IMPACT OF ADVANCEMENTS IN TECHNOLOGY ON PERFORMANCE OF THE BANKING SECTOR IN NEW DELHI (INDIA)

by

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ABSTRACT

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A business has to have a superior value delivery system and a more competitive value position. On the same ground a bank's performance depends on how successfully it executes its service innovation to open up new markets because many innovation efforts entail introducing new services, growing current ones, and/or enhancing the service method of delivery. These days, electronic-banking provided by the banks may be used for all banking operations, including creating a new account, reviewing the balance, transferring funds, making cash deposits or withdrawals, paying bills online, purchasing insurance or other financial products, and more. The technology is available around-the-clock, allowing customers to conveniently do a variety of banking operations with a single click. Customer service made possible by I.T. has slowed down the line at the bank's deposit and withdrawal kiosks. The present research aimed to find out how customers feel about using IT-enabled customer service.

The present study found that Clients of public sector banks have the same preferences when it comes to ATMs as clients of private sector banks, according to reports. Factors such as

time, location, cost, comfort, security, and user-friendliness impact the choices of both public and private bank clients when it comes to ATMs, according to the data. It has been noted that public sector bank consumers' preferences for Internet banking are identical to those of private sector bank customers. Both public and private sector bank clients' preferences for telebanking are influenced by factors including cost, accessibility, simplicity of use, security, and convenience. When compared to private sector bank customers, public sector bank customers have somewhat different tele-banking preferences. This research would be useful for the banking industry as it would reduce operational expenses and bank traffic since fewer consumers would need to visit the bank for various services. The survey would also help bank managers determine which demographic groups are most likely to use IT-enabled consumer services. In terms of customer happiness and quality, the study will contribute to the development of more customer-centric IT-enabled customer services. Examining how these interactions with clients might improve customers' perceptions of quality and satisfaction will be beneficial.

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LIST OF ABBREVIATIONS

RTGS : Real Time Gross Settlement

EFT : Electronic Funds Transfer

EPS : Electronic Payment System

ECS : Electronic Clearing System

ATM : Automated Teller Machine

EDI : Electronic Data Interchange

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CHAPTER I:
INTRODUCTION

1.1 Introduction

To stay ahead of the competition, businesses must understand their clients, comprehend the direction of their industry, and predict the systems that their customers will require. They frequently collaborate with them on both immediate implementation and future planning. Businesses must monitor the performance of their competitors in order to satisfy customer value expectations. Therefore, a business has to have a superior value delivery system and a more competitive value position (Lanning, 1998). An organization's performance depends on how successfully it executes its service innovation to open up new markets because many innovation efforts entail introducing new services, growing current ones, and/or enhancing the service method of delivery (Berry et al., 2006). The term "technology readiness" refers to how people use technology to achieve their goals (Parasuraman, 2000).

These days, e-banking may be used for all banking operations, including creating a new account, reviewing the balance, transferring funds, making cash deposits or withdrawals, paying bills online, purchasing insurance or other financial products, and more. The technology is available around-the-clock, allowing customers to conveniently do a variety of banking operations with a single click. Customer service made possible by I.T. has slowed down the line at the bank's deposit and withdrawal kiosks. It is necessary to find out exactly how customers feel about using IT-enabled customer service.

1.2 General Banking Scenario in India - Introduction and Reforms

These days, India's overall financial situation is quite dynamic. When the Indian government started taking steps to actively participate in the country's economic life, the banking industry in India looked quite different. Customers' expectations of performance and their reported experiences of performance are compared in another study by Parasuraman, Zeithaml, and Berry (1988). This gives the measurer a satisfaction gap that is quantitative in character and objective.

Ferrentino and Boniello (2020) assert that customer satisfaction is calculated by dividing the perception of performance by the performance expectation. so that we may identify areas for development and assess if these changes have improved customer satisfaction once they have been put into place.

It is impossible to enhance anything without a way to quantify it. That was Lord William Thomson Kelvin, who lived from 1824 to 1907.

Numerous banks having mixed ownership are a defining feature of the Indian financial sector. The banking sector in India includes both large and small institutions, as well as cooperative and local area banks, small finance banks, and scheduled banks.

Scheduled banks: The Reserve Bank of India Act, 1934's second schedule lists 137 commercial banks in India as of March 2024.

Non-scheduled banks: Financial organizations exempt from Schedule 2 of the 1934 Reserve Bank of India Act.

Cooperative banks: Cooperative financial organizations that are owned by their members are subject to regulation by the NABARD and the RBI.

Local area banks: Established in 1996, private local banks have authority over two or three adjacent areas.

Small finance banks: Banks that were established solely to carry out basic banking operations in order to promote financial inclusion

Other institutions: NBFCs/AIFIs/SFCs/SIDCs.

Online and mobile banking, financial products, and safe deposit lockers are just a few of the many services offered by Indian banks. By contrast, public sector banks had somewhat more than 90% of the banking system's total assets in 1991.

In accordance with the RBI Act of 1948, the Reserve Bank of India was nationalized on January 1, 1949. The Indian government gave the Reserve Bank of India (RBI) the authority "to manage, command, and monitor the banks in India" in 1949 when it passed the Banking Regulation Act. The Banking Regulation Act also made it clear that opening a new bank or a branch of an existing bank required an RBI license and prohibited institutions from sharing directors. The Indian banking industry had developed into a vital tool for quickening the nation's economic expansion by the 1960s. With effect from midnight on July 19, 1969, the 14 biggest commercial banks were nationalized by an edict issued by the Indian government. A second round of nationalizations, this time in 1980, included six more commercial banks. Officially, nationalization was justified by the need to give the government more control over the lending process. The Indian government

controlled over 91% of the nation's banking industry after the second phase of nationalization.

The following is a synopsis of the Indian banking reforms:

Yuvaraja and Reddy (2021) The implementation of international accounting and capital adequacy standards, interest rate deregulation as well as the arrival of private and international banks highlight the need to consider the Indian economy's circumstances while determining the pace and sequence of financial sector changes.

Rao (2015) came to the conclusion that banking system in India has changed from being a banking system to an international banking system. Banks are being forced by regulations to improve their operating strategies and skill sets. To reach the pinnacles of international excellence and fulfill its crucial role in addressing global challenges, the system needs a combination of new technology, closely monitored credit and risk assessments, treasury management, product diversity, internal control, external oversight, and highly qualified personnel.

According to Goyal and Joshi (2022), the banks are being forced to try novel approaches with the same old inflexible structure and system because of the new issues they are facing. More administrative and managerial independence for the management is needed, together with corresponding and goal-oriented accountability.

1.3 Services in Indian Banking Sector for their customers

The following services have been summarized based on Bedi (2020)

1.3.1 RTGS: First introduced in India in March 2004, the RTGS system enables banks to electronically instruct customers to transfer money to an account at another bank.

1.3.2 EFT: Through the EFT system, anybody who wishes to pay another individual, business, etc., can go to his bank and pay in cash or provide instructions or permission could move funds directly from his own account to the recipient's or beneficiary's bank account.

1.3.3 EPS: These days, people talk about a lot of different things online, including e-governance, e-mail, e-commerce, and e-tail. Similarly, India has already modified the Negotiable Instruments Act to incorporate truncated checks and electronic check instruments as a precursor to the adoption of electronic checks.

1.3.4 ECS: A retail payment method called Electronic Clearing Service can be utilized for comparable bulk payments and receipts, particularly when each individual payment is recurring and of a comparatively modest value.

1.3.5 ATM: Customers with an ATM card can use this gadget to do standard banking operations without speaking to a human teller. In addition to withdrawing cash, customers may use ATMs to pay bills, deposit cash or checks, see account balances, transfer funds between accounts, and much more.

1.3.6 Tele Banking Services: Customers may do all non-cash banking tasks over the phone with the help of tele-banking. For easier inquiries and transactions, this device uses an automatic voice recorder. Staffed phone terminal are used for complex transactions and inquiries.

1.3.7 EDI: EDI is the electronic exchange of business documents, including purchase orders, invoices, shipping notifications, receiving advice, and more, between trading partners in a common, computer-processed format. Payments and financial data can also be sent electronically via EDI.

1.4 The major efforts and attractions of Indian Banking Industry

1.4.1 How can banks win back the trust of their customers?

The following points are based on the work of Choudhury (2018)

- **Promote consumer self-service:** In order to attract and persuade self-directed clients, banks must enhance the information and guidance they offer, particularly financial planning tools, product lines, and price packages.
- **Personalized banking:** Clients are more likely to offer their banks more regular updates when they report a more customized experience.
- **Improved service and value:** Consumers are seeking greater control over their connections and will compare prices and rates to find the best deals for the quality of service.

1.4.2 Banks vying for the interest of clients who have higher expectations

Since 2011, the percentage of consumers who want to switch banks has grown, with 50% of consumers worldwide citing excessive costs and fees as the main cause. Customers seem to want more than just a better price, though; they also want the freedom to control the relationship by getting in touch with their bank whenever and wherever they want. For straightforward purchases, they might choose online channels, but for more complicated

ones, they want superior, individualized services (Jham & Mohd, 2019).

- Customers often bank with one or two banks in more developed economies, including the US and Latin America, mainly to guarantee they get the finest goods and services at the most competitive rates.
- Due mostly to worries about possible bank collapses, customers in rising economies like China, India, and Japan frequently bank with numerous providers. (Note: Since 2011, the percentage of consumers with one bank has decreased from 41% to 31%, while the percentage of customers with three or more banks has climbed from 21% to 32%)

1.4.3 How can banks provide their clients with more individualized services?

(Adapted from Manrai & Manrai, 2007)

- **Make promises about services and prices clear:** The majority of clients are unaware of their annual expenses, despite the fact that pricing is crucial to their pleasure.
- **Provide a consumer experience using tiers.** Consumers ought to be able to purchase certain goods and services and be eligible for loyalty-based upgrades.
- **Switch to omni-channel distribution from multi-channel:** Banks must adopt an omni-channel strategy that leverages consumer data collected from social media, websites, branches, and other sources, rather than relying just on multi-channel distribution. (Note: Since 2011, the percentage of consumers worldwide who intend to switch banks has risen from 7% to 12%.)

1.4.4 How can banks improve the experience of their customers?

As noted by Prabhakaran and Satya (2023)

- Making low-cost digital channels the go-to option for consumers. Banks should utilize pricing incentives to entice clients to utilize digital channels wherever feasible.
- Make spending on important customer encounters a top priority. Banks can maximize the impact on attrition, dormancy, and loyalty by concentrating operational changes on the most valuable interactions with their clients.
- Utilize cutting-edge technologies to create the next retail bank. Delivering a more affordable, dependable, adaptable, and still personalized client experience requires the use of technology.

1.4.5 Internet Services- Banking in India

Internet banking, mobile banking, tele-banking (also known as phone banking), and automated teller machines (ATMs) were all described in detail by Jadhav (2018). While doing financial transactions online, it is also common practice to talk about the benefits, drawbacks, and security aspects of e-banking. This dissertation compares public and private banks and examines the barriers to internet banking expansion in India. The researcher also outlines the benefits of online banking, citing time savings, increased customer loyalty, and the ability to draw in new clients as some of the main perks, enhanced consumer access, lower customer attrition and providing online education.

1.5 Research Problem

Customers and banks have both benefited from the analysis of client demands and preferences. The study will assist identify consumer wants and successfully improve customer satisfaction while also helping to re-configure e-banking strategies by making IT-enabled customer services more customer-centric, to better understand the latest viewpoints on IT-enabled customer services and how to best address new consumer demands, a comparison of banks in the private and public domains would be beneficial. Additionally, the research will offer suggestions on how these IT-enabled customer services might improve consumer perceptions of quality and happiness, which would reduce customer attrition and save bank operating costs.

In terms of information technology (IT) enabled customer services, this research would be useful for the banking industry as it would reduce operational expenses and bank traffic since fewer consumers would need to visit the bank for various services. The survey would also help bank managers determine which demographic groups are most likely to use IT-enabled consumer services. Effective methods to increase the use of IT-enabled client services may be formulated by bank executives and staff members in practice. In terms of customer happiness and quality, the study will contribute to the development of more customer-centric IT-enabled customer services. Examining how these interactions with clients might improve customers' perceptions of quality and satisfaction will be beneficial.

1.6 Research Objectives

The goals of the study were derived from the research aim statements. The following are the research objectives that have been defined in accordance with this:

- The first goal is to examine and assess the demographic variables affecting consumer preferences for IT-enabled customer service in relation to the selected banks in New Delhi. There are a lot of demographic factors that must be thought about, including gender, age, profession, and degree of education.
- The second objective is to compare public and private sector banks in India to see how customers prefer customer services that are facilitated by information technology. Customers' preferences in public and private sector banks will be compared based on IT-enabled customer service aspects such location, time, cost, comfort, safety, and user-friendliness, as well as other qualitative factors.

1.7 Research Question

- Do various demographics factors influence preferences for I.T. enabled customer services in banking sector in New Delhi?
- What are the best bank options for customers in New Delhi, in terms of the services provided by public and private sector banks that are enabled by technology?

1.8 Research Hypothesis

1.8.1 Gender

H_0: Gender has no influence on the adoption of I.T. enabled customer services.

H_1: Gender has significant influence on the adoption of I.T. enabled customer services

1.8.2 Age Category

H_0: Age has no influence on the adoption of I.T. enabled customer services.

H_1: Age has significant influence on the adoption of I.T. enabled customer services

1.8.3 Educational Qualification

H_0: Educational level has no influence on the adoption of I.T. enabled customer services.

H_1: Educational level has significant influence on the adoption of I.T. enabled customer services.

1.8.4 Occupation

H_0: Occupation has no influence on the adoption of I.T. enabled customer services.

H_1: Occupation has significant influence on the adoption of I.T. enabled customer services.

1.8.5 Convenience

H_0: Convenience has no influence on the adoption of I.T. enabled customer services.

H_1: Convenience has significant influence on the adoption of I.T. enabled customer services

1.8.6 Cost

H_0: Cost has no influence on the adoption of I.T. enabled customer services.

H_1: Cost has significant influence on the adoption of I.T. enabled customer services.

1.8.7 Time

H_0: Time has no influence on the adoption of I.T. enabled customer services.

H_1: Time has significant influence on the adoption of I.T. enabled customer services.

1.8.8 Hypothesis for Comfort

H_0: Comfort has no influence on the adoption of I.T. enabled customer services.

H_1: Comfort has significant influence on the adoption of I.T. enabled customer services.

1.8.9 Hypothesis for Safety

H_0: Safety has no influence on the adoption of I.T. enabled customer services.

H_1: Safety has significant influence on the adoption of I.T. enabled customer services.

1.8.10 Human Interface

H_0: Human Interface has no influence on the adoption of I.T. enabled customer services.

H_1: Human Interface has significant influence on the adoption of I.T. enabled customer services.

CHAPTER II:

REVIEW OF LITERATURE

2.1 Introduction

Even though electronic-banking methods are widely used in India's banking industry, little is known about how certain demographic factors affect the use of IT-enabled banking services. Due to socio-cultural norms and differences in technology literacy, customers may encounter additional difficulties and impediments when trying to access and use digital payment systems. Efforts to create comprehensive financial services of every client are hampered by this incomplete knowledge. In order to identify obstacles, possibilities, and tactics to improve digital financial accessibility and use, this thorough literature review aims to investigate the complex dynamics of demographic factors within India's e-banking ecosystem. The literature also seeks to determine whether IT-enabled customer services are preferred by Indian banking clients and if these preferences vary across public and private sector banks. With the intention of fully comprehending the many factors that are expected to affect the uptake of e-banking services among banking clients, this literature study is structured into several parts.

