respondents falls under the category of Private employee, 11.4% of the respondents from the category of Self employee and the remaining 30% of respondents are from the category of Student

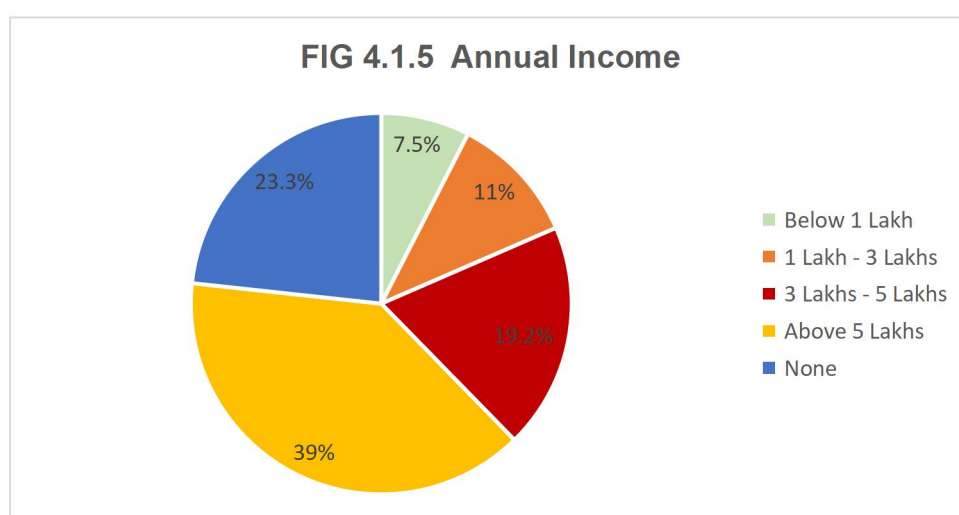
**INFERENCE:**

- Majority 43.3 % of the respondents belong to the category of Private employee .

**TABLE 4.1.5 Annual Income of The Respondents**

| S.NO  | PARTICULARS       | NO OF RESPONDENTS | % OF RESPONDENTS |
|-------|-------------------|-------------------|------------------|
| 1     | Below 1 Lakh      | 11                | 7.5%             |
| 2     | 1 Lakh - 3 Lakhs  | 16                | 11%              |
| 3     | 3 Lakhs - 5 Lakhs | 28                | 19.2%            |
| 4     | Above 5 Lakhs     | 57                | 39%              |
| 5     | None              | 34                | 23.3%            |
| TOTAL |                   | 150               | 100%             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 7.5% of respondents are Below 1 Lakh, 11% of respondents are 1 Lakh - 3 Lakhs, 19.2% of respondents are 3 Lakhs - 5 Lakhs, 39% of respondents are Above 5 Lakhs and the remaining 23.3% of respondents are none.

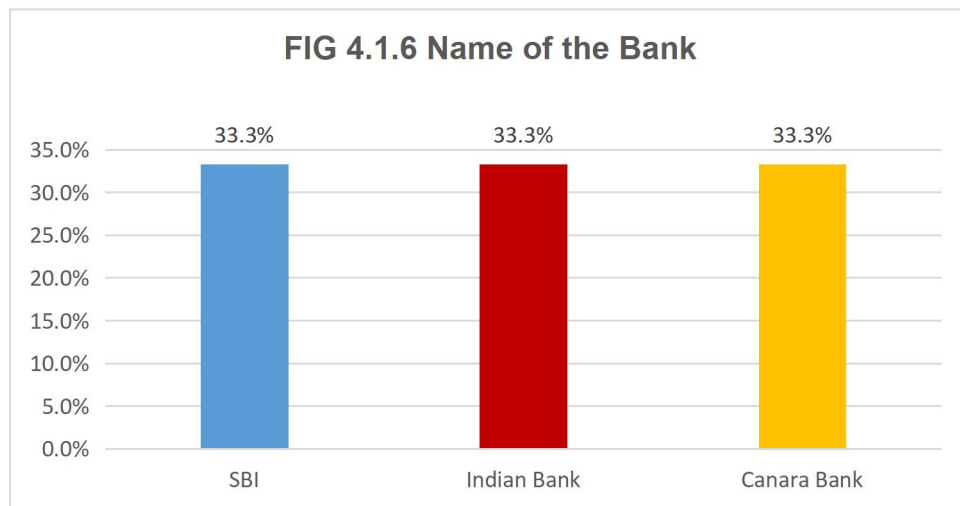
**INFERENCE:**

- Majority 39% of respondents belong to The Annual Income category of Above 5 Lakhs

**TABLE 4.1.6 Name of the Bank of The Respondents**

| <b>PARTICULARS</b> | <b>NO OF RESPONDENTS</b> | <b>% OF RESPONDENTS</b> |
|--------------------|--------------------------|-------------------------|
| SBI                | 50                       | 33.3%                   |
| Indian Bank        | 50                       | 33.3%                   |
| Canara Bank        | 50                       | 33.3%                   |
| <b>TOTAL</b>       | <b>150</b>               | <b>100%</b>             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 33.3% of respondent have account in SBI, 33.3% of respondent have account in Indian Bank, 33.3% of respondent have account in Canara Bank, where the no.of sample is equal drawn from the selected Public Sector Bank.