2.2 Gender

Due to its accessibility and ease of identification, gender represents one of the most often employed demographic traits to divide up markets (Jung & Shin, 2019). Gender has a major role in the acceptability of online banking since many people believe that male and female bank clients behave differently (Abayomi et al., 2019).

According to Li et al. (2008), women are perceived as being less willing to test out new technical advancements since men go through the phases of technological adoption more quickly than women. Furthermore, men's views toward embracing technology are influenced by how beneficial they believe the invention to be, but women would rather know how user-friendly it is (Windasari & Albashrawi, 2021). In the past, the patriarchal system in developing nations held that males should be in-charge of the home. This belief was founded on the roles that each gender performed in the advancement of society rather than gender inequity (Hyland et al., 2020). However, the role of women in the home and in industry has changed significantly as a result of successful female empowerment and societal support (Bhatia & Singh, 2019).

Ideologies that women's contributions are unrepresented continue to dominate the undeveloped position of women in several developing nations (Anunobi, 2002; Mhembwe, 2019). There hasn't been much progress in dispelling gender prejudices regarding women's incapacity to use digital systems, including internet banking (Hilbert, 2011; Merhi et al., 2021). For this reason, it is sexist to think that women are naturally resistant to technology while males are naturally more comfortable with and skilled with its use; there is evidence of women's technological adoption (Mogaji et al., 2021).

Additionally, the primary causes of women's low technological engagement are the unfavorable circumstances they encounter, including unemployment, lack of education, and low income (Dodel & Mesch, 2020). Women are more receptive than males to actively using digital applications when these unfavorable circumstances are rectified. Women are less likely than males to participate in technology, according to earlier empirical research done in impoverished nations like Swaziland (Antonio & Tuffle, 2014; Fauzi et al., 2020).

Liberalization has increased the use of online banking and other technology, which in turn has given more women access to employment, education, and income (Besedeš et al., 2021).

Because of the possible ramifications for gender equality and financial inclusion, research on how gender affects digital payment systems, specifically in the banking sector of India has attracted interest. The significance of precision, security, as well as convenience in online transactions, all of which are relevant for both genders, is highlighted by Yu et al. (2002) and Baddeley (2004), who provide insights into the larger landscape of electronic payment systems. The complexities of gender relations in digital payment adoption and use remain largely unexplored, nevertheless. According to Kim et al. (2010), resolving security and trust issues might be crucial to advancing gender-inclusive digital financial products as they provide insight into how these factors affect customer behavior in electronic payment systems. A paradigm for comprehending widely used payment mechanisms and their uptake by various demographic groups is offered by Sudarno (2012), which may provide light on gender-specific choices in India. Aigbe and Alkpojaro (2014) and Singh and Rana (2017) also look at the potential and problems of electronic payment systems, emphasizing the need to solve privacy, security, and usability issues in order to improve gender parity in digital financial access. Further investigation via empirical studies such as the one suggested in this research is necessary, as there is still a deficiency in empirical research that focuses explicitly on the gendered features of digital payment technologies within the Indian banking environment.

Given the paucity of existing research, further studies are required to examine the ways in which gender affects internet banking usage in developing nations like Swaziland (Onyia

& Tagg, 2011). Financial institutions, such as banks, could benefit from understanding the gender gap in online banking acceptance and use in order to develop strategies to narrow the gap. Given that men and women are thought to exhibit distinct attitudes and behaviors around the use of technology, gender is considered significant.

2.3 Age Category

Studies looking at the connection between age and acceptance of internet banking are similarly lacking. Internet banking is increasingly common among younger generations, according to studies conducted by Karjaluoto et al. (2009). Online banking was more popular among younger generations, according to Alagheband (2006). All of these researches looked at how younger and older generations generally accepted online banking without taking cultural variations into account.

As one of the few studies to do so from a variety of age and gender perspectives, this research fills a gap in our knowledge by examining cultural differences in acceptance of online banking. One of the few research that looks at how cultural differences affect online banking adoption across countries, the research combines the cultural characteristics of Hofstede (2001) and Trompenaars and Hampden-Turner (1998).

In order to perform an empirical study, Bahl (2012) gathered managers' opinions on green banking financial products, energy-conscious banking, paperless banking, green building, and social responsibility services. It was discovered that the main focus of green banking initiatives was reducing carbon footprints through green construction.

It was the intention of Rajput, Arora, and Khanna (2013) to look at the connection between ecological and financial success. Despite the lack of a link between green banking adoption

and profitability, the results did show a robust relationship between net income and profitability.

Lloyd (2008) said that Canandaigua National Bank and the Community Bank in New York owe their success and growth in trust entirely to their CSR programs. Some areas for improvement were noted in Brazil's expanding economy: (a) raising employee and stakeholder awareness of sustainability; (b) modernizing institutional tools; and (c) increasing transparency in the disclosure of socio-environmental data (Lins, 2008).

According to Farooqi et al. (2013), client happiness is a critical component of commercial banks' performance. Commercial banks must work very hard to attract and keep consumers in this cutthroat time. The newest technology, E-CRM, which is thought to be one of the key solutions for banking issues, focuses on attracting, keeping, and expanding lucrative clientele. E-CRM, which basically deals with customer management over the internet, is what happens when the standard CRM idea is seen in the context of e-business.

2.4 Educational Qualification

Rana (2014) opines that digital banking encompasses more than just online or mobile platforms; it also involves middleware programs that connect databases and operating systems to other programs. The researchers set out to discover what factors impact customers' views of online banking based on their demographic information. The following theories were established: there is not any obvious connection between yearly income, education level, gender, or age in digital banking. Gender, age, income, occupation, and education were some of the demographic variables examined in relation to digital banking usage. The findings indicated that adoption was not significantly

impacted by age, career, or level of education. The use of digital banking was significantly correlated with both gender and income. The most popular digital banking platform for online purchasing is SBI.

Online banking use is greater among college graduates, according to Zheng (2010). Their wealth and level of education have a big role in whether or not they utilize telephone banking (AL-Ashban & Burney, 2001). People with higher levels of education are more likely to use internet banking, since it guarantees that financial transactions will take less time (Kim, Widdows & Yilmazer, 2005). This is likely due to the fact that educated people place a higher value on saving time. People with employment and higher levels of education are more likely to utilize online banking.

Similar to automated teller machines (ATMs), internet banking offers a new avenue for the distribution of conventional banking products and services. At first, banks used the Internet to advertise their key competencies, which included channels, products, and advice. They then started offering and distributing their own goods and services over the Internet. Less than 10 percent of the market used Internet banking between 1996 and 1998, according to a comprehensive survey done in 2001 by the Consumer Bankers Association. This describes the early adoption stage, when the banking sector is undergoing a dramatic transition and entering a new era of "anytime, anywhere" banking. Research on public perceptions carried out for the benefit of the European Commission in September 2003 found that cultural differences influence the formation of trust, and that a lack of trust is one of the primary factors discouraging customers from participating in online transactions. Internet banking use is influenced by more than just trust. Personal conventions, attitude,

intentions, beliefs, and the degree to which something is useful or easy to use are all part of this category, according to the Journal of Services Research (2007).

Internet banking usage patterns may also be influenced by demographics. Researchers in the Journal of Online Banking and Commerce (2006) concluded that women who took the survey had not fully embraced online purchasing just yet. Consequently, the key to gaining a competitive edge is raising the degree of service performance acceptability. Service quality has received a lot of attention since it is clearly correlated with financial performance, customer satisfaction, and retention (Al-Hawari et al., 2005). According to an assessment of Malaysian banking websites by Suganthi et al. (2001), every domestic bank has a website. Out of the 10 largest banks, just four had transactional websites. The other websites were informational in nature. Trust, online transaction security, acceptance of change, and a preference for human interactions are some of the behavioral and psychological issues that seem to be impeding the expansion of Internet banking, with an eye on the Italian market. For the purpose of determining whether banks see conventional banking operations and online banking as complementing or complementary, the research also looked at the interaction between the two. Despite some evidence suggesting that established banks are less inclined to adopt new financial innovations than innovative ones, way to do away with their branches system. A higher inclination to utilize online banking is linked to aspects including convenience, flexibility, safety concern, complexity, and responsiveness, according to earlier research (Barczak et al., 1997; Danniel & Strong, 1997).

2.5 Occupation

If you ask the unemployed, they are less likely to utilize online banking than blue-collar and white-collar workers (Stavins, 2001). People who are more likely to have to utilize computers and the internet for work purposes could inherently be more proficient with these tools than those who are not, suggests research by Kim et al. (2005). This means that those working in service industries are more prepared to utilize internet banking.

Additionally, according to Jun (2005) profession affects the uptake of online banking. Mannan (2010) analyzed the respondents by occupation and discovered that 45% of all e-banking users fall into the service category, 15% fall into the business category, 7% are professionals, and 30% are students. Online banking is increasingly common among service industry workers because of their greater access to computers and the internet.

One popular method of electronic banking is the automated teller machine (ATM), which is used mostly by members of the salaried class (Pandan & Sharma, 2012). Findings from a survey on electronic banking channels and respondents' evaluations of the bank's general characteristics were reported by Joshua (2009). The highest proportion of respondents (56.7%) was from the salaried group, the business/self-employed category came in second (29.1%). The vast majority of online banking users work in service-related jobs (48% of respondents), followed by business owners (27% of respondents) and independent contractors (12.7% of respondents), according to Gupta & Bansal (2012). The bulk of respondents belong to the service group, with the second largest contingent falling into the business category, as per the demographic survey conducted by Sharma et al. (2012), which included both public and private sector banks. Credit and debit cards, online banking,

insurance, mutual funds, money transfers, mobile banking, phone banking, checking balances, and different lending programs are just a few of the financial services that these people are familiar with. By analyzing the respondent characteristics, Kaushal (2012) was able to ascertain how e-banking impacted the operational efficiency and service standard of the Indian banking sector. Of the 400 people he polled, he found that 43.3% are military personnel, 20.5% are business owners, and 17.5% are employed by companies that use transactional websites, sometimes known as e-banking platforms. Additionally, 95% of Indian salaried people have bank accounts (Sisodia et al, 2005). Therefore, it is necessary to ascertain how paid workers feel about electronic banking delivery methods. Therefore, we need to perform more study on the adoption features of the paid segment of society since there is a glaring research gap.

2.6 Convenience

Online customer service encompasses an array of features, including ease of use, product information, privacy, and financial security (McKechnie et al., 2006). According to DeYoung (2005), technology has the potential to enhance banking services and ultimately boost bank profitability via enhanced customer interaction, search capabilities, service flexibility, usability, compatibility, and comfort. Customers' prior attitudes about technology impact their actions when it comes to (Karjaluoto et al., 2002) internet banking. Convenience increases the likelihood that customers will utilize online banking, secure, and provides immediate gratification (Barczak et al., 1997).

Research has shown that age has a big role in people's willingness to try out new technology (Flavia'n et al., 2006). Coming of age during the computer boom has made

today's youth second nature when it comes to utilizing the internet. Howcroft et al. (2002) found that the "convenience" aspect of online banking is particularly well-received by younger clientele. Similarly, research on Finnish customers conducted by Karjaluoto et al. (2002) indicated that those who use Internet banking tend to be younger and more tech-savvy. Sathye (1999) claims that those who utilize online banking services tend to be youthful, well-educated, comfortable with computers, and positive about technology.

According to Kotzab and Madlberger (2001), banks use the internet to provide services online and it is acknowledged as a popular medium for service delivery. The degree to which customers trust internet services determines how likely they are to use them. According to Papadopoulou et al. (2001), trust promotes loyalty to the service provider and is a necessary component of long-term relationships, since there is no in-person particularly crucial in an online situation. The establishment of trust between a company and its clients is essential to the success of any organization.

In academic circles, online banking channels have become more and more popular (Acharya et al., 2008). Online transactions are seen as hazardous as they involve the sharing of private data, such as credit card details. Online platforms provide users freedom, accessibility, and convenience, but they also diminish in-person, personalized engagement (Jabnoun and Al-Tamimi, 2003). This discourages customers who prefer face-to-face interactions and lack experience with complex technological systems. By enhancing service quality, technology may not only increase the efficiency of service delivery but also aid in client retention. Internet banking, as described by Pennathur (2001), is an open system that facilitates accessibility and gives users instantaneous access to an organization's data system at any time and from any place.

Research has examined a number of variables that prevent consumers from embracing e-business models, such as perceived danger in the contact, inadequate education to grasp website instructions (Im et al., 2003), and incapacity to understand technology (Flavian et al., 2006). Customers who are familiar with technologies are less doubtful about its security, according to Ba (2001)Concerns regarding the safety of financial transactions impact how customers feel and behave while using online services. Security and privacy concerns are the main reasons why customers are wary of internet banking. A study by Loonam and O'Loughlin (2008) sought to ascertain how Irish consumers felt about online banking. According to their findings, website features should improve flexibility, accessibility to information, service recovery, trust, and service quality. These elements were thought to be crucial for consumers' adoption of online banking.

Factors such as perceived risk and trust are crucial, according to study on online banking penetration in China done by Zhao et al. (2010). Establishing trust was vital in reducing the perceived danger for clients. Laukkanen et al. (2008) looked at how banks in Finland have started accepting customers' payments online. A lot of people's mental health issues had a role in why they didn't want to utilize internet banking. Polasik and Wisniewski (2009) found that customers' impression of the security of online transactions was a major predictor of their readiness to establish an online account, in their research on Polish consumers' usage of online banking. Consumers' actions when using internet banking were examined using three popular models: the technological acceptance model, the theory of rational action, and the theory of planned behavior. From what we can see, the technology adoption model was the most applicable of the three. The degree to which customers trusted a financial institution greatly affected the rate of online banking adoption, Kim et al (2009)

states that customers' distrust of new technologies influences their behavior when using such technologies.

The dependability, complexity, trialability, and risks of online banking were studied by Ndubisi and Sinti (2006) in relation to the adoption rate among Malaysian customers. The results suggest that customers are more influenced by the practical elements of bank websites when it comes to using online banking than by the more hedonistic ones. Customers might have a more positive impression of online banking if essential data is provided and websites are easy to use. Specifically, Chong et al. (2010) looked at how many Vietnamese people used online banking. Consumers' faith in a company has a major impact on how open they are to trying out new technology. Perceived utility was shown to have a substantial effect on customers' adoption of the internet, according to research by Abbasi et al. (2011) on internet adoption in Pakistan. Social impact shaped the people's opinions, and the technological adoption model was unable to describe the behavior of internet adoption.

Building, fostering, and preserving relationships with consumers require trust. It may be characterized as trust in the transaction and preparedness to depend on the service provider (Singh & Sirdeshmukh, 2000). According to Flavian and Guinalı´u (2006), the client feels scared that their private data can be exploited and shared with unauthorized persons. An investigation on Taiwanese internet banking usage was carried out by Wang et al. (2003). Their research showed that trustworthiness of transactions, practicality, models. Privacy and security worries discouraged customers from using internet banking. Sathye (1999) asserts that security, user-friendly websites, cost, and infrastructure issues all affect how customers behave while using online banking. Among the many concerns voiced by UK

customers about using online banking, White and Nteli (2004) identified security as the most pressing. Consumers' opinions and usage of online banking services are impacted by their mistrust of these services. As stated by Satye (1999).