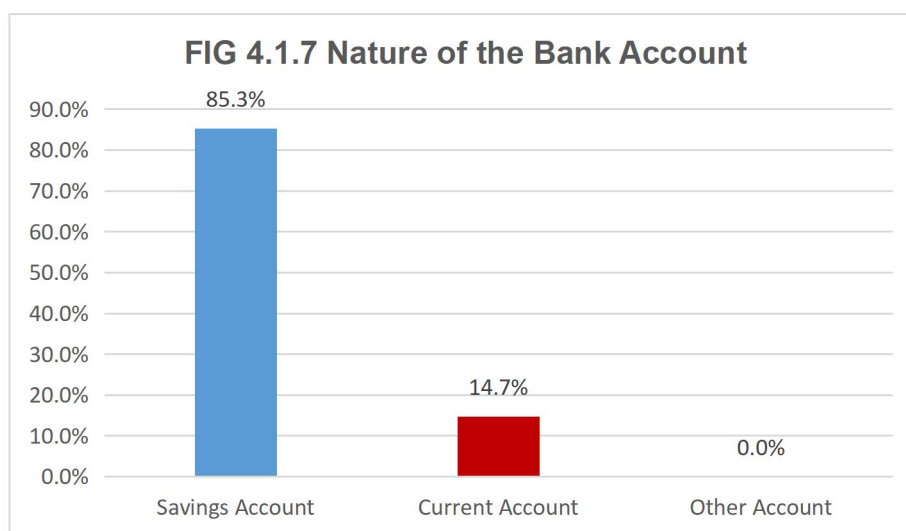
**INFERENCE:**

- The no.of sample is equal drawn from the selected Public Sector Bank (SBI, Indian Bank, Canara Bank) in Chennai.

**TABLE 4.1.7 Nature of the Bank Account of The Respondents**

| PARTICULARS     | NO OF RESPONDENTS | % OF RESPONDENTS |
|-----------------|-------------------|------------------|
| Savings Account | 128               | 85.3%            |
| Current Account | 22                | 14.7%            |
| Other Account   | 0                 | 0%               |
| <b>TOTAL</b>    | <b>150</b>        | <b>100%</b>      |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 85.3% of the respondents of the category comes under the saving account and current account has maintain by the 14.7% of the respondents.

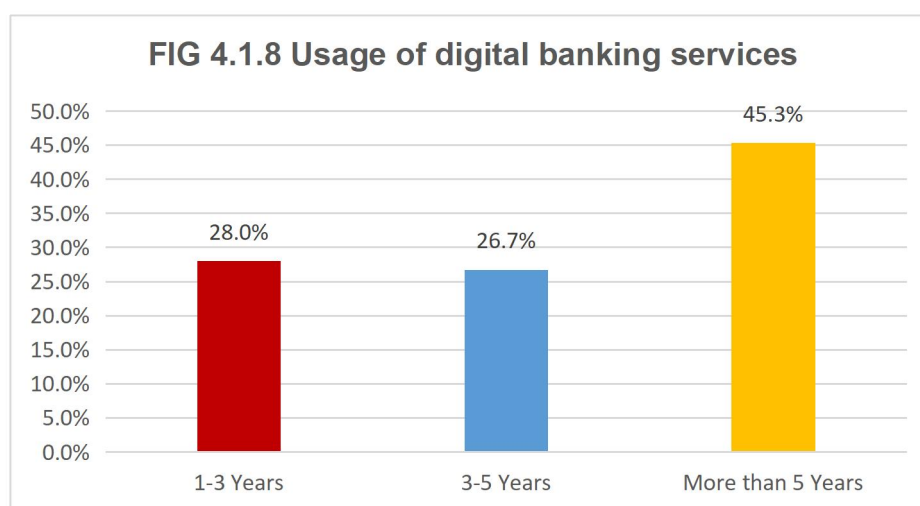
**INFERENCE:**

- Majority 85.3% of respondents having Savings Account in selected Public Sector Bank (SBI, Indian Bank, Canara Bank) in Chennai.

**TABLE 4.1.8 Years of using digital banking services**

| PARTICULARS       | NO OF RESPONDENTS | % OF RESPONDENTS |
|-------------------|-------------------|------------------|
| 1-3 Years         | 42                | 28%              |
| 3-5 Years         | 40                | 26.7%            |
| More than 5 Years | 68                | 45.3%            |
| <b>TOTAL</b>      | 150               | 100%             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 28% of the respondents are using digital banking services between 1 - 3 years, 26.7% of the respondents are using digital banking services between 3 - 5 years, and 45.3% of the respondents are using digital banking services more than 5 years.

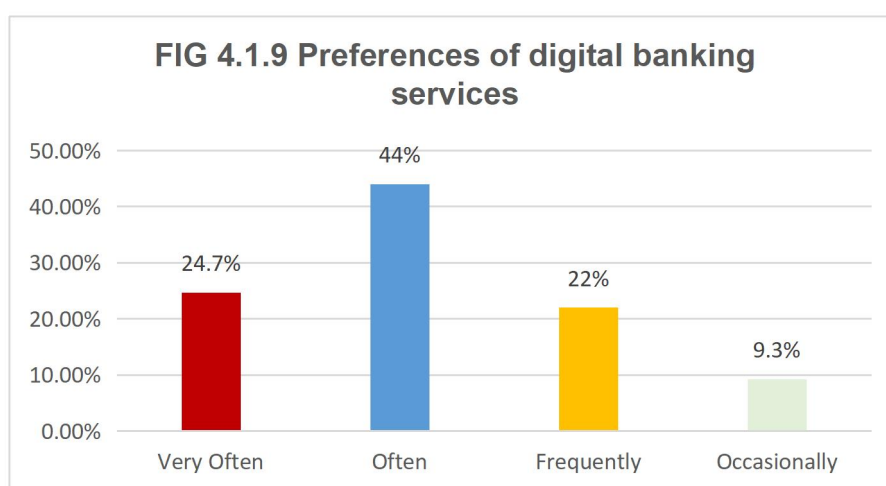
**INFERENCE:**

- Majority 45.3% of respondents are using digital banking services more than 5 years.