Customers' perceptions of honesty, competency, and dependability may be used to understand trust, which can also be seen as a behavioral component (Flavia´n and Guinalı´u, 2006). Internet banking adoption can be aided by a website's reliability and trustworthiness (Urban et al., 2000). According to research, online banking transactions carry a far higher risk than those conducted through conventional banking systems. The majority of clients avoid utilizing online banking because they are afraid about losing money. Consumers worry that information provided over banking websites might be captured by hackers or other unauthorized persons (Alda´s-Manzano et al., 2009).

M-Banking

The conventional retail banking delivery method has changed as a result of information technology developments (Laukkanen, 2016). Financial institutions currently offer their goods and services through a variety of channels, including branch banking, automated teller machines, online banking, and mobile banking. Nevertheless, because of its greater localization and popularity, M-Banking stands out as the most inventive and possibly successful channel (Koenig-Lewis et al., 2010). The capacity of M-financial to determine a user's location and offer financial services specific to that area is one of its unique features. For instance, it may inform the client of the available ATMs, local currency conversion rates, and available money transfer options (Junglas & Watson, 2006). Mobile banking is the preferred way to obtain financial services since it offers several benefits over

traditional banking. Financial institutions now use mobile banking as a key tool to satisfy client demands and keep a competitive edge (Tam & Oliveira, 2016). Customers may use their mobile devices to conduct all financial activities via M-financial, which is a mobile banking extension of internet banking (Laukkanen, 2016). For customers, banks, and telecom providers, mobile banking offers more advantages than ever before (Shareef et al., 2018). M-Banking has become a very useful and possibly revolutionary instrument for mobile commerce, claims Laukkanen (2016). The proliferation of mobile banking has been the subject of several studies (Shankar & Kumari, 2016; Shareef et al., 2018). Because M-Banking is advantageous to banks as well as the customers, a large number of research have looked at adoption intention behavior in the context of M-Banking (Shankar, Jebarajakirthy, et al., 2020), why? Because banks want to know how to increase M-financial adoption, and using the M-Banking platform to access financial services is all about convenience (Shareef et al., 2018). Thus, it is essential to comprehend the degree to which the ease of online banking impacts the adoption of M-Banking.

As consumers spend more time engaging in other activities and less time shopping, their need for convenience has increased, leading them to focus on online shopping (Kashyap & Kumar, 2018). Due to their limited time, consumers are motivated to look for ways to make purchases faster and easier (Berry & Cooper, 1990). The “convenience” element, according to Copeland (1923), is the time and effort required to buy consumer products. Retail convenience may thus be defined as the price that consumers pay for the time and effort they spend shopping. According to marketing literature, non-monetary consumer resources that impact purchase behavior include time and effort (Bender, 1964). (Beik and Herrmann,

1968) Retailers have focused their efforts on offering services that let customers make purchases more quickly and easily after realizing this requirement (Shaheed, 2004).

The research team behind this study set out to answer the question, “How do convenience factors affect the inclination to use M-Banking”. To reduce time and effort, consumers embrace and utilize mobile banking channels (Shankar & Rishi, 2020). Consumer choices for M-Banking and transactional activities are heavily influenced by convenience (Kaura, 2013); (Shankar & Rishi, 2020). Customers may use this app to conduct financial transactions and obtain a variety of information about banking products from any location (Shankar, Jebarajakirthy, et al., 2020). Customers may save time, energy, and gas money by doing transactions away from the bank. The M-financial platform allows customers to access financial services whenever they choose, eliminating the need for time-consuming in-person bank visits. Customers therefore favor using online banking services for their financial operations. The primary elements that draw customers to the M-Banking platform in order to access banking services are the following: search comfort, access comfort, evaluation comfort, benefit convenience, ease of transactions, post-benefit comfort, and ease of use (Benoit et al., 2017; Roy et al., 2018; Shankar & Rishi, 2020; Jiang et al., 2013; Duarte et al., 2018).

2.7 Cost

Using mobile money enables people to save money for unexpected expenses like medical expenses at the time of emergency. People utilize mobile money to save for unforeseen circumstances like medical crises and to enhance easy access to cash (Abdinoor & Mbamba, 2017). Better saving habits are fostered by mobile accounts, which allow users to avoid unnecessary spending and save instead of spend. Users of mobile accounts often save little sums of money (Ahn & Nam, 2022). Because students can easily deposit money into savings accounts along with earn interest over a predetermined period of time, a significant positive association exists between mobile banking and services and savings behavior, according to a study looking at how mobile banking services affect university students' spending and saving habits in Africa. Additionally, because university students utilize, it has been discovered that these services have a favorable association with their spending behavior (Gitau, 2018). Low-income people are far more likely to save for contingencies and future events when they utilize mobile money (Anane & Nie, 2022). The usage of mobile financial services helps reduce the gender gap in financial inclusion and increases borrowing, investing, and insurance purchases from traditional financial institutions (Shruti, 2020).

The affordability of online banking services is another factor that influences customers' propensity to utilize them. New technology would only be adopted by customers if they were priced sensibly, claim Aliyu and Tasmin (2012). The adoption of new technologies may result in lower service costs, which would then result in cheaper service prices, claim Campbell and Frei (2010). They discovered that reduced interaction costs seem to have the unexpected consequence of making people use services more frequently. One of the

primary factors influencing people's internet adoption patterns is this as well. Sohrabi, Yee, and Nathan (2013) claim that because internet banking is less expensive, customers frequently utilize it. Comparable to the study conducted by Aliyu and Tasmin (2012), which demonstrated a relationship between the frequency of online banking use and a number of expenses (including internet usage and service fees). They said that online banking customers are cognizant of and ok with the costs. In summary, people's opinions about the cost of internet banking may influence their decision to support or oppose it.

2.8 Safety

There are many benefits to internet banking, yet many customers still avoid it because they are afraid their personal information would be compromised (Kuisma et al, 2007). Internet banking security is a major component in customers' choice to utilize electronic banking, according to Laforte and Li (2005). Several variables impact the adoption of electronic banking, as shown. According to Abu-Shanab & Pearson (2007) and Abu-Shanab, Pearson, & Setterstrom (2010), security is one of the main factors that is considered crucial for the success of online banking services. Researchers discovered many forms of online banking security flaws that led to both account users' and institutions' financial losses. The security breaches had an explanation (Jassal & Sehgal, 2013). Internet banking offers a number of benefits and well-liked services, but both customers and suppliers face a number of difficulties. The biggest worries are security-related (Pathan and Nigudge, 2014).

Numerous studies have emphasized the different security concerns that consumers have when thinking about using e-banking services. In order to allay consumer fears and

encourage the use of e-banking, banks and legislators must have a thorough understanding of the scope and character of these security issues.

The Protection Motivation Theory (PMT) and the Technology Acceptance Model (TAM) are two theoretical frameworks that shed light on the psychological processes that underlie choices to embrace e-banking. According to TAM, consumers' intents to embrace technology are influenced by its perceived utility and ease of use, with security concerns serving as possible obstacles (Davis, 1989), conversely, PMT highlights how coping strategies and perceived danger influence people's adoption behaviors, emphasizing the value of trust-building techniques (Rogers, 1975).

The degree to which e-banking is utilized is significantly influenced by the dependability and reliability of clients' financial systems and service providers. Banks employ a range of trust-building strategies to boost customer confidence and relieve security concerns, such as security technologies (Dhamija et al., 2006), communication strategies (Fogg et al., 2001), and regulatory processes for compliance (Jain et al., 2013).

Empirical research has proven time and time again that customers' fears about using e-banking services have a major influence on their intentions to do so. Research and surveys show that factors including how trustworthy banks are, how much control users feel they have over their personal data, and how effective security measures are the main determinants of whether or not people use online banking (Karjaluoto et al., 2002; Liao et al., 2009). The report concludes by emphasizing the necessity of resolving security issues and fostering confidence in order to promote the use of internet banking.

Rao et al. (2011) looked at patrons' perceptions of the service quality offered by commercial and public banks in Visakhapatnam, India. According to the author, the aspects of service quality that received the greatest ratings were assurance and reliability, while the aspect that received the lowest ratings was tangibles. Furthermore, the poll found that had vastly different views of the service quality they experienced. Santhiyavalli (2011) looked at the key factors that contributed to the level of customer satisfaction with the service offered by a few State Bank of India branches. This research used the SERQUAL Model and found that out of the five elements, the most important ones for customer satisfaction are "reliability," "responsiveness," "empathy," and "tangibility.".

2.9 Other Studies

According to Jha et al. (2008), technology has significantly contributed to the development of the Indian banking industry by lowering transaction costs, increasing speed, and improving operational correctness and efficiency. These days, "anyhow, anywhere, and any type" banking is the focus of financial services. This article aims to take a look at how the Indian banking business is using new technology, what customers know, and how accepting they are of these changes. India has the best technological access, advancements, and breakthroughs in a number of banking functional areas. One of the fastest-growing sectors of India's economy, banking relies heavily on technology to better serve its customers. Indian banking has evolved throughout time from a conventional customer service model to a contemporary one that allows banks to provide their services to clients whenever they want. Banks are now visiting their clients to entice them. The banking industry is now undergoing radical transformations in how it operates and provides its

services to clients. Banks are now progressively transitioning to a high-tech banking era as their reliance on technology grows.

According to Dangolania (2011), the introduction of information technology into every facet of business and human life has been so evident that it doesn't require further emphasis. In the financial sector, information technology has been crucial. The primary goal of this study is to investigate how IT has affected Bank Keshavarzi Iran's banking system. The data comes from both the employees and the clients. A 5-point Likert scale and an actual percentage were then used to analyze the data in order to determine the impact of information technology on banking system affairs. The findings went on to demonstrate that there are three ways in which the financial industry benefits from IT: IT significantly reduces costs, streamlines network transactions, and saves time for both consumers and staff.

According to Saranya and Vasantha (2013), technology support is crucial for the banking industry's successful operation in today's high-tech environment. The focus of this research is on how financial institutions use technology. The foundation of the Indian economy today is the banking industry. The last few decades of the 18th century saw the establishment of banking in India. The first banks were the Bank of Hindustan (1770-1829) and the General Bank of India (1786). We cannot imagine the banking industry's prosperity without communication and information technologies. It has increased the banking industry's economic role. Payments and financial transactions can be handled quickly and easily. Credit cards, automated teller machines, tele-banking, mobile banking, online banking, etc. all contribute to a safer banking experience. It also emphasizes how well technology is used in banking and how consumers are aware of products. The research

demonstrates how consumers may utilize technology in banking. From the whole population of Chennai, 200 participants were chosen to participate in this research. To analyze the data and extract meaningful findings, a number of methodologies were applied, including chi-square, factor analysis, and simple percentage analysis. The report offers a number of recommendations for banks to enhance their efficient use of technology.

According to Vimala (2015), banks that do not employ technology to make their services accessible to the general public and to harness the potential of the rural sector would suffer as banking becomes more complex in the modern day. In the end, technology would be the primary facilitator and differentiator in achieving this goal. However, there can't be a one-size-fits-all strategy. There have been massive shifts in the way a lot of businesses function in the last few years as a result of the phenomenal developments in ICT. As a result, banks have launched web-based services, which are aptly named Internet Banking. Numerous studies have examined various facets of this phenomena and how they affect the banking industry. This study aims to investigate how an IT installation affects a subset of Bank of India, Bangalore Urban clients. The research is conducted using a standardized questionnaire that is given to 100 chosen consumers. Analysis of the replies is then conducted, and the study's conclusions are presented along with a few recommendations.

According to Rajan and Shamini (2018), as consumers increasingly choose to communicate with their banks through digital channels like internet and mobile, retail banks worldwide are anticipated to experience a shift to digital over the next three to five years. Indian banking technology has come a long way from the days of back office automation to the online, centralized, and integrated systems of today. These days, people like to be able to access their bank accounts at any time and from any place. This

necessitates being innovative, robust, secure, optimized, and ready to meet the needs of empowered and tech-savvy customers. Based on customer preferences and expectations, a study looks at the future banking service channels with specific reference to Tiruchirappalli city. The research's introduction, literature review to guide it, research methodology to apply it, data analysis to meet the study's goals, and conclusions and recommendations are all included in this document.

Regi (2017) asserts that an IT-savvy consumer has more leverage and a wide range of payment alternatives, including credit cards, debit cards, ATMs, RTGS, NEFT transfers, ECS, and mobile payments. However, because technical aspects are changing quickly and continuously, it is impossible to foresee the future with any degree of accuracy. The study focuses on the following goals: (i) To investigate how consumers see technological banking, (ii) To learn about the issues that consumers encounter when using technological banking (iii) To examine how different bank types relate to issues that clients encounter while using technological banking. Primary data was gathered using a questionnaire and the basic random sample technique. The 600 samples were chosen from a variety of governmental and private sector entities in the Tirunelveli district. Among them were Karur Vysya Bank, ICICI, HDFC, Indian Bank, Indian Overseas Bank, and State Bank of India. The main conclusions about the difficulties consumers have when using technology banking are covered in this study, along with recommendations derived from the data.

The study by Rajesh and Palpandim (2015) examines how information technology affects the banking services that clients may access. By reaching new clients and creating cutting-edge services, information technology offers economies of scale in service delivery. India's banking industry has changed quickly, adapting technology to the new, cutthroat industry.

To provide quick service, it uses communication, mobile, and internet technologies. The present research set out to answer many questions about customers' demographics. This investigation, which involved 100 samples, was carried out in Southern Tamilnadu. An open-ended, well-designed questionnaire was used to gather the study's data. In order to accomplish these aims, this research employs a battery of statistical tests, including simple percentage analysis, factor analysis, t-test, chi-square, and multiple linear regression. According to the study's findings, banking services via IT platforms provide clients with satisfactory service, but they also need to be improved to keep up with evolving technological trends.

According to Jain and Popli (2023), information technology and deregulation have drawn several international banks to India, creating new goods, new markets, and efficient delivery systems for the banking industry. Options are enhanced, new markets are created, and productivity and efficiency are both improved. The Indian financial markets have reportedly turned into a buyer's market. In India, commercial banks have evolved into one-stop supermarkets. Value-added and personalized goods are causing mass banking to lose ground to class banking. With the help of technology, banks may create the appearance of a branch in the foyer of a corporate building without hiring employees to do manual tasks. Your bank's branches are open around the clock via e-banking, mobile banking, internet banking, ATMs, and tele-banking. The goal of these technologically advanced distribution channels is to reach as many clients as possible in the most economical and effective way possible. These financial innovations are fantastic because they offer a situation where both bankers and clients benefit. Effective utilization of technology multiplies growth and advancement.

According to Yeboah et al. (2013), Ghana's commercial banks and the majority of its rural banks have integrated IT with their business operations. The research assesses the kinds of technology that bank clients utilize, as well as the advantages and disadvantages of technology. To do this, structured and semi-structured questionnaires were employed in using a combination of methods to collect data. The findings show that ATMs, Internet banking, and electronic fund transfers at points of sale are the IT services that consumers utilize the most. All of the banks provided the most popular services, including branch networking, ATMs, direct deposit, and withdrawal services. The pace at which clients visit banking rooms and obtain services has increased when banks began offering IT services. The frequency with which clients use the services and the frequency of visits to the banking halls were influenced by their level of knowledge about the services. Customers have a number of difficulties, including poor technical skills, issues with Internet access, difficulties with online fraud, and IT's avoidance of face-to-face communication, which makes it challenging to receive prompt problem-solving assistance. In order to encourage consumer patronage, the research suggests that periodic educational campaigns be conducted regarding the technical facilities and how the banks use them. To ensure that the ATM can deliver its promised round-the-clock service, it should be constantly observed.

In their study, Raj and Rao (2018) attempted to determine how the banking industry's use of new technologies affected its clientele. This study's data came from the Reserve India's several banking sectors, which provided information on the technologies and how they were used. A basic percentage analysis will be carried out. According to questioners 30 collected and interpretations are given, this suggest that most of the customers of ATM

facility. Last but not least, the banks must provide information about e-banking services and the few papers that concentrate on the banking industry's technological advancements.

Online banking is the term for banking services that a bank offers through its website (Yee & Faziharudean, 2010). Customers of the bank may handle their account or accounts with little trouble thanks to it. Due to the accessibility and convenience of online banking, customers may utilize these services whenever and wherever they choose. Online banking was also one of the least expensive ways to purchase banking supplies, according to Pikkarainen, Pikkarainen, Karjaluoto, and Pahnila (2004).

Selvanathan (2015) asserts that trust has always been regarded as the most important element in interactions between buyers and sellers. Generally speaking, trust is the relative sense of security in an uncertain or dangerous circumstance. Trust is viewed as a means of lowering transaction costs from an economic standpoint (Chiou & Shen, 2012). Customers were more likely to participate in an exchange and their sense of risk was reduced, which led to more efficient transactions. Whether or not Malaysians utilize online banking is dependent on their banking needs, their trust in the bank, and their degree of comfort with online banking in the past (Dauda, Santhapparaj, Asirvatham, and Raman, 2007). While researching online trust, McKnight and Chervany identified a typology (2002). Trust in e-commerce and e-vendors arises from consumers' trusting beliefs and intentions. These beliefs and intentions are influenced by their personality traits. For example, when making a credit card payment online, consumers may trust the e-vendor, the website, or other people. Another concept is dispositional trust, which refers to their willingness to rely on others. With additional room for interpretation in the digital realm, trust takes on added significance (Chen & Barnes, 2007). Banks that want to improve their services must

prioritize building trust with their consumers, as this is one of the most important variables that may influence their choice to use online banking.

To keep up with the demands and expectations of the present, businesses of all generations, including our own, must make advantage of and master the technological advancements that have recently emerged. When it comes to creating and improving contemporary technology, information technology is crucial. Banks, being the backbone of any society and the center of every country's financial system, reflect the growth of the economy as a whole (Tiwari et al., 2019; Mori and Mlambiti, 2020).

The banking industry benefits from technological advancements and IT deployment as they minimize capital costs, lessen financial risks, and improve cost-effective intermediation, all of which increase bank welfare. The main purpose of IT in banking is to make it easier to allocate financial resources optimally in unpredictable situations. By lowering costs and lowering transaction risk, IT implementation improves the banking system's overall efficiency and guarantees seamless operation (N. Alkhaldi, 2017; Vijai and Anitha, 2020).

According to Avasthi and Sharma (2001), such technological developments are poised to change the global financial landscape. They underlined that technology will affect the whole banking sector by changing the distribution channels used by banking companies. They went on to say that in order to improve customer service and operational efficiency, Indian banks would have to employ technology. Research by Tiwari et al. (2019), Vijai and Anitha (2020), and Ragupathi and Sujatha (2021) suggest that if Indian banks prioritized the deployment of IT, they might enhance risk management, maximize resources, and provide new products and services to the market. Previous research has

shown that information technology is the only instrument that can help banks fulfill their objectives in a sustainable way on a global scale (Singh and Singh, 2012; Shukla and Kanna, 2017; Tiwari et al., 2019). Nevertheless, the banking industry is seeing some of the most significant and difficult changes due to technology advancements and the expansion of the Internet (Sanader, 2014; Shukla and Kanna, 2017).

Studies in India's banking business are anticipated to undergo changes due to technology improvements, as stated by Anandarajan et al. (2000), Sanakulov and Karjaluoto (2015), and Sidana (2017). IT has impacted employee productivity and improved staff operational efficiency, according to research by Sidana (2017) that focused on the difficulties banks and their regulators confront when using IT.

Tiwari et al. (2019) looked at how technology has affected banks and came to the conclusion that the introduction of new products, better risk management, and more efficient staff and customer service are all results of IT deployment in the banking business. The way companies are conducted has been altered by technology. Branch banks may abandon online and phone banking in the next years because to their intrusions (Mohapatra et al., 2015; Shaikh et al., 2018).

Anandarajan et al. (2000) looked at the effects of IT on the Indian financial industry and came to the conclusion that IT has made banking operations more precise, faster, and more efficient by consolidating the overlapping and repetitive processes into a single key pressing technology.

Shen et al. (2005) evaluated the significance of IT in the financial sector. IT advancements and expansion are opening up global financial resource pools, which disperses market risk

and lowers the danger to any one bank (Ayuketang Nso, 2018). This study was later corroborated by Bhuvana et al. (2016).

Later, Goswami (2021) gave special recognition to the innovative private banks in India that have embraced and fully integrated IT. India's private sector banks have paved the way for e-banking with their cutting-edge technologies. In addition to providing clients with significant convenience, Indian banks are venturing into net banking, which lowers their operating costs (Mohapatra et al., 2015; Bhuvana et al., 2016; Khan, 2017; T and Rao, 2018; Muazzam and Diwedi, 2020).

Lee, Kwon, and Schumann (2005) proposed that as the services of online banking are provided over the internet, users must be conversant with the technologies, including web browsers and personal computers. This was corroborated by a research by Laforet and Li (2005) that looked at Chinese consumers' perceptions of internet banking services. They found that internet banking customers tend to have higher knowledge with computers and other new technologies compared to individuals who don't utilize this service. In line with studies conducted by Saranathan (2008) and Karjaluoto, Mattila, and Pento (2002), they also detailed how familiarity with and comfort using the internet may be an effective measure of a society's acceptance of technological advancements. According to Thornton and White (2001), individuals may adapt and embrace online banking technology as their knowledge and confidence grow along with the rise in computer use.

Nasri and Charfeddine (2012) note that technical innovation has caused substantial shifts in the banking industry, due to banking's progress, ATMs, m-banking, tele-banking, and e-banking have largely replaced traditional methods of providing bank services (Sinha and

Mukherjee, 2016). Electronic banking is described in a variety of ways in the literature. Some of these phrases include Internet banking, e-banking, and online banking. Customers may carry out a variety of banking tasks and operations via e-banking, including bill payment, cash transfers, statement printing, account balance inquiries, and electronic payments. According to Khalfan et al. (2006), internet banking helps banks grow their market share, enhance customer satisfaction, retain current clients, lower operating and administrative expenses, and strengthen their competitive positions. IT is changing the banking industry in a way that promotes development by giving impoverished farmers in rural areas access to data, loans, and microcredit (Kamel, 2005). The increasing automation of banks in industrialized nations raises concerns about the consequences of replacing human connection with technology, since it may lead to a decrease in consumer trust and a rise in mistrust (Benamati & Serva, 2007).

The literature uses a variety of theoretical frameworks to describe the factors that influence bank customers' adoption of e-banking. Popular theoretical frameworks including the Theory of Reasoned Action (TRA), the Theory of Technology Acceptance (TAM), and the Theory of Planned Behavior (TPB) can help explain the connections between user ideas, attitudes, and intentions. According to Ajzen and Fishbein (1977), beliefs influence attitudes, which in turn influence intentions and behaviors. In addition to the social psychology concepts stated above, TAM has proven to be a crucial paradigm for understanding how consumers embrace IT (Davis, 1989). Perceived utility and ease of use are the main factors influencing attitudes, which in turn drive behavioral intention to use the actual system (Wang et al., 2003; Davis, 1989; Venkatesh et al., 2003). Based on these traits, TAM seeks to predict IT adoption. Perceived behavioral control, or the extent to

which a person feels in control of how they do an activity, is the main emphasis of TPB (Ajzen, 1991). As an adaptation of Fishbein and Ajzen's (1975) theory of reasoned action, TAM was primarily developed, according to Lee (2009), to model user acceptance of information technology. Users' views of the system's usefulness and their attitude toward using it impact their behavioral intention to use, which dictates the system's actual usage, according to this theory.

According to Sun and Zhang (2006), the Technology Acceptance Model (TAM) has sufficient explanatory power and might be enhanced by modifiers. The TAM model has already been used to forecast the adoption of internet banking in a number of countries, including Taiwan (Lee, 2009), Tunisia (Nasri & Charfeddine, 2012), India (Sinha & Mukherjee, 2016), and the Malay and Chinese ethnic groups (Khalil & Sutanonpaiboon, 2010). Al-Otaibi et al. (2018) examined customer satisfaction with mobile banking in Saudi Arabia and the UK, for instance, in spite of this sector. Furthermore, Giordani et al. (2014) demonstrate that high branch expenses have little impact on branch unhappiness. Although ATM users are more inclined to utilize Internet banking services, customers in Greece still prefer to visit banks. Furthermore, the Unified Theory of Acceptance and Use of Technology (UTAUT) model was presented by researchers in 2003 and could explain 70% of the variation in intention. The four dimensions that determine behavioral intents and use behavior, performance expectation, effort expectancy, social influence, and enabling circumstances, are influenced by four moderator factors: gender, age, experience, and voluntariness of use. According to Rodrigues et al. (2016), an online user's behavioral intention is determined by their cognitive decision to react favorably (like) or unfavorably (dislike) to online purchases.

Regarding adoption determinants, the research on electronic banking has identified a number of industry patterns. Perceptions of value, quality, utility, convenience, and simplicity of use are common themes. When looking at how attitudes and perceived benefits affect the uptake of online banking, there is contradictory data in the literature. Nevertheless, information about the impact of these issues on various demographic groups is limited.

Servon and Kaestner (2008) looked at a program that taught low- and middle-income people in urban areas how to use the Internet and manage their money. Although they didn't find many noteworthy quantitative findings, they did note that these people showed an interest in learning technology and money management. Mehmood, Shah, Azhar, and Rasheed (2014) state that four factors impact the use of online banking. Trust, usability, privacy, and security are some of these factors. Several variables affect the level of client satisfaction with online banking, according to study conducted by Unyathanakorn and Rompho (2014). Quality, perceived value, and devoted customers make up these components. Loyalty from customers stems from how much they love and how easy the product is to use, says Bapat (2017).

The variables that impact the use of online banking in countries other than the United States are similar to those in the United States. Using data from developed and emerging nations, Yuen, Yeow, Lim, and Saylani compared what makes electronic banking more or less acceptable to customers (2010). Perceived trustworthiness of online banking is only an issue in industrialized countries, according to Maduku (2013), who found that among South African bank customers, perceived usefulness, perceived simplicity of use, and trust all had strong positive correlations with attitude. According to Premalatha (2016), who studied

non-users in India, customers in Pakistan are happy with traditional banking and do not perceive the advantages of electronic banking.

Electronic banking, financial education, and help-seeking behavior are the antecedents of good financial management behavior, according to Bapat's (2019) poll of Indian postgraduate students. Using information gathered from the National Financial Capability Study in 2015, Li, Hanna, and Kim (2020) zero down on the use of mobile payment methods. In addition to 24% of people using mobile payments, they find that the adoption rate is 11 times greater among those under 25 than among those over 65. The authors make the case that classroom knowledge and real-world applications are equally important when it comes to personal finance.

In 2015, Geetha and Ramanarayanan investigated how core banking products affected customers. According to their research, younger people (particularly those between the ages of 35 and 45) make more than Rs. 1,20,000 a year and are used to using online banking.

Rakhi and Mala (2014) tested the functional link between perceived threat, intention to utilize mobile payments, and readiness for adoption in India. In this study, we looked at how well various types of clients' proposed structural linkages held up.

Sharma and Sharma (2013) looked into how well the commercial banks handled data. They believed that the establishment of virtual banking in India may take a few more years. Modern banking has experienced advancements in computerization, outsourcing, and the convergence of many banking-related IT products. They discovered that fewer clients were switching banks when bank vendors were introduced.

Bishnoi (2013) talked about the many services that an ATM offers, the benefits of using an ATM card, and a number of issues that arise when using an ATM card. The study also looked at how different personal profiles and the ATM services provided by different banks relate to one another. According to the survey, the main problems with ATM services included low-quality currency notes, machine outages, internet outages, lack of small statement printing, limited visibility of the statement slip, and running out of cash. According to the study's findings, clients found ATMs to be more pleasant whenever and wherever they were used. Both the number of ATMs and their users grew daily. When utilizing ATM facilities, the opinions of male and female customers, as well as those Among customers of banks in the public and private sectors, do not significantly differ on a number of topics.

The current development of ATMs and paper-based transactions in consumer retail banking was studied by Chandio (2013). The findings indicated that ATMs were typically utilized for cash withdrawals and balance inquiries. Although people occasionally use ATMs from other banks, the majority of consumers utilize ATMs from their own banks. Customers expressed great satisfaction with their own ATM facilities, according to the report.

Gulla and Gupta (2012) state that commercial banks rely heavily on information technology, banking via technological means has superseded traditional banking methods. Both risk and expense were reduced, leading to an increase in profit. The Bank of India was cited as an example of an institution that pioneered tool infrastructure outsourcing. Banking services are impacted by outsourcing both immediately and over time. Each bank has a different level of risk that sellers must contend with.

According to Alsamydai et al. (2012), this study is broken down into five categories: customer satisfaction, perceived utility, personal characteristics, electronic banking, and continuation of using electronic banking services. The results demonstrated a substantial link between all attributes and the criteria associated with perceived benefit and service quality in electronic banking.

Shah (2012) assessed "the customers' opinions, the challenges faced by the bank customers, and approaches to enhance e-banking services" after surveying the inhabitants of Thane City about their feelings towards online banking. Online banking is available from public, private, and international institutions, but the survey claims that customers have become more difficult to deal with over the years. Additionally, customers had issues such as language hurdles, insufficient computer skills, delayed response times from bank employees, inability to use online banking, and forgetting ATM PINs.

In her research Kuchara (2012) examined outcomes like convenience, security, ease of maintenance of banking facilities, curiosity, improved rates, and reduced service costs as important aspects. For online banking, half of those surveyed said it was more practical and adaptable. It contains a lot of transactions with associated client advantages. The number of banks providing internet banking was growing daily, turning it from a nice-to-have option to a need.

The state of banks' information technology adoption has been examined by Sekar (2011). Private Banks have been far more agile in their use of technology-based services than their public sector counterparts. Technology can offer the methods that banks can use to supply and address related difficulties. According to Sekar, banks will transform into technology

companies that offer financial services. Biometric ATMs, voice and local language information kiosks, and SHG product e-marketing via the bank payment gateway are examples of technological innovations made by bank vendors. Managing technical goods with a shorter life cycle, addressing corporate requirements, and integrating multiple services are just a few of the hurdles the vendor must overcome. Another significant issue for the suppliers is security.

The difficulties the banking sector faces, particularly from atypical financial firms, are covered by Subhashrao (2011). The new rivals may swiftly and effectively penetrate the financial services industry. Private sector banks provide e-banking services in a far better manner. Another challenge that public sector banks confront is internet advertising through financial services.

Sharma (2011) enumerated the benefits of online banking. Because they are experts, the suppliers may assist with data preservation and programming. Paper money is being used less frequently and plastic money is used more frequently as a result of core banking solutions. Sharma has expressed the belief that some deficiencies must be fixed.