**TABLE 4.1.9 Customer Preferences of digital banking services**

| <b>PARTICULARS</b> | <b>NO OF RESPONDENTS</b> | <b>% OF RESPONDENTS</b> |
|--------------------|--------------------------|-------------------------|
| Very Often         | 37                       | 24.7%                   |
| Often              | 66                       | 44%                     |
| Frequently         | 33                       | 22%                     |
| Occasionally       | 14                       | 9.3%                    |
| <b>TOTAL</b>       | <b>150</b>               | <b>100%</b>             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 24.7% of the respondents prefer digital banking services Very Often, 44% of the respondents prefer digital banking services Often, 22% of the respondents prefer digital banking services Frequently, 9.3% of the respondents prefer digital banking services Occasionally.

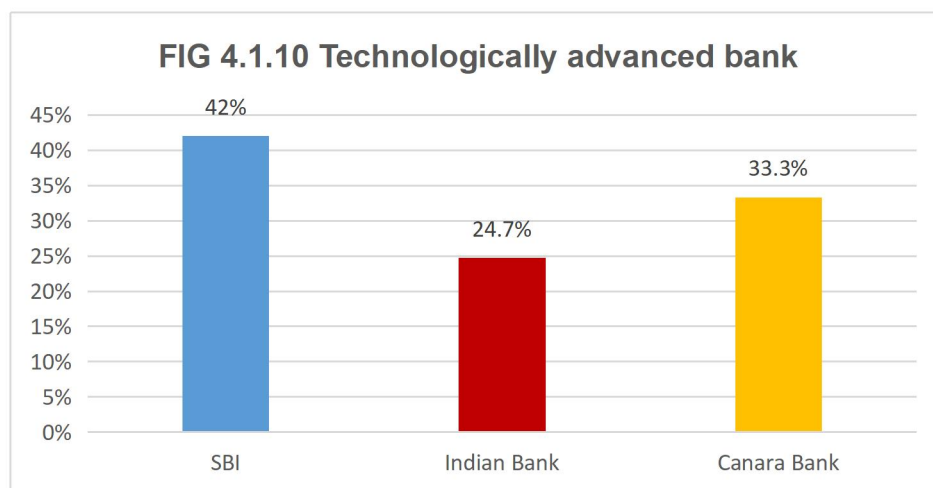
**INFERENCE:**

- Majority 44% of respondents are preferred using digital banking services Often.

**TABLE 4.1.10 Technologically advanced bank among the  
selected public sector bank**

| PARTICULARS  | NO OF<br>RESPONDENTS | % OF RESPONDENTS |
|--------------|----------------------|------------------|
| SBI          | 63                   | 42%              |
| Indian Bank  | 37                   | 24.7%            |
| Canara Bank  | 50                   | 33.3%            |
| <b>TOTAL</b> | 150                  | 100%             |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 42% of the respondents consider SBI as Technologically advanced bank, 24.7% of the respondents consider Indian Bank as Technologically advanced bank, 33.3% of the respondents consider Canara Bank as Technologically advanced bank.

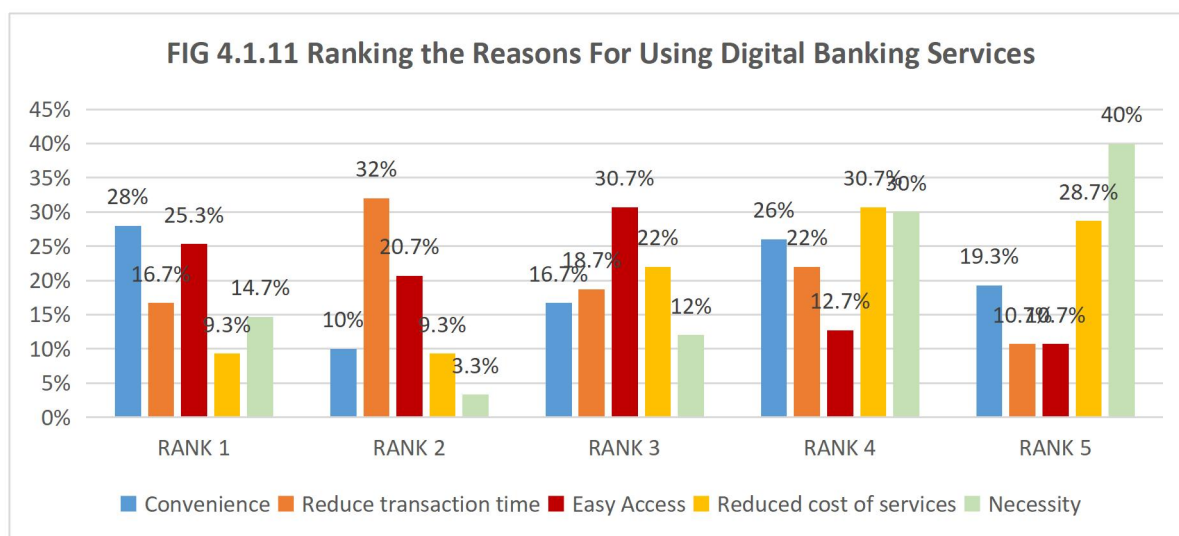
**INFERENCE:**

- Majority 42% of the respondents consider SBI as Technologically advanced bank than the other selected public sector bank in Chennai.