Sawant (2011) asserts that banks actively encourage economic growth by leveraging IT. The Electronic Clearance Services (ECS) were set up in the late 90s with the sole intention of making commercial banks more efficient. EFT came into being in the middle of the 2000s, RTGS in 2004, and NEFT in 2005-06 were launched. By the end of 2010, around 90% of the banks had implemented a core banking system. After analyzing SWIFT, Bank Net, NPCI, and demat cards, the writers came to the conclusion that using technology to provide clients with facilities and services was beneficial.

Kumbhar (2011) found critical factors impacting the degree, device availability, fulfillment and dependability, security and response, ease of use, cost effectiveness, communication, issue solving, and general satisfaction are some of the seven characteristics that make up the customer experience. The findings showed that the main component impacting service quality and total customer satisfaction with ATM services provided by public and private banks was the service's cost-effectiveness. Nonetheless, factor analysis revealed that customer satisfaction is influenced by cost-effectiveness, responsiveness, security, and ease of use at a 36 percent variance.

The usage of mobile banking and the extent to which working professionals are acquainted with its features were investigated by Girdhar and Bhardwaj (2011). The results showed that working professionals had a low level of knowledge about mobile banking. There are two primary motivations given by both current and former users: safe and simple accessibility and continuous mobility to make advantage of mobile banking services.

Along with evaluating the present ATM offers from State Bank of India, ICICI Bank, and HDFC Bank, Singh and Komal (2009) examined the characteristics impacting ATM choice. The research pits three public and private sector banks against each other: HDFC Bank, State Bank of India, and ICICI Bank. According to the study's findings, most respondents were extremely happy with SBI's ATM services, followed by ICICI Bank and HDFC Bank. Customer satisfaction is a result of the banks' size, years of operation, and goodwill. HDFC Bank ranked best in terms of customer satisfaction, which includes performance, prompt services, and good organization. ICICI Bank and SBI came in second and third, respectively.

Kamakodi and Khan (2008) state that the banking sector was radically transformed by the New Private Sector Banks (NPSB) after 1993, which were formed via the use of information technology. Competition among NPSBs, Public Sector Banks, and Old Private Sector Banks has heated up with the rise of internet technology. Banking activities that used the internet made possible a plethora of new goods, and online banking. To find out how comfortable customers were with CBS, the writers conducted a poll. According to the survey's findings, around 40% of respondents have voiced concerns about danger, while over 50% are flexible enough to use online banking.

The use of IT and online banking in India's banking sector has been studied by Singh and Malhotra (2004).The number of users is growing quickly, and they believe that electronic financial transfers have been quite successful. They have seen that nearly the same services are being offered to clients by all commercial banks and several international institutions. They believe that overseas transactions, standing orders, and DEMAT accounts fall short of expectations. There are several security hazards associated with online banking that must be addressed. The websites of certain non-internet banks are not transactional.

2.9.1 The Intention of Behavior to Utilize Online Banking

The behavioral intention to use Internet banking is a component of post-acceptance behavior, which encompasses future recurring purchases of goods and services (Ali & Khalil, 2013; Homburg & Giering, 2001).

The primary factor influencing success in the Internet-based industry is the behavioral desire to keep utilizing Internet banking services rather than adopting them for the first time. (Ali & Khalil (2013); Roca et al. 2006; Hsu et al. 2006)

2.9.2 Expectations for Performance

Performance expectation is the first independent variable and is described as the opinion held by users that a technology has the potential to increase their productivity (Raman & Don, 2013). An essential component of Internet banking's performance expectations is accessibility (Raman & Don, 2013). Polatoglu and Ekin (2001) found that the Internet makes it easier and more efficient for consumers to browse an online banking website from anywhere at any time. Internet banking may reach a far wider audience and prevent individuals from standing in line than traditional banking. Customers of all ages and genders can benefit from its increased convenience and time-saving features.

2.9.3 Expectancy of Effort

The idea that using a technology involves the least amount of work is known as effort expectation, and it is another significant indication. Effort expectation was identified by Chen and Barnes (2007) as a crucial technical aspect of the web interface that significantly affected user acceptance. One of the main reasons why people are increasingly using online banking is the anticipation of less work, say Calisir and Gumussoy (2008). Customers of all ages and both sexes may have been more receptive to online banking if banks could ensure fast download speeds and avoid disruptions.

2.9.4 Social Impact

The impact of peer and organizational support on technology adoption is measured by the third indicator, social influence (Raman & Don, 2013; Taylor & Todd, 1995). Given how dependent employees are on one another to do certain duties, social support from coworkers is particularly important for accomplishing certain goals, such higher

organizational productivity (Raman & Don, 2013; Yang et al., 2009). Employee relationships, social interactions, and coalition building may all be enhanced by an organization's adoption of technology (Raman & Don, 2013; Yang et al., 2009).

2.9.5 Conditions that Facilitate

Convenient circumstances are the second determinant of the acceptance of online banking. The availability of resources, such as written documentation and technical infrastructure, is crucial for facilitating the deployment of new technologies (Ajzen & Driver, 1992; Raman & Don, 2013). Internet banking has expanded access to the web, allowing more people to use it (Karjaluoto et al., 2009; Raman & Don, 2013). In reality, meeting customer needs for instant online banking can only be achieved if the necessary software and hardware resources are easily available (Karjaluoto et al., 2009; Raman & Don, 2013).

2.9.6 Perceived Credibility

One of the strongest predictors of actual use of online banking services is the degree to which someone believes such services are trustworthy. The lack of face-to-face interaction between customers and bank representatives makes online banking a special environment where customers' perceptions of the bank's reliability matter greatly (Angie & Chow, 2006; Kumar, 2013; Mukherjee & Nath, 2003; Shumaila et al., 2009). As the level of trust in online banking increases, more and more users will start using it. A lack of trust in financial institutions is a major perceived credibility problem that lowers the acceptance of Internet banking (Angie & Chow, 2006; Kumar, 2013; Shumaila et al., 2009). This is because customers are scared to submit sensitive personal information online. Accordingly,

maintaining present bank customers requires establishing confidence with them (Kumar, 2013; Mukherjee & Nath, 2003).

2.9.7 Perception of Using Online Banking

The final factor, one's attitude toward using Internet banking, indicates overall contentment and enjoyment with employing a technology (Davis, 1989; Kumar, 2013; Taylor & Todd, 1995; Thompson et al., 1991; Zolait, Mattila & Ainin, 2009). According to many studies (Dinev et al., 2009; Kumar, 2013; Venkatesh et al., 2003; Zolait et al., 2009), an individual's level of enjoyment or distaste for using technology affects their likelihood of embracing it in the future. The lack of interest in Internet banking services is preventing their rapid adoption, according to Yang et al. (2009), even in wealthy countries like Australia. The opinions of internet banking users regarding acceptance were more favorable than those of non-users (Kumar, 2013; Rotchanakitumnuai & Speece, 2003).

2.10 Research Gap Identified on the basis of Literature Review

Many topics need immediate attention for self-service technology in the Indian banking industry are highlighted in the extensive literature research. These voids may be measured. The impact of individual differences on the desire for online banking in India has been the subject of studies. However, customer preferences in the Indian banking industry remain unaddressed. Human resource management and performance management are only two examples of the numerous areas and services that have been the subject of extensive study comparing public and private banks. According to the reviewed literature, most research has concentrated on online banking in nations including the UK, Singapore, Australia, and Turkey. However, the domain of customer preferences and the key variables influencing

these preferences for self-service technologies, notably in the National Capital Region (NCR) of Delhi, remains unexplored.

CHAPTER III:

METHODOLOGY

3.1 Introduction

Data sources, sample strategy, research instruments, and reliability analysis are all covered in this chapter, which also explains the research methodology that was used for this study.

3.2 Design of the Study

To accomplish the goal of the study, qualitative as well as quantitative research approaches have been used. In this study, a mixed methods technique was used.

3.3 Data Collection

The intended research made use of both original and secondary sources of information. To collect primary data from bank customers in New Delhi, a structured questionnaire was employed in a sample survey. Population or universe for this study is 33,807,400 (Delhi's 2024 population - 33.8 million people) (Macrotrends 2024).

The proposed study included 200 participants, or 50 from each of the following banks: HDFC Bank, ICICI Bank, State Bank of India and Bank of India in New Delhi. The published research papers/documents were the secondary data sources along with books, magazines, journals, reports etc.

3.4 Sampling Design

Both convenience sampling and random sampling were used to choose the consumer. There are 200 total samples, 50 from every selected bank.

A sample size of 190 (rounded to 200) was determined at a 95% confidence level.

3.5 Research Instrument

After careful analysis and investigation, the questionnaire was created.

All of the respondents' general demographic information and identification are included in the first section.

Gender: There are two main groups into which it falls: male and female.

Age: Age groups ranging from 18–25, 26–35, 36–45, 45–60, and 60 and above have been established.

Educational status: it has been categorized Xth standard, XIIth standard, graduate, post-graduate and holder of any Professional competence.

Occupational status: it has been categorized into the following sections, salaried employees, self-employed people, student, homemakers, and others.

Questions about the frequency, awareness, and duration of internet-based self-service banking technology are included in the other section. The prevalence of branches may indicate that fewer people utilize online banking services when they visit banks.

The following factors of consumer preference have been measured using the Likert scale:

- Convenience to use
- Time
- Cost
- Comfort
- Security
- Human interface (Personal touch)

The survey is attached to this document.

3.6 Data Analysis

Initially, the collected information was displayed in tabular form, reflecting the various answers provided by the participants. The first part of Name, residence, birthdate, and other basic demographic data were requested in the survey. Given the widespread perception that clients who use online banking services go to bank branches less often, we chose to inquire about the frequency of branch visits in the following section along with questions regarding awareness, frequency, and duration of use of ATM, internet banking, and tele-banking services.

The last component of the survey asks clients to rate their level of satisfaction with the bank on a five-point Likert scale, where 5 is very satisfied and 1 is very dissatisfied. Several subjects pertaining to financial services are covered in it. The development of the questionnaire included extensive consultation with professionals in the banking sector and research of the relevant literature. The Statistical Package for the Social Sciences (SPSS 24) was used to tabulate and assess the primary data that was obtained from the respondents.

3.7 Reliability Analysis

To get a feel for the current state of desire for internet-based self-service banking technology, we contacted bank executives from the studied institutions before we prepared the questionnaire. The data collected from bank officials prior to questionnaire preparation is shown in the following table.

Table 3.1: Data collected from bank officials prior to questionnaire preparation

S No.	Question	SBI	Bank of India	HDFC Bank	ICICI Bank
1	What percentage of banking customers use I.T. enabled banking services?	20%	11%	36%	33%
2	What are the various issues and challenges identified in regard to I.T. enabled banking services?	The majority of the banking customers are not tech friendly	Most people who use banks have no idea these services exist and are wary using them because of security concerns.	The banking customers do not use such banking services due to cyber crime threats and related concerns	The banking customers do not use such banking services due to technical failure and threats related to cyber crime
3	Ratio of male: female using SST's	70% male 30% female	80% male 20% female	50% male 50% female	60% male 40% female
4	suggestion/opinion	It is important to train customers towards I.T. enabled services	It is important to generate greater awareness amongst banking customers towards I.T. enabled services	It is important to improve relation between banking customers and the banks through hiring relationship managers	It is important to train customers towards I.T. enabled services

				as one option.	

Banking industry professionals reviewed and approved the survey.

Table 3.2 2: Cronbach's Alpha Score for the various questionnaire components' constructions

Dimensions	**Constructs**	**Cronbach's alpha score**
ATM	Convenience	0.852
	Time saving	
	Cost	
	Comfort	
	Security	
	Better than human interface i.e. bankers	
Internet Banking	Convenience	0.779
	Time saving	
	Cost	
	Comfort	
	Security	
	Better than human interface i.e. bankers	
Tele-banking	Convenience	0.752
	Time saving	
	Cost	
	Comfort	
	Security	
	Better than human interface i.e. bankers	

Source: SPSS output

CHAPTER IV:

ANALYSIS AND FINDINGS

4.1 Introduction

The purpose of this study was to examine the demographic variables in the New Delhi banking industry that have an effect on customers' preferences for self-service technologies. Additionally, it investigates whether or not there is a difference in client preference with respect to the self-service technology. In this study, seventeen different hypotheses were examined. Three crore twenty-nine lakhs fifty people make up the study sample. The 43rd Meeting of State level Bankers' Committee in New Delhi gave the report.

Respondents' demographics:

4.2 Gender-Wise Comparisons of E-Banking Services Usage

Men may be more likely to employ self-service technology than women, given that 65% of the population was male and 35% was female.

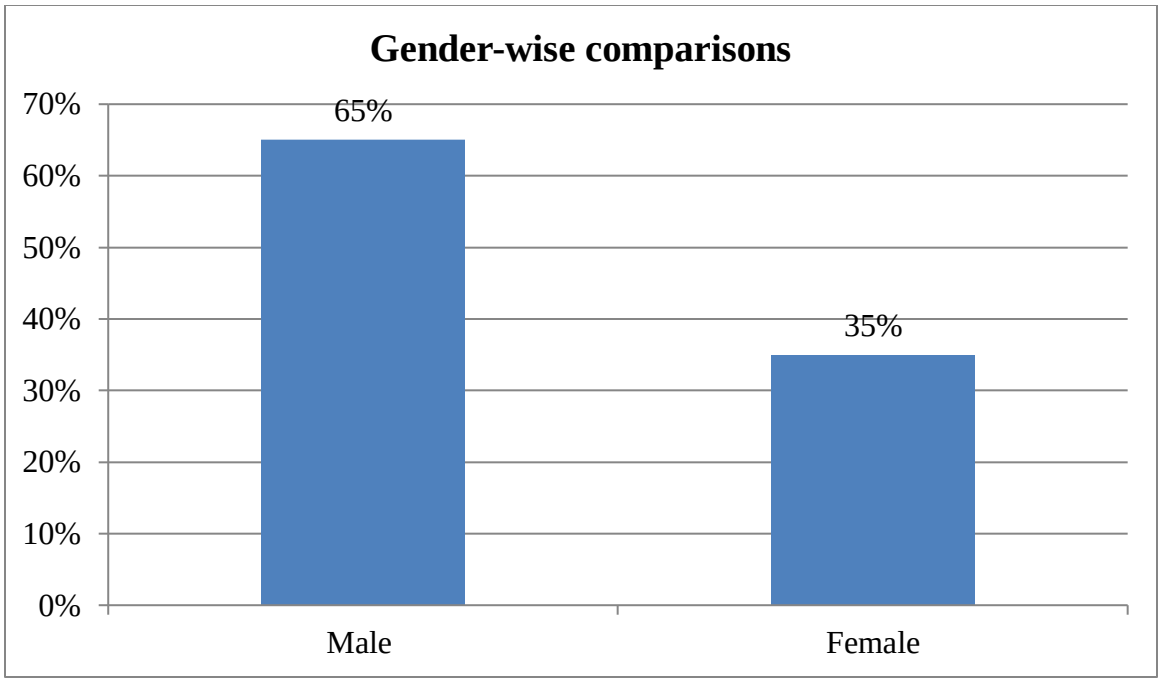

Figure 4.1: Gender wise preferences of e-banking services

4.3 Age-Wise Comparisons of E-Banking Services Usage

Respondents under the age of 35 make up the largest demographic using self-service technologies, according to an analysis of the sample data.

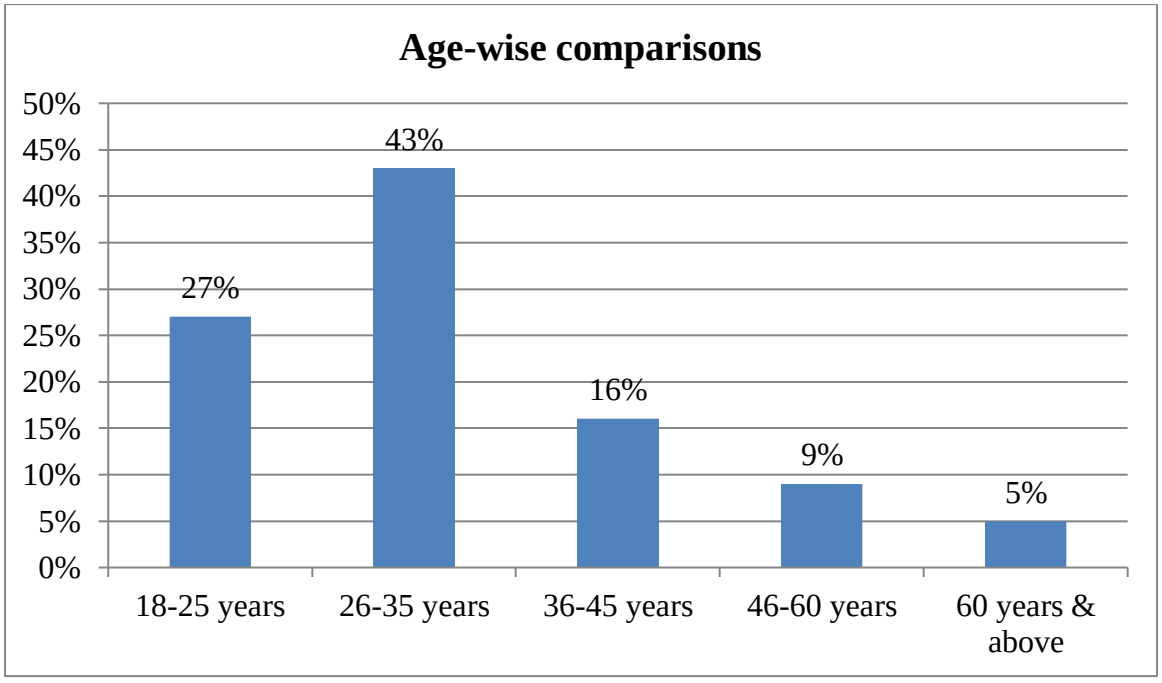

Figure 4.2: Preference for Self-service Technology by Age Group

4.4 Education Qualification Wise Comparisons of E-Banking Services Usage

A survey of educational credentials found that self-service technology use is more common among those with a bachelor's degree or above.

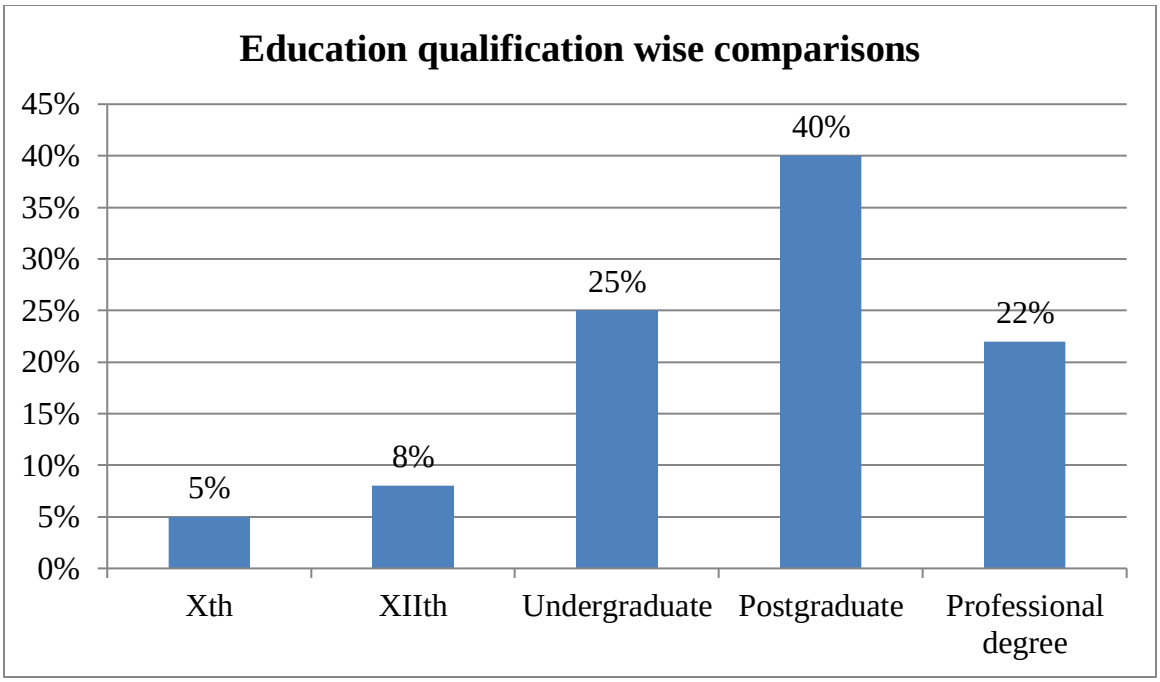

Figure 4.3: Preference for Self-service Technology by Educational Qualification

Salary earners are the ones who make more use of self-service technologies, according to the distribution of occupations.

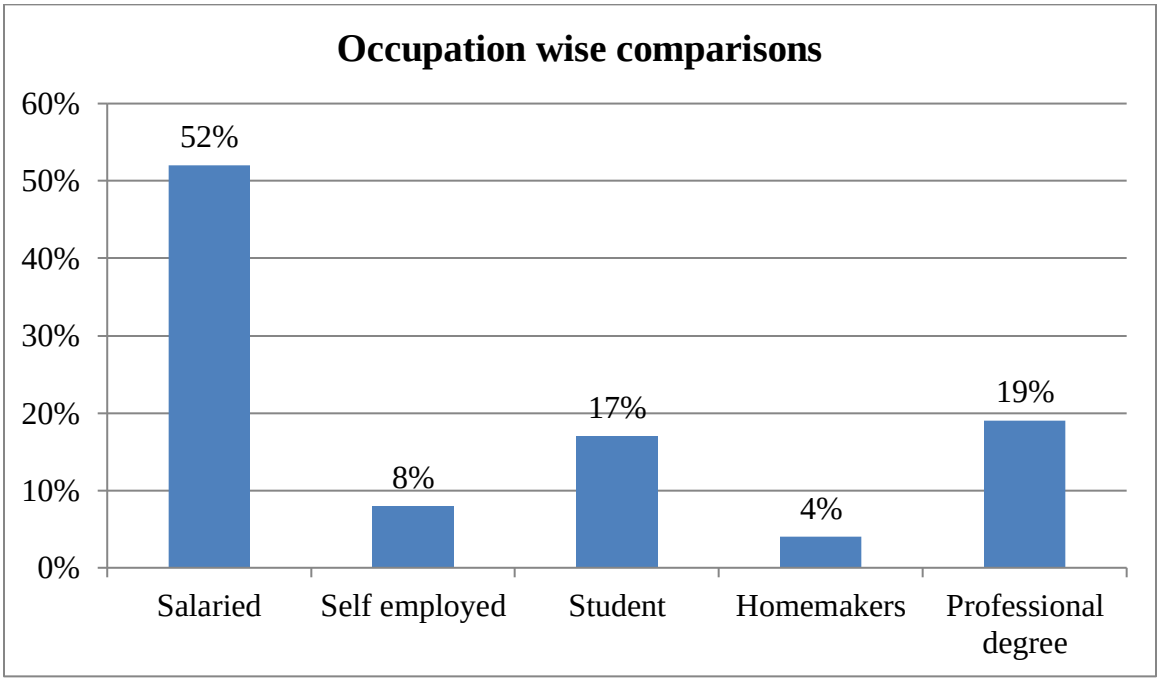

Figure 4.4: Preference for Self-service Technology by Occupation

4.5 Influence of Gender on Preference of Self-Service Technology

Direct way to determine whether gender (represented by v1) affects choice for self-service technology, an analysis of variance (ANOVA) is performed. In SPSS, the two groups are denoted as a) Male and b) Female, with 0 and 1 representing the corresponding categories. The second variable, v2, stands for preference, which is the dependent variable. In the analysis of variance table, each column represents a different variable: X for between-groups, Y for within-groups, T for total, and s for sum-of-squares, df, A, value, and significance level (p-value).

Hypothesis on Gender

H_0: Gender has no influence on the adoption of I.T. enabled customer services.

H_1: Gender has significant influence on the adoption of I.T. enabled customer services

To determine if a customer's choice for self-service technology is influenced by gender, the following section of the SPSS sheet should be used,

Table 4.1: Results of the analysis of variance for gender and ATM preference

	S	D	A	O	VALUE
X	1.334	1	1.334	.730	.393
Y	673.623	198	1.693		
T	672.877	199			

Source: SPSS Output

The ANOVA p-value is shown in the sixth column of the table under the VALUE heading. The 'p' value is 0.393, as seen in the table. Given that p = 0.393 is greater than α = 0.04, the null hypothesis is accepted. Customers' preferences towards ATMs are therefore unaffected by gender.

Table 4.2: Gender-Related ANOVA Results for Online Banking

	S	D	A	O	VALUE
X	.009	1	.009	.0027	.940
Y	933.301	198	3.317		
T	933.310	199			

Source: SPSS Output

The table's data indicates that the 'p' value is 0.940. We may infer that the null hypothesis is valid based on the p-value of 0.940. When asked about their choice for online banking, customers' gender had no effect.

Table 4.3: Analyzed Variance (ANOVA) Results by Gender for Preference in Telebanking

	S	D	A	O	VALUE
X	.234	1	.234	1.370	.360
Y	133.343	198	.334		
T	133.778	199			

Source: SPSS Output

The null hypothesis is accepted since the table shows that the ‘p’ value is 0.360. Therefore, the inclination of customers towards Tele-Banking is unaffected by gender.

4.6 Relative Preference for Self-Service Technologies by Age Group

Simplified Approach To determine whether customers’ age affects their choice for Self-Service Technology, an ANOVA is conducted.

The age categories are represented in SPSS as 0, 1, 3, and 2, accordingly.

The inclination of customers towards self-service technologies is the one being measured.

S=Sum of Squares, D=Differences, A=Mean Square, value=Significance Level (p-Value), X=Between Groups, Y=Within Groups, and T=Total in the ANOVA table.

Hypothesis on age-group

H_0: Age has no influence on the adoption of I.T. enabled customer services.

H_1: Age has significant influence on the adoption of I.T. enabled customer services

Table 4.4: ANOVA The results Relating to age group: ATM-favored

	S	D	A	O	VALUE
X	94.290	2	33.873	16.374	.000
Y	479.387	194	1.267		
T	672.878	199			

Source: SPSS Output

The null hypothesis is not taken into consideration since the table shows that the ‘p’ value is equal to 0. Customers’ preferences towards ATMs are therefore impacted by their age group.

Table 4.5: Analysis of Variance by Age Group for Online Banking

	S	D	A	O	VALUE
X	98.478	2	32.622	11.818	.000
Y	833.733	194	3.084		
T	933.310	199			

Source: SPSS Output

The null hypothesis is not taken into consideration since the table shows that the ‘p’ value is equal to 0. Customers’ choice for Internet Banking is therefore influenced by their age group.

Table 4.6: ANOVA The results In terms of age-group Regarding the favorability of telebanking

	S	D	A	O	VALUE
X	3.491	2	.628	1.940	.101
Y	131.187	194	.333		
T	133.778	199			

Source: SPSS Output

Based on the data in the table, we may conclude that the null hypothesis is correct since the p-value is 0.101. Customers' preference for Tele banking is unaffected by age group.

4.7 Whether People Prefer Self-Service Technology Depends on Their Level of Education

A Single Path Using analysis of variance (ANOVA), we can determine whether there is a statistically significant relationship between self-service technology choice and education level (v1).

The numbers 0, 1, 3, and 2 are used to represent these groups in SPSS for analysis.

S=Sum of Squares, D=Differences, A=Mean Square, value=Sigificance Level (p-Value), X=Between Groups, Y=Within Groups, and T=Total in the ANOVA table.

Hypothesis on Educational Qualification

H_0: Educational level has no influence on the adoption of I.T. enabled customer services.

H_1: Educational level has significant influence on the adoption of I.T. enabled customer services.

Table 4.7: Results of the Analysis of Variance for Level of Education: Choosing an ATM

	S	D	A	O	VALUE
X	63.479	2	14.624	10.073	.000
Y	610.348	193	1.433		
T	673.937	197			

Source: SPSS Output

The null hypothesis is not taken into consideration since the table shows that the ‘p’ value is equal to 0. Customers’ inclination towards ATMs is therefore impacted by their educational degrees.

Table 4.8: Analysis of Variance Results for Academic Background: Online Banking

	S	D	A	O	VALUE
X	63.479	2	14.624	10.073	.000
Y	610.348	193	1.443		
T	673.937	197			

Source: SPSS Output

According to the data in the table, the null hypothesis is rejected since the ‘p’ value is smaller than $\alpha = 0.04$. Customers’ choice for internet banking is therefore influenced by their educational qualification.

Table 4.9: Results of the Analysis of Variance for Level of Education: Mobile banking

	S	D	A	O	VALUE
X	3.346	2	.812	3.243	.026
Y	130.234	193	.333		
T	133.691	197			

Source: SPSS Output

The null hypothesis is not taken into consideration since the table shows that the ‘p’ value is equal to 0.026. Customers’ propensity towards tele-banking is therefore influenced by their educational degrees.

4.8 Occupation as a Factor in the Preference for Self-Service Technologies

Simplified Approach to determine whether the various occupations (represented by v1) significantly impact the use of self-service technologies, an analysis of variance (ANOVA) is conducted.

For the sake of analysis in SPSS, the occupations are represented as 0, 1, 3, and 2.

V3 stands for the dependent variable, which is the preference for self-service technology.

S=Sum of Squares, D=Differences, A=Mean Square, value=Sigificance Level (p-Value), X=Between Groups, Y=Within Groups, and T=Total in the ANOVA table.

Hypothesis on Occupation:

H_0: Occupation has no influence on the adoption of I.T. enabled customer services.

H_1: Occupation has significant influence on the adoption of I.T. enabled customer services.

Table 4.10: Operational ANOVA Results: ATM Preference

	S	D	A	O	VALUE
X	133.207	2	33.343	34.042	.000
Y	433.168	193	1.331		
T	646.474	197			

Source: SPSS Output

It is shown in the table that the ‘p’ value is 0. Thus, the choice of clients towards ATMs is affected by their employment.

Table 4.11: Online Banking: Analysis of Variance (ANOVA) Results

	S	D	A	O	VALUE

X	130.338	2	30.110	12.277	.000
Y	798.133	193	3.031		
T	918.171	197			

Source: SPSS Output

The value of ‘p’ is zero. Therefore, the customer’s choice for Internet Banking is affected by their occupation.

Table 4.12: Job-Related ANOVA Results for Telebanking

	S	D	A	O	VALUE
X	3.049	2	.764	3.488	.037
Y	91.301	109	.394		
T	92.360	113			

Source: SPSS Output

It is seen in the table that the ‘p’ value is 0.037. Therefore, consumers’ inclination towards tele-banking is affected by their work.

4.9 Evaluation of Self-Service Technology Preferences by Customers

Utilizing a frequency-based comparison, we were able to deduce that consumers of both banks prefer utilizing self-service technologies. There has been a representation of public bank as bank-3 and a representation of private bank as bank-1.