**TABLE 4.1.11 Ranking the Reasons For Using Digital Banking Services**

| S.NO | PARTICULARS              | RANK 1        | RANK 2        | RANK 3        | RANK 4        | RANK 5        |
|------|--------------------------|---------------|---------------|---------------|---------------|---------------|
| 1    | Convenience              | 42<br>( 28%)  | 15<br>(10%)   | 25<br>(16.7%) | 39<br>( 26%)  | 29<br>(19.3%) |
| 2    | Reduce transaction time  | 25<br>(16.7%) | 48<br>(32%)   | 28<br>(18.7%) | 33<br>( 22%)  | 16<br>(10.7%) |
| 3    | Easy Access              | 38<br>(25.3%) | 31<br>(20.7%) | 46<br>(30.7%) | 19<br>(12.7%) | 16<br>(10.7%) |
| 4    | Reduced cost of services | 14<br>(9.3%)  | 14<br>(9.3%)  | 33<br>(22%)   | 46<br>(30.7%) | 43<br>(28.7%) |
| 5    | Necessity                | 22<br>(14.7%) | 5<br>( 3.3%)  | 18<br>(12%)   | 45<br>( 30%)  | 60<br>( 40% ) |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 28% of the respondents gave Rank 1 for Convenience, 10% of the respondents gave Rank 2 for Convenience, 16.7% of the respondents gave Rank 3 for Convenience, 26% of the respondents gave Rank 4 for Convenience and 19.3% of the respondents gave Rank 5 for Convenience.

16.7% of the respondents gave Rank 1 for Reduce Transaction Time, 32% of the respondents gave Rank 2 for Reduce Transaction Time, 18.7% of the respondents gave Rank 3 for Reduce Transaction Time, 22% of the respondents gave Rank 4 for Reduce Transaction Time, 10.7% of the respondents gave Rank 5 for Reduce Transaction Time.

25.3% of the respondents gave Rank 1 for Easy Access, 20.7% of the respondents gave Rank 2 for Easy Access, 30.7% of the respondents gave Rank 3 for Easy Access, 12.7% of the respondents gave Rank 4 for Easy Access, 10.7% of the respondents gave Rank 5 for Easy Access.

9.3% of the respondents gave Rank 1 for Reduce cost of service, 9.3% of the respondents gave Rank 2 for Reduce cost of service, 22% of the respondents gave Rank 3 for Reduce cost of service, 30.7% of the respondents gave Rank 4 for Reduce cost of service, 28.7% of the respondents gave Rank 5 for Reduce cost of service.

14.7% of the respondents gave Rank 1 for Necessity, 3.3% of the respondents gave Rank 2 for Necessity, 12% of the respondents gave Rank 3 for Necessity, 30% of the respondents gave Rank 4 for Necessity, 40% of the respondents gave Rank 5 for Necessity.

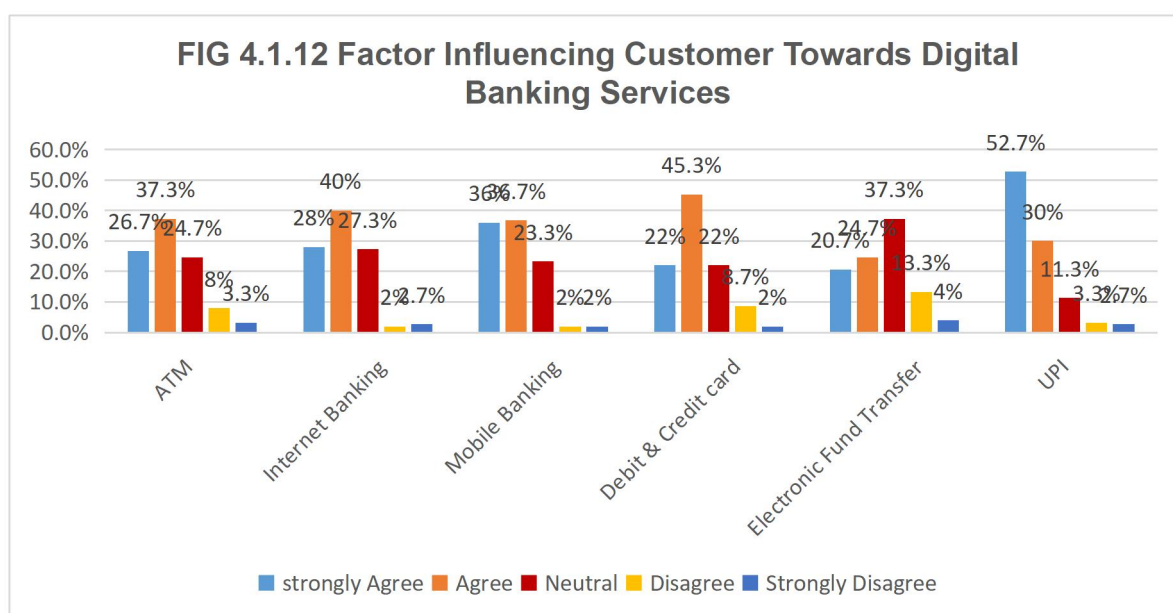
#### **INFERENCE:**

- The 28% of the respondents gave Rank 1 for Convenience.
- The 32% of the respondents gave Rank 2 for Reduce Transaction Time.
- The 30.7% of the respondents gave Rank 3 for Easy Access.
- The 30.7% of the respondents gave Rank 4 for Reduce cost of service.
- The 40% of the respondents gave Rank 5 for Necessity.

**TABLE 4.1.12 Factor Influencing Customer Towards Digital Banking Services**

| S.NO | PARTICULARS              | strongly Agree | Agree          | Neutral       | Disagree       | Strongly Disagree |
|------|--------------------------|----------------|----------------|---------------|----------------|-------------------|
| 1    | ATM                      | 40<br>( 26.7%) | 56<br>(37.3%)  | 37<br>(24.7%) | 12<br>( 8%)    | 5<br>(3.3%)       |
| 2    | Internet Banking         | 42<br>(28%)    | 60<br>(40%)    | 41<br>(27.3%) | 3<br>( 2%)     | 4<br>(2.7%)       |
| 3    | Mobile Banking           | 54<br>(36%)    | 55<br>(36.7%)  | 35<br>(23.3%) | 3<br>(2%)      | 3<br>(2%)         |
| 4    | Debit & Credit card      | 33<br>(22%)    | 68<br>(45.3%)  | 33<br>(22%)   | 13<br>(8.7%)   | 3<br>(2%)         |
| 5    | Electronic Fund Transfer | 31<br>(20.7%)  | 37<br>(24.7 %) | 56<br>(37.3%) | 20<br>(13.3 %) | 6<br>(4% )        |
| 6    | UPI                      | 79<br>(52.7%)  | 45<br>(30%)    | 17<br>(11.3%) | 5<br>(3.3%)    | 4<br>(2.7%)       |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 26.7% of the respondents are strongly agree with ATM, 37.3% of the respondents are agree with ATM, 24.7% of the respondents are just neutral with ATM, 8% of the respondents are disagree with ATM, 3.3% of the respondents are strongly disagree with ATM.

28% of the respondents are strongly agree with Internet Banking, 40% of the respondents are agree with Internet Banking, 27.3% of the respondents are just neutral with Internet Banking, 2% of the respondents are disagree with Internet Banking, 2.7% of the respondents are strongly disagree with Internet Banking.

36% of the respondents are strongly agree with mobile Banking, 36.7% of the respondents are agree with mobile Banking, 23.3% of the respondents are just neutral with mobile Banking, 2% of the respondents are disagree with mobile Banking, 2% of the respondents are strongly disagree with mobile Banking.

22% of the respondents are strongly agree with Debit & Credit card, 45.3% of the respondents are agree with Debit & Credit card, 22% of the respondents are just neutral with Debit & Credit card, 8.7% of the respondents are disagree with Debit & Credit card, 2% of the respondents are strongly disagree with Debit & Credit card.

20.7% of the respondents are strongly agree with Electronic Fund Transfer, 24.7% of the respondents are agree with Electronic Fund Transfer, 37.3% of the respondents are just neutral with Electronic Fund Transfer, 13.3% of the respondents are disagree with Electronic Fund Transfer, 4% of the respondents are strongly disagree with Electronic Fund Transfer,

52.7% of the respondents are strongly agree with UPI, 30% of the respondents are agree with UPI, 11.3% of the respondents are just neutral with UPI, 3.3% of the respondents are disagree with UPI, 2.7% of the respondents are strongly disagree with UPI,

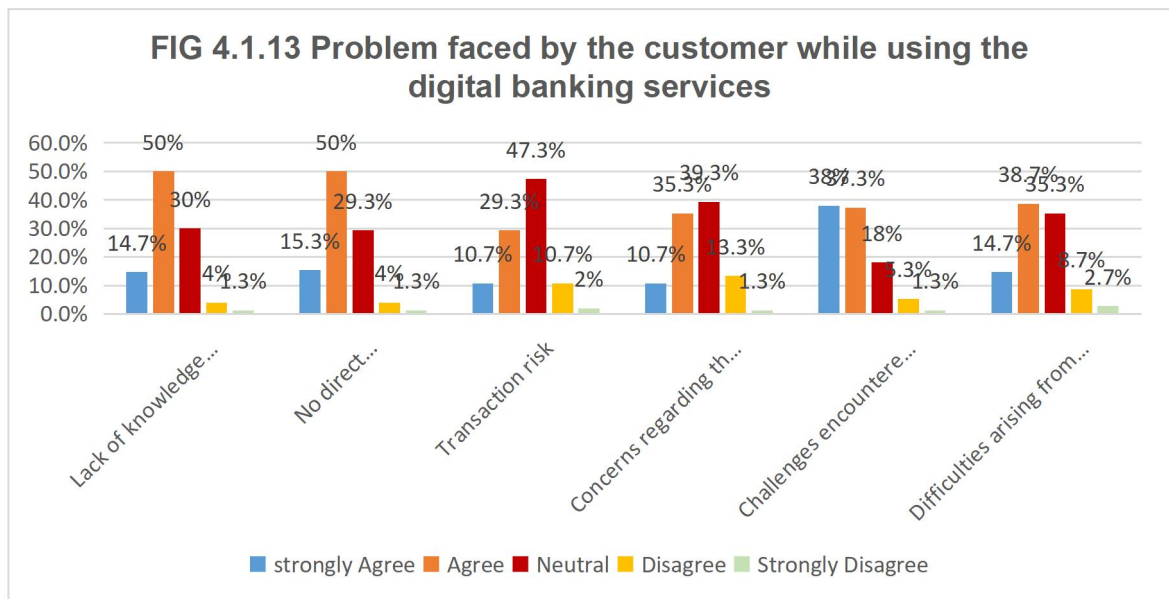
**INFERENCE:**

- The Majority 37.3% of the respondents are agree with ATM.
- The Majority 40% of the respondents are agree with Internet Banking.
- The Majority 36.7% of the respondents are agree with mobile Banking.
- The Majority 45.3% of the respondents are agree with Debit & Credit card.
- The Majority 37.3% of the respondents are just neutral with E-Fund Transfer.
- The Majority 52.7% of the respondents are strongly agree with UPI.