To compare the preferences of public and private banks, the working hypothesis is:

H0: Bank-1 and Bank-3 are equally preferred by consumers.

H1: Bank-1 is more popular with consumers than Bank-3.

The results are shown below:

4.9.1 Alternative ATM Preference Analysis

Below is shown the pertinent section of the SPSS output sheet:

Table 4.13: Recommendation for Automated Teller Machine Use in a Comparative Analysis Based on Independent Samples

	Levene's Test for Equality of Variances		t-test for Equality of Means					
	F	Sig.	t	df	Sig. (3-		Std. Error	94% Confidence

						tailed)	Mean Difference	Difference	Interval of the Difference	
									Lower	Upper
PREFRENCE TOWARDS ATM	Equal variances assumed	.714	.398	-1.083	198	.380	-.140	.139	-.233	.133
	Equal variances not assumed			-1.083	193.8	.380	-.140	.139	-.233	1.33

Source: SPSS Output

With a ‘p’ value of 0.398 as shown in the table, it can be concluded that the preferences of consumers of banks in the public and private sectors with respect to ATM acceptance are same.

4.9.2 An Evaluation of Online Banking Preferences

Here is the SPSS output sheet with the pertinent portion:

Table 4.14: Preference for Online Banking as Measured by an Independent Samples Test of Comparison

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (3-tailed)	Mean Difference	Std. Error Difference	94% Confidence Interval of the Difference	
									Lower	Upper
PREFRENCE TOWARDS INTERNET BANKING	Equal variances assumed		.303	.031	196	.974	.004	.161	-.311	.331
	Equal variances not assumed		.643	.031	194.634	.974	.004	.161	-.311	.331

Source: SPSS Output

Regarding the usage of the Internet for banking, there is no discernible difference in the preferences of bank customers in the public and private sectors ($p = 0.643$).

4.9.3 An Evaluation of Tele-Banking Preferences

The relevant section of the SPSS results page is:

Table 4.15: Preference for Tele Banking as Measured by an Independent Samples Test with Comparative Analysis

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (3-tailed)	Mean Difference	Std. Error Difference	94% Confidence Interval of the Difference	
									Lower	Upper
PREFRENCE TOWARDS TELE BANKING	Equal variances assumed	3.377	.000	1.792	198	.073	-.134	.074	-.383	.013
	Equal variances not assumed			1.792	164.734	.072	-.134	.074	-.383	.013

Source: SPSS Output

Since Levene's test indicated unequal variances (p = 0.000), we used the 'equal variances not assumed' row. With a p-value of 0.072, the result is not statistically significant.

Therefore, we conclude that there is no significant difference in telebanking preferences between public and private sector customers.

4.10 Customer Preference Comparison: Ease

We compared the frequency of consumer preference for self-service technologies in both banks to get a sense of their customer preference.

The Convenience Hypothesis:

H_0: Convenience has no influence on the adoption of I.T. enabled customer services.

H_1: Convenience has significant influence on the adoption of I.T. enabled customer services

Table 4.16: ANOVA Results for private bank customers' convenience preferences: ATM CONVENIENCE

	S	D	A	O	VALUE
X	163.916	4	33.483	73.393	.000
Y	87.239	192	.241		
T	340.344	199			

Source: SPSS Output

Private bank clients' choice for ATMs is influenced by convenience (P = 0).

Table 4.17: Customers' Preferences for Convenience Based on Analysis of Variance: ATM

CONVENIENCE

	S	D	A	O	VALUE
X	332.679	4	22.936	67.639	.000
Y	138.901	192	.662		
T	344.480	199			

Source: SPSS Output

The convenience factor impacts the preference of public bank customers towards ATMs, with a P-value of 0 and an α-value smaller than 0.04.

Table 4.18: ANOVA Results for private bank customers' convenience preferences: Online Money Transfer

INTERNET BANKING

	S	D	A	O	VALUE
X	344.708	4	41.123	60.613	.000
Y	162.913	192	.840		
T	230.630	199			

Source: SPSS Output

With a significance level of 0, the inclination of private bank clients towards online banking is influenced by convenience.

Table 4.19: Analysis of Variance (ANOVA) tables Results for the public bank customers' convenience preference: Banking Online

INTERNET BANKING

	S	D	A	O	VALUE
X	329.993	4	29.998	38.798	.000
Y	340.008	192	1.389		
T	400.000	199			

Source: SPSS Output

Customers of public banks favor online banking due to its ease, and the significance level is 0.

Table 4.20: Analysis of Variance Results for Private Bank Customers' Preferences Regarding Convenience: Banking via telephone

Tele-Banking

	S	D	A	O	VALUE
X	18.469	4	3.712	30.434	.000
Y	34.231	192	.1836		
T	42.000	199			

Source: SPSS Output

The inclination of private bank clients towards tele-banking is influenced by convenience, and P = 0.

Table 4.21: As a public bank customer's choice in terms of convenience: Online Banking

Tele-Banking

	S	D	A	O	VALUE
X	31.069	4	6.312	32.760	.000
Y	28.686	192	.341		
T	79.744	199			

Source: SPSS Output

The inclination of public bank clients towards tele-banking is influenced by P = 0 and convenience.

4.11 Customer Preference Comparison: Using the Time Saving Parameter

Table 4.22: ANOVA results for private bank customers' time preference: ATM

	S	D	A	O	VALUE
X	140.039	4	30.008	33.323	.000
Y	180.446	192	.931		
T	330.494	199			

Source: SPSS Output

Private bank clients' choice for ATMs is influenced by the time-saving element, with a significance level of P = 0.

Table 4.23: ANOVA Results for public bank customers' time preference: ATM

	S	D	A	O	VALUE
X	333.143	4	22.631	103.217	.000
Y	83.733	192	.233		
T	42.000	199			

Source: SPSS Output

When it comes to public bank clients, the time-saving element impacts their choice for ATMs (P = 0).

Table 4.24: Analysis of Variance Results for Private Bank Customers' Time Preferences: Online Money Transfer

	S	D	A	O	VALUE
X	302.710	4	20.923	36.787	.000
Y	314.910	192	1.113		
T	230.630	199			

Source: SPSS Output

Private bank clients' preference for online banking is influenced by the time-saving element, with a 'P' value of 0.

Table 4.25: ANOVA Results about the time preference of customers of public banks: BANKING ONLINE

	S	D	A	O	VALUE
X	344.318	4	41.062	20.286	.000
Y	322.683	192	1.361		
T	400.000	199			

Source: SPSS Output

Customers of public banks are more likely to choose online banking when the 'P' value is zero, as this method saves them time.

Table 4.26: Analysis of Variance Results for Private Bank Customers' Time Preferences: Phone banking

	S	D	A	O	VALUE
X	13.330	4	3.622	13.478	.000
Y	20.780	192	.310		
T	42.000	199			

Source: SPSS Output

Customers of private banks are more likely to choose tele-banking when the 'P' value is zero and the time-saving factor is included.

Table 4.27: Analysis of Variance Results for Time Preferences of Customers of Public Banks Bank on the Go

	S	D	A	O	VALUE
X	36.447	4	4.371	19.699	.000
Y	43.898	192	.373		
T	79.744	199			

Source: SPSS Output

Public bank clients' preference for tele-banking is influenced by the time-saving element, and the 'P' value is equal to 0.

4.12 A Public and Commercial Sector Cost-Benefit Study of Customers' Preferences for Self-Service Technologies

Table 4.28: ANOVA Product for the benefit of private bank clients in relation to expense: ATM

	S	D	A	O	VALUE
X	120.106	4	38.031	38.438	.000
Y	190.289	192	.983		
T	330.494	199			

Source: SPSS Output

The cost factor affects the inclination of private bank clients towards ATMs, and the 'P' value is zero.

Table 4.29: ANOVA Results for the public bank client's cost preference: ATM

	S	D	A	O	VALUE
X	149.490	4	31.848	33.692	.000
Y	183.230	192	.926		
T	323.730	199			

Source: SPSS Output

The cost factor affects the inclination of public bank clients towards ATMs, and the 'P' value is zero.

Table 4.30: Analysis of Variance Results for Cost Preferences of Private Bank Customers: BANKING ONLINE

	S	D	A	O	VALUE
X	187.313	4	37.263	31.141	.000
Y	333.308	192	1.303		
T	230.643	199			

Source: SPSS Output

'Customers of private banks are swayed by cost when it comes to their choice for online banking, and the P-value is zero.

Table 4.31: Analysis of Variance (ANOVA) tables Product for the benefit of public bank clients in relation to expense: ANOVA on Online Banking

	S	D	A	O	VALUE
X	324.494	4	29.119	37.246	.000
Y	342.204	192	1.311		
T	400.000	199			

Source: SPSS Output

Customers of public banks are more likely to choose online banking when the 'P' value is zero and when the associated costs are low.

Table 4.32: Analysis of Variance Results for Cost Preferences of Private Bank Customers: Phone banking

	S	D	A	O	VALUE
X	8.182	4	1.637	6.930	.000
Y	24.816	192	.336		
T	42.000	199			

Source: SPSS Output

The inclination of private bank clients towards tele-banking is influenced by cost, with a 'P' value of zero.

Table 4.33: Analysis of Variance Results for Customer Preference of Public Banks with Respect to Cost

	S	D	A	O	VALUE
X	36.728	4	7.340	33.142	.000
Y	23.007	192	.333		
T	79.744	199			

Source: SPSS Output

The cost effects the inclination of public bank clients towards tele-banking, and the 'P' value is equal to zero.

4.13 Self-Service Technology Preferences of Customers in Public and Private Banks, Contrasted by Comfort Level

Table 4.34: Analysis of Variance Results for Private Bank Customers' Comfort Preferences: ATM

	S	D	A	O	VALUE
X	143.187	4	30.637	33.403	.000
Y	177.208	192	.912		
T	330.494	199			

Source: SPSS Output

Since the 'P' value is zero, we may infer that convenience impacts private bank clients' choice for ATMs.

Table 4.35: ANOVA Results for the public bank customers' comfort preference: automated teller machine

	S	D	A	O	VALUE
X	170.103	4	32.031	38.334	.000
Y	173.617	192	.890		
T	323.370	199			

Source: SPSS Output

The 'P' value is zero, indicating that public bank clients' choice for ATMs is influenced by their level of comfort.

Table 4.36: ANOVA Results showing private bank customers' preferred method of banking online in terms of convenience

	S	D	A	O	VALUE
X	333.692	4	26.739	28.408	.000
Y	186.936	192	.962		
T	130.630	199			

Source: SPSS Output

'When it comes to private bank clients' preferences for online banking, comfort has a significant impact (P=0).

Table 4.37: ANOVA Results for the public bank's client choice in terms of convenience: online banking

	S	D	A	O	VALUE
X	347.377	4	41.244	21.137	.000
Y	323.733	192	1.341		
T	400.000	199			

Source: SPSS Output

Customers of public banks are more likely to choose online banking when the 'P' value is zero, which indicates comfort.

Table 4.38: ANOVA Results showing private bank customers' preferred method of banking via telephony

	S	D	A	O	VALUE
X	11.282	4	3.397	10.280	.000
Y	23.416	192	.319		
T	42.000	199			

Source: SPSS Output

The inclination of private bank clients towards Tele-Banking is influenced by comfort, which has a 'P' value of zero.

Table 4.39: Satisfaction of public bank customers: Banking via telephone

	S	D	A	O	VALUE
X	20.031	2	10.008	29.137	.000
Y	39.732	194	.302		
T	79.744	199			

Source: SPSS Output

The comfort level of public bank clients affects their choice for tele-banking, with a 'P' value of 0.

4.14: Public and Private Sector Bank Clients' Perception about Security-Based Self-Service Technology

Table 4.40: ANOVA results for the private bank client's security preference: ATM

	S	D	A	O	VALUE
X	131.871	4	32.372	33.644	.000
Y	308.732	192	1.076		
T	330.494	199			

Source: SPSS Output

The inclination of private bank clients towards ATM is influenced by security, with a 'P' value of 0.

Table 4.41: Analysis of Variance Results for Customers' Security Preferences at Public Banks: ATM

	S	D	A	O	VALUE
X	146.919	4	31.382	33.769	.000
Y	184.801	192	.948		
T	323.370	199			

Source: SPSS Output

Customers of public banks are more likely to use ATMs when the 'P' value is zero, which indicates safety.

Table 4.42: ANOVA The results for the private bank client's security preference: BANKING ONLINE

	S	D	A	O	VALUE
X	183.434	4	36.664	39.974	.000
Y	337.394	192	1.333		
T	230.630	199			

Source: SPSS Output

The inclination of private bank clients towards Internet Banking is influenced by security, with a 'P' value of 0.

Table 4.43: Analysis of Variance Results for Customers' Security Preferences at Public Banks: ONLINE FINANCING

	S	D	A	O	VALUE
X	362.716	4	43.923	23.642	.000
Y	334.382	192	1.313		
T	400.000	199			

Source: SPSS Output

'Customers of public banks are more likely to choose online banking when the P-value is zero, which indicates that security is an important factor.

Table 4.44: ANOVA The results for the private bank client's security preference: Money Transfers

	S	D	A	O	VALUE
X	17.124	4	3.239	18.040	.000
Y	36.844	192	.190		
T	42.000	199			

Source: SPSS Output

'Customers of private banks are more likely to choose telebanking when the P-value is zero, which indicates that security is an important factor.

Table 4.45: Analysis of Variance Results for Customers' Security Preferences at Public Banks: Bank on the Go

	S	D	A	O	VALUE
X	23.010	4	8.203	23.184	.000
Y	37.724	192	.194		
T	79.744	199			

Source: SPSS Output

The inclination of public bank clients towards Tele-banking is influenced by security, with a 'P' value of 0.

4.15 Customer Preferences in Relation to Human Interaction

Table 4.46: Analysis of Variance Results for Preference of Human Interface: ATM among Customers of Public Banks

	S	D	A	O	VALUE
X	124.777	6	32.396	33.810	.000
Y	196.823	192	1.030		
T	323.430	199			

Source: SPSS Output

The human interface significantly effects the preference of public bank customers towards ATMs, since the 'P' value is equal to 0.

Table 4.47: Analysis of Variance Results for Preference of Human Interface by Private Bank Customers: ATM

	S	D	A	O	VALUE
X	110.888	6	18.281	16.334	.000
Y	319.707	193	1.138		
T	330.494	199			

Source: SPSS Output

The human interface affects the inclination of private bank clients towards ATMs, with a 'P' value of 0.

Table 4.48: Analysis of Variance Results for Preference of Human Interface by Private Bank Customers: ONLINE FINANCING

	S	D	A	O	VALUE
X	179.330	4	34.866	38.837	.000
Y	321.390	192	1.322		
T	230.630	199			

Source: SPSS Output

The preference of private bank clients towards Internet Banking is influenced by human interaction, with a 'P' value of 0.

Table 4.49: Analysis of Variance Results for Preferences of Public Bank Customers with Respect to the Human-Computer Interface: Online Banking

	S	D	A	O	VALUE
X	339.644	4	27.913	34.691	.000
Y	360.234	192	1.623		
T	400.000	199			

Source: SPSS Output

'The preference of public bank clients towards Internet Banking is influenced by human interaction, with a P-value of zero.

Table 4.50: Analysis of Variance Results for Preference of Human Interface by Private Bank Customers: SPEED BILLING

	S	D	A	O	VALUE
X	39.827	4	4.696	27.928	.000
Y	32.143	192	.132		
T	42.000	199			

Source: SPSS Output

The preference of private bank clients for telebanking is influenced by the human interface, with a 'P' value of 0.