**TABLE 4.1.13 Problem faced by the customer while using the digital banking services**

| <b>S. NO</b> | <b>PARTICULARS</b>                                                            | <b>strongly Agree</b> | <b>Agree</b>  | <b>Neutral</b> | <b>Disagree</b> | <b>Strongly Disagree</b> |
|--------------|-------------------------------------------------------------------------------|-----------------------|---------------|----------------|-----------------|--------------------------|
| <b>1</b>     | Lack of knowledge about computerized transactions                             | 22<br>(14.7%)         | 74<br>(50%)   | 45<br>(30%)    | 6 (4%)          | 2<br>(1.3%)              |
| <b>2</b>     | No direct communication with the bank                                         | 23<br>(15.3%)         | 75<br>(50%)   | 44<br>(29.3%)  | 6 (4%)          | 2<br>(1.3%)              |
| <b>3</b>     | Transaction risk                                                              | 16<br>(10.7%)         | 44<br>(29.3%) | 71<br>(47.3%)  | 16<br>(10.7%)   | 3<br>(2%)                |
| <b>4</b>     | Concerns regarding the security of transactions                               | 16<br>(10.7%)         | 53<br>(35.3%) | 59<br>(39.3%)  | 20<br>(13.3%)   | 2<br>(1.3%)              |
| <b>5</b>     | Challenges encountered when there is an interruption in internet connectivity | 57<br>(38%)           | 56<br>(37.3%) | 27<br>(18%)    | 8<br>(5.3%)     | 2<br>(1.3%)              |
| <b>6</b>     | Difficulties arising from language comprehension                              | 22<br>(14.7%)         | 58<br>(38.7%) | 53<br>(35.3%)  | 13<br>(8.7%)    | 4<br>(2.7%)              |

SOURCE: Primary Data



### INTERPRETATION:

From the above table, it is inferred that 14.7% of the respondents are strongly agree with Lack of knowledge about computerized transactions, 50% of the respondents are agree with Lack of knowledge about computerized transactions, 30% of the respondents are neutral with Lack of knowledge about computerized transactions, 4% of the respondents are disagree with Lack of knowledge about computerized transactions, 1.3% of the respondents are strongly disagree with Lack of knowledge about computerized transactions.

15.3% of the respondents are strongly agree with No direct communication with the bank, 50% of the respondents are agree with No direct communication with the bank, 29.3% of the respondents are neutral with No direct communication with the bank, 4% of the respondents are disagree with No direct communication with the bank, 1.3% of the respondents are strongly disagree with No direct communication with the bank.

10.7% of the respondents are strongly agree with Transaction risk, 29.3% of the respondents are agree with Transaction risk, 47.3% of the respondents are neutral with Transaction risk, 10.7% of the respondents are disagree with Transaction risk, 2% of the respondents are strongly disagree with Transaction risk,

10.7% of the respondents are strongly agree with Concerns regarding the security of transactions, 35.3% of the respondents are agree with Concerns regarding the security of transactions, 39.3% of the respondents are neutral with Concerns regarding the security of transactions, 13.3% of the respondents are disagree with Concerns regarding the security of transactions, 1.3% of the respondents are strongly disagree with Concerns regarding the security of transactions.

38% of the respondents are strongly agree with connectivity interruption, 37.3% of the respondents are agree with connectivity interruption, 18% of the respondents are neutral with connectivity interruption, 5.3% of the respondents are disagree with connectivity interruption, 1.3% of the respondents are strongly disagree with connectivity interruption.

14.7% of the respondents are strongly agree with Understanding The Language, 38.7% of the respondents are agree with Understanding The Language, 35.3% of the respondents are neutral with Understanding The Language, 8.7% of the respondents are disagree with Understanding The Language, 2.7% of the respondents are strongly disagree with Understanding The Language.

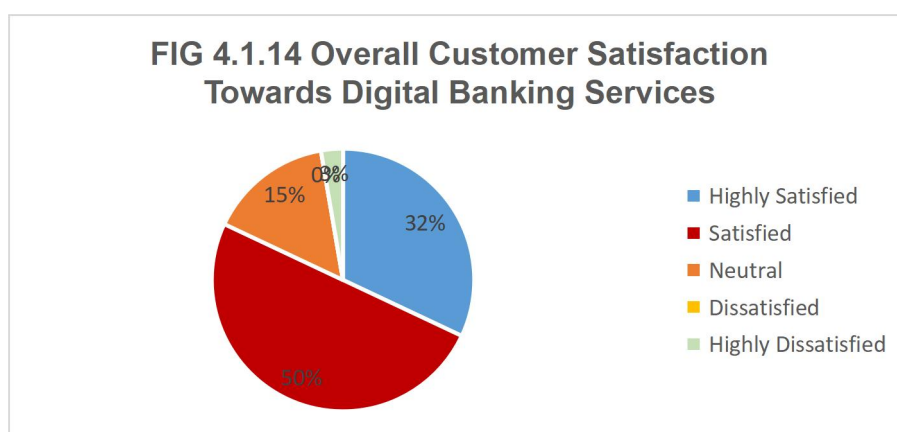
#### **INFERENCE:**

- The Majority 50% of the respondents are agree with Lack of knowledge about computerized transactions.
- The Majority 50% of the respondents are agree with No direct communication with the bank.
- The Majority 47.3% of the respondents are neutral with Transaction risk.
- The Majority 39.3% of the respondents are neutral with Concerns regarding the security of transactions.
- The Majority 38% of the respondents are strongly agree with connectivity interruption.
- The Majority 38.7% of the respondents are agree with Understanding The Language.