Table 4.51: Analysis of Variance Results for Preference of Human Interface among Customers of Public Banks: Bank on the Go

	S	D	A	O	VALUE
X	23.433	4	8.707	26.633	.000
Y	36.333	192	.187		
T	79.744	199			

Source: SPSS Output

The preference of public bank clients for tele-banking is influenced by the human interface, with a ‘P’ value of 0.

4.16 Other Findings

Customers overwhelmingly favor ATMs.

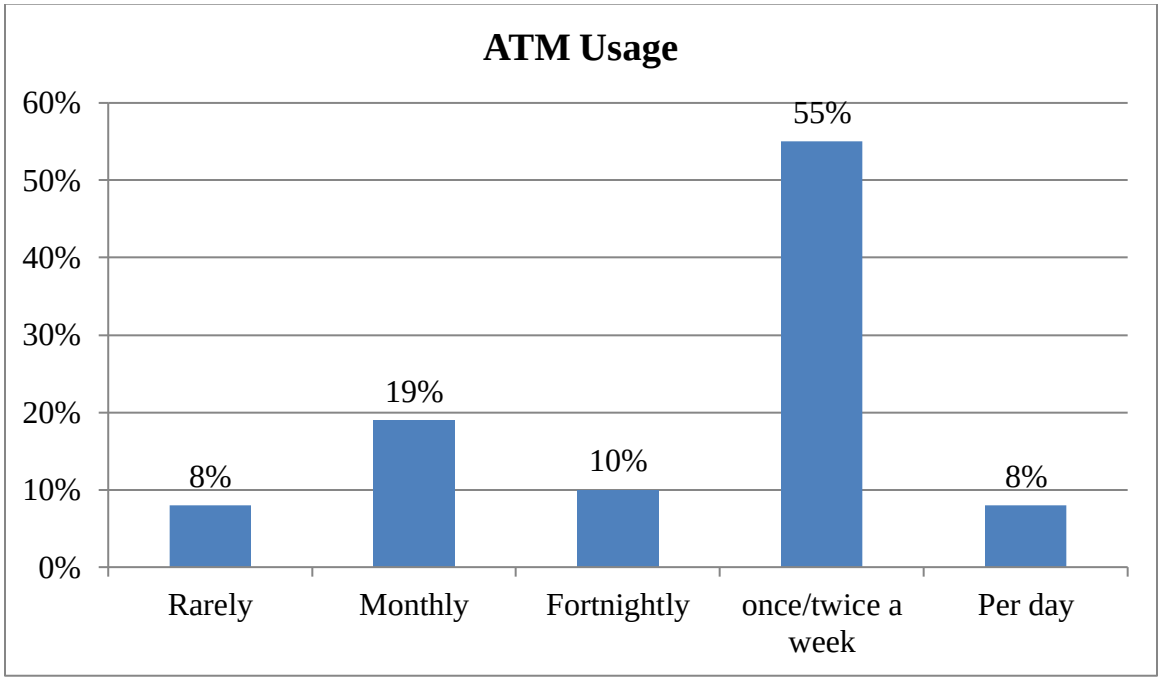

Figure 4.5: shows the preferred frequency of ATM

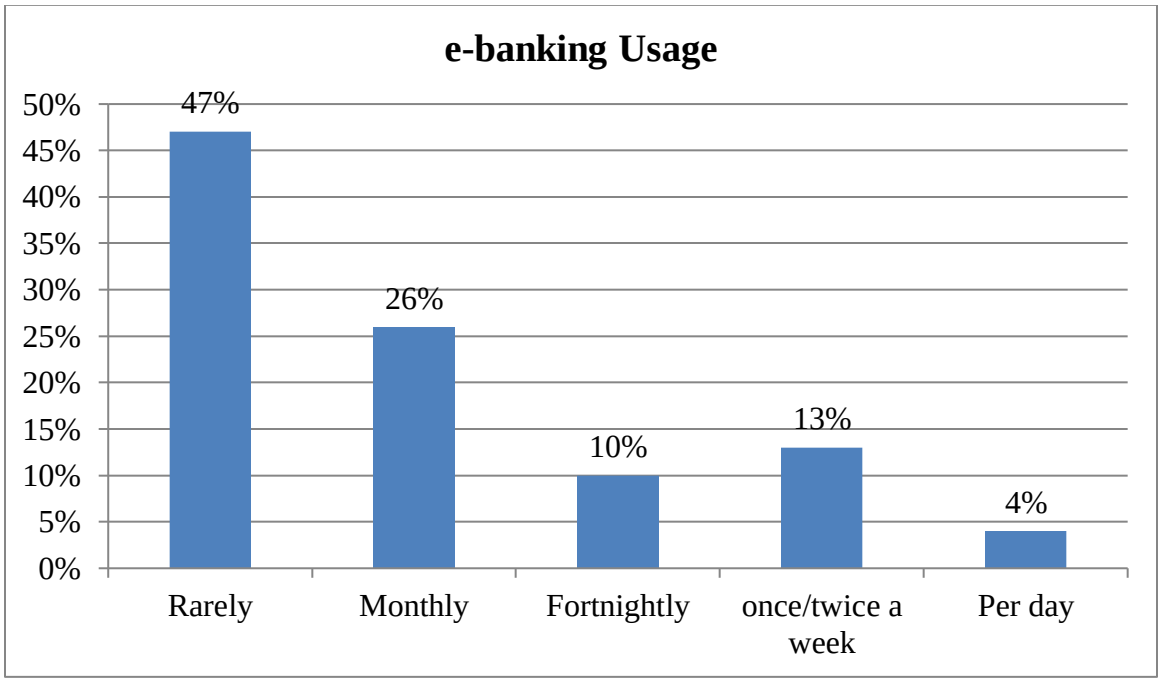

Figure 4.6: Preference for online banking in terms of frequency

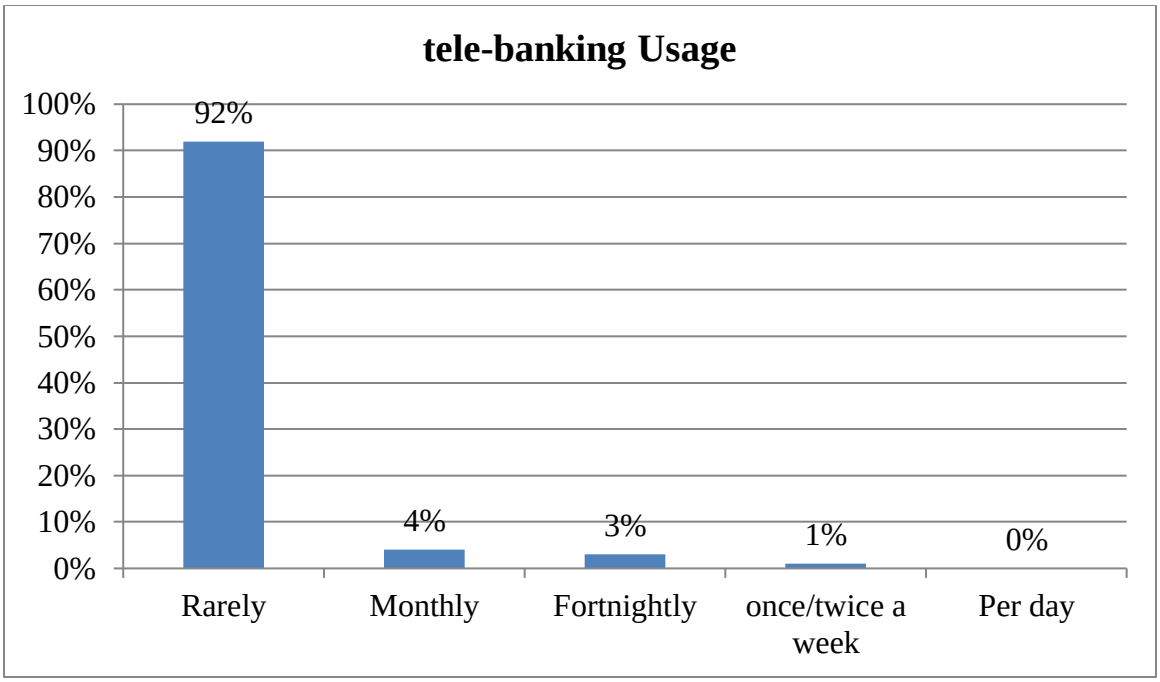

Figure 4.7: Preference for telebanking in terms of frequency

The following findings are derived from the data collected from respondents and the literature review:

The services provided by ATMs include:

- Inquiry into statements
- Payment of bills
- Shopping
- Request for DD/pay order
- Withdrawal/deposit
- Request for cheque books

Out of all the services that are accessible, the most common ones that people use ATMs for are withdrawals and deposits, shopping, and checking their statements. Not many people are using the other services.

Internet banking provides a range of services, including:

- Request for a Statement
- Paying bills
- Buying things
- DD/Pay order form
- Request for a loan
- Please request a cheque book.
- Transferring money

Internet banking has been used mostly for the purposes of paying bills, making purchases, transferring funds, and checking account balances, out of all the available services. Not many people are using the other services.

Some of the services provided by Tele-banking are:

- Request for a Statement
- Paying bills
- Buying things
- DD/Pay order form
- Request for a loan
- Please request a cheque book.
- Transferring money

When it comes to the aforementioned options, telebanking has seen substantial use just for Statement inquiries. Not many people are using the other services.

4.17 Summary

This chapter looked at the banking business in New Delhi to see how demographics affect people's choices for self-service technologies. Customers' reasons for not using self-service technology included not being aware of it, not being comfortable with how it works, being worried about security, and not knowing what to expect.

CHAPTER V:

CONCLUSION

5.1 Overview

Although banks provide a variety of self-service technologies, it has been shown that clients prefer ATMs over all others. Other self-service technological options, such as tele-banking or internet banking, must be prioritized. This part highlights the most important findings and compares them with those of the current literature, even if specifics of the findings regarding the factors impacting other sections have addressed consumer desires for self-service technology.

5.2 Synopsis of Study Results

We used a one-way ANOVA to find out which demographic variables had the most impact on people's decisions to use self-service technologies. Using a one-way ANOVA, we can find out if customers' demographics have any effect on their choice of technology for self-service banking, including online banking, automated teller machines, and tele-banking. The independent variable for demographics is denoted by v1, while the desire for self-service technology is denoted by v2.

5.2.1 The Favorability of ATM Services among Customers

The following are the conclusions drawn from this investigation with reference to ATM services:

- A customer's preference for an ATM is not influenced by their gender.
- When it comes to ATM preference, age is perfectly significant.

- The desire for ATMs is perfectly correlated with educational qualifications.
- Occupation has ideal amount of importance on preference of ATM.

Clients of public sector banks have the same preferences when it comes to ATMs as clients of private sector banks, according to reports. Factors such as time, location, cost, comfort, security, and user-friendliness impact the choices of both public and private bank clients when it comes to ATMs, according to the data.

5.2.2 Preferences of Customers for Online Banking Services

The following are the conclusions drawn from the analysis with reference to Internet banking services:

- Customers' preferences for online banking are unaffected by gender.
- The age group has a perfect degree of importance on Internet banking preference, meaning that age affects consumers' inclinations.
- Customers' choice for Internet banking is influenced by their educational background, which has a perfect degree of impact on that preference.
- The customer's preference for online banking is proportional to the degree to which their employment influences this preference.

It has been noted that public sector bank consumers' preferences for Internet banking are identical to those of private sector bank customers. Customers of both public and private sector banks like internet banking for a number of reasons, such as its affordability, ease of use, security, and accessibility from anywhere at any time.

5.2.3 Preference of Customers for Tele-Banking Services

The following are the conclusions drawn from the analysis with reference to tele-banking services:

- Customers' choice for tele-banking is not influenced by their gender, and their age group also has no bearing on this preference.
- Customers' educational background affects their preference for telebanking.
- A customer's choice for tele-banking is influenced by their occupation.

Both public and private sector bank clients' preferences for telebanking are influenced by factors including cost, accessibility, simplicity of use, security, and convenience. The results also reveal that private sector banks have a slightly different preference for tele-banking than public sector banks.

5.2.4 Customer Inclination towards Self-Service Technologies in Public and Private Banks

87% of consumers in the public sector and 90% of customers in the private sector prefer self-service technologies, according to observations.

The other key conclusions were that

- Customers utilize ATM services more frequently than they use Internet and tele-banking services.
- When it comes to ATM choice, public sector bank clients share the same preferences as private sector bank customers.

- The preferences of customers of public sector banks and private sector banks regarding online banking are indistinguishable.

When compared to private sector bank customers, public sector bank customers have somewhat different tele-banking preferences. The following are some of the reasons why fewer individuals are fond of using telebanking or online banking, as shown by a review of the relevant literature and conversations with banking authorities:

- Not having received proper instruction in the use of telebanking or online banking;
- Scattershot knowledge of what needs doing;
- People aren't aware of how beneficial the services are;
- An absence of human interaction;
- Customers are wary of security risks and lack confidence in online banking, therefore they stay away from it.

5.3 Managerial Implications and Suggestions

Banks in India and New Delhi in particular, may use the study's findings to better understand the factors driving the popularity of self-service technologies. In addition, it will be useful for everyone concerned in identifying the factors that prevent self-service technology adoption and developing strategies to overcome these challenges. As a consequence, clients will be more aware of the advantages of self-service technology, which will raise the acceptance of the services. Below is a list of some particular recommendations: -

- More successful marketing initiatives should be launched to educate people about the advantages of self-service technologies.
- Banks should make a great effort to ease clients' pain when they use self-service technology, especially when consumers have apprehensive attitudes about it. Therefore, banks should consider the apprehensions or quandaries of their target customers over the use of self-service technology while seeking advertising for self-service technology.
- To target the various self-service technology categories based on the chosen market niche, appropriate demographic segmentation ought to be put into place.
- The research adds to our knowledge of how public and private sector customers of banks behave differently.
- When combined, these steps will assist the company in better promoting self-service technology, which will boost user numbers and lessen the strain and operating expenses on banks.

5.4 Limitations of the Research

The following are the research study's limitations:

- Only tele-banking, internet banking, and ATM services have been taken into account.
- The rural areas of New Delhi have not been examined; only New Delhi has been. Because urban bank clients are more used to using contemporary technology-enabled banking services, urban branches were selected for the study.
- Respondents' answers may be skewed, and certain conclusions may be inaccurate.

5.5 Scope of Future Research

While outlining its limitations in the previous part, the present study addressed the research areas. In order to help future research popularize and effectively enhance customer preference for self-service technology in the Indian banking industry, this section provides concise recommendations.

- Future research may be conducted by varying the sample size for each category.
- By expanding this study to include the following, future research can enhance the conclusions of this study:
    - contrasting urban and rural areas
    - examining other regions, such as states
    - examination of other factors, such as cybercrime
- Research has been done on retail banking. One may research corporate clients.
- The following extra characteristics, which are anticipated to vary over time, might be incorporated into future study to enhance the current work:
    - anticipated rise in consumer knowledge of self-service technologies
    - A shift in participation brought on by more consumers using self-service technologies
- Similar future study can be expanded to other service industries, such as hotels and hospitals.

5.6 Significant Research Contribution

The study looks at the main determinants of the customer's desire for self-services as well as a variety of demographic parameters. Based on these, a number of recommendations have been made to raise the degree of consumer preference.

5.7 Summary

The thesis highlights how crucial it is to pinpoint