**TABLE 4.1.14 Overall Customer Satisfaction Towards Digital Banking Services**

| S.NO         | PARTICULARS         | NO OF RESPONDENTS | % OF RESPONDENTS |
|--------------|---------------------|-------------------|------------------|
| 1            | Highly Satisfied    | 48                | 32%              |
| 2            | Satisfied           | 75                | 50%              |
| 3            | Neutral             | 23                | 15.3%            |
| 4            | Dissatisfied        | 0                 | 0                |
| 5            | Highly Dissatisfied | 4                 | 2.7%             |
| <b>TOTAL</b> |                     | 150               | 100              |

SOURCE: Primary Data



**INTERPRETATION:**

From the above table, it is inferred that 32% of the respondents are highly satisfied with Overall Customer Satisfaction Towards Digital Banking Services, 50% of the respondents are satisfied with Overall Customer Satisfaction Towards Digital Banking Services, 15.3% of the respondents are just neutral with Overall Customer Satisfaction, and 2.7% of the respondents are highly dissatisfied.

**INFERENCE:**

The Majority 50% of the respondents are satisfied with Overall Customer Satisfaction provided by the selected public sector bank in Chennai.

## 4.2 STATISTICAL ANALYSIS: (ONE WAY ANOVA)

**The study is based on the following hypotheses:**

To find the relationship between demographic variables of the respondents like Age, Occupation, and their perception regarding digital banking services provided by public sector bank in Chennai.

**Hypothesis1:**

**H0:** There is no significant relationship between Age of the customer and their perception toward the digital banking services.

**H1:** There is a significant relationship between Age of the customer and their perception toward the digital banking services.

**TABLE 4.2.1 Age Group and Perception of Customer Towards Digital Banking service ( ANOVA TABLE)**

|                | Sum of Squares | df  | Mean Square | F     | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 19.275         | 4   | 4.819       | 5.956 | .000 |
| Within Groups  | 117.318        | 145 | .809        |       |      |
| Total          | 136.593        | 149 |             |       |      |

### INTERPRETATION:

From the above table the computed p value is .000 which is less than 0.05. So we reject the null hypothesis and accepted the alternative hypothesis. So there is Significant relationship between Age of the customer and their perception toward the digital banking services.

**Hypothesis2:**

**H0:** There is no significant relationship between occupation of the customer and their perception toward the digital banking services.

**H1:** There is significant relationship between occupation of the customer and their perception toward the digital banking services.

**TABLE 4.2.2 Occupation and Perception of Customer Towards  
Digital Banking service (ANOVA TABLE)**

|                   | <b>Sum of<br/>Squares</b> | <b>df</b> | <b>Mean<br/>Square</b> | <b>F</b> | <b>Sig.</b> |
|-------------------|---------------------------|-----------|------------------------|----------|-------------|
| Between<br>Groups | 9.758                     | 3         | 3.253                  | 3.744    | .013        |
| Within Groups     | 126.835                   | 146       | .869                   |          |             |
| Total             | 136.593                   | 149       |                        |          |             |

**INTERPRETATION:**

From the above table the computed p value is .013 which is less than 0.05. So we reject the null hypothesis and accepted the alternative hypothesis. There is significant relationship between occupation of the customer and their perception toward the digital banking services.

## **CHAPTER 5**

### **FINDINGS, SUGGESTIONS AND CONCLUSION**

#### **5.1 FINDINGS:**

- 58% of the respondents are male.
- 37.3 % of the respondents belong to the age group of 20-30 category.
- 54 % of the respondents belong to the category of Under Graduate.
- 43.3 % of the respondents belong to the category of Private employee .
- 39% of respondents belong to The Annual Income category of Above 5 Lakhs
- The no.of sample is equal drawn from the selected Public Sector Bank (SBI, Indian Bank, Canara Bank) in Chennai.
- 85.3% of respondents having Savings Account in selected Public Sector Bank in Chennai.
- 45.3% of respondents are using digital banking services more than 5 years.
- 44% of respondents are preferred using digital banking services Often.
- 42% of the respondents consider SBI as Technologically advanced bank than the other selected public sector bank in Chennai.
- 28% of the respondents gave Rank 1 for Convenience.
- 32% of the respondents gave Rank 2 for Reduce Transaction Time.
- 30.7% of the respondents gave Rank 3 for Easy Access.
- 30.7% of the respondents gave Rank 4 for Reduce cost of service.
- 40% of the respondents gave Rank 5 for Necessity.
- 37.3% of the respondents are agree with ATM Influencing Customer Towards Digital Banking Services.
- 40% of the respondents are agree with Internet Banking Influencing Customer Towards Digital Banking Services.
- 36.7% of the respondents are agree with mobile Banking Influencing Customer Towards Digital Banking Services.
- 45.3% of the respondents are agree with Debit & Credit card Influencing Customer Towards Digital Banking Services.
- 37.3% of the respondents are just neutral with E-Fund Transfer Influencing Customer Towards Digital Banking Services.

- 52.7% of the respondents are strongly agree with UPI Influencing Customer Towards Digital Banking Services.
- 50% of the respondents are agree with Lack of knowledge about computerized transactions.
- 50% of the respondents are agree with No direct communication with the bank.
- 47.3% of the respondents are neutral with Transaction risk.
- 39.3% of the respondents are neutral with Concerns regarding the security of transactions.
- 38% of the respondents are strongly agree with connectivity interruption.
- 38.7% of the respondents are agree with Understanding The Language.
- 50% of the respondents are satisfied with Overall Customer Satisfaction provided by the selected public sector bank in Chennai.
- By using the ANOVA table computed p value is .000 which is less than 0.05. So we reject the null hypothesis and accepted the alternative hypothesis. So there is Significant relationship between Age of the customer and their perception toward the digital banking services.
- By using the ANOVA table the computed p value is .013 which is less than 0.05. So we reject the null hypothesis and accepted the alternative hypothesis. There is significant relationship between occupation of the customer and their perception toward the digital banking services.

## **5.2 SUGGESTION:**

- Public sector banks should invest in awareness campaigns to educate customers about the benefits and features of digital banking services.
- Conduct workshops and online tutorials to improve digital literacy among different customer segments.
- Continuously assess and enhance the user interface of digital banking platforms to ensure they are user-friendly and intuitive.
- Gather customer feedback regularly to identify areas for improvement in the design and navigation of digital services
- Public sector banks should prioritize and communicate robust security measures in place for digital transactions to address customer concerns.

- Implement state-of-the-art encryption, multi - factor authentication, and other security protocols to ensure a secure digital banking environment.
- Offer personalized features that cater to the specific needs and preferences of different customer segments.
- Strengthen digital customer support channels, including chat bots and online assistance, to address customer queries and concerns promptly.
- Offer responsive and effective support to build trust in digital banking services.

### **5.3 CONCLUSION:**

The study concludes the comprehensive insights into the overall perception of customers towards digital banking services. Digital Banking will be successful for banks only when they have Commitment along with a deeper understanding of customer needs. This can come only when the bank has a very huge base of customers, skilled personnel, and a service-oriented mindset. Banks should concentrate on needs of customer in order to have effective digital banking practices. The study result that different age group and different occupation group of customers have different perception toward the digital banking services so bank should concentrate on all group of customers for betterment of digital banking services. The majority of the total respondents were satisfied with the digital banking services but they also encountered some difficulties while using digital banking products like lack of computerized knowledge, transaction risk, connectivity interruption, language barrier etc. So the banks should invest in awareness campaigns to educate customers prioritize and communicate robust security measures in place for digital transactions to address customer concerns to enhance digital banking services in selected public sector bank in Chennai.

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## **ANNEXURE - QUESTIONNAIRE**

- 1) EMAIL ID:
- 2) GENDER:
  - a) Male
  - b) Female
- 3) AGE GROUP:
  - a) Below 20
  - b) 20-30
  - c) 31-40
  - d) 41-50
  - e) Above 50
- 4) EDUCATION QUALIFICATION:
  - a) SSLC
  - b) Higher secondary
  - c) UG
  - d) PG
- 5) OCCUPATIONAL STATUS:
  - a) Government employee
  - b) Private employee
  - c) Self employee
  - d) Student
- 6) ANNUAL INCOME STATUS:
  - a) Below 1 Lakh
  - b) 1 Lakh – 3 Lakhs
  - c) 3 Lakhs – 5 Lakhs
  - d) Above 5 Lakhs
  - e) None
- 7) NAME OF THE BANK YOU HAVE AN ACCOUNT WITH ?
  - a) SBI
  - b) Canara Bank
  - c) Indian Bank
- 8) STATE THE NATURE OF YOUR BANK ACCOUNT?
  - a) Savings account
  - b) Current account
  - c) Others
- 9) HOW LONG HAVE YOU BEEN USING DIGITAL BANKING SERVICES?
  - a) 1-3 years
  - b) 3-5 years
  - c) More than 5 years

10) PREFERENCE OF DIGITAL BANKING SERVICES ?

- a) Very Often
- b) Often
- c) Frequently
- d) Occasionally

11) WHICH PUBLIC SECTOR BANK DO YOU CONSIDER AS MOST TECHNOLOGICALLY ADVANCE ?

- a) SBI
- b) Indian Bank
- c) Canara Bank

12) RANK THE REASONS FOR USING DIGITAL BANKING SERVICES ?

| S. NO | Reasons                  | Rank |
|-------|--------------------------|------|
| 1     | Convenience              |      |
| 2     | Reduce transaction time  |      |
| 3     | Easy Access              |      |
| 4     | Reduced cost of services |      |
| 5     | Necessity                |      |

13) FACTOR INFLUENCING CUSTOMER SATISFACTION TOWARDS DIGITAL BANKING SERVICES

Strongly Agree (5) , Agree (4) , Neutral (3) , Disagree (2) , Strongly Disagree (1)

| S. NO | Factors                       | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|-------|-------------------------------|----------------|-------|---------|----------|-------------------|
| 1     | ATM                           |                |       |         |          |                   |
| 2     | Internet banking              |                |       |         |          |                   |
| 3     | Mobile banking                |                |       |         |          |                   |
| 4     | Debit or credit cards         |                |       |         |          |                   |
| 5     | Electronic Fund transfer      |                |       |         |          |                   |
| 6     | Unified Payment Interface UPI |                |       |         |          |                   |

14) OVERALL CUSTOMER SATISFACTION TOWARDS DIGITAL BANKING SERVICES

- a) Highly satisfied
- b) Satisfied
- c) Neutral
- d) Dissatisfied
- e) Highly dissatisfied

15) PROBLEM FACED BY THE CUSTOMER WHILE USING THE DIGITAL BANKING SERVICES

Strongly Agree (5) , Agree (4) , Neutral (3) , Disagree (2) , Strongly Disagree (1)

| S. NO | PARTICULARS                                                                   | strongly Agree | Agree | Neutral | Disagree | Strogly Disagree |
|-------|-------------------------------------------------------------------------------|----------------|-------|---------|----------|------------------|
| 1     | Lack of knowledge about computerized transactions                             |                |       |         |          |                  |
| 2     | No direct communication with the bank                                         |                |       |         |          |                  |
| 3     | Transaction risk                                                              |                |       |         |          |                  |
| 4     | Concerns regarding the security of transactions                               |                |       |         |          |                  |
| 5     | Challenges encountered when there is an interruption in internet connectivity |                |       |         |          |                  |
| 6     | Difficulties arising from language comprehension                              |                |       |         |          |                  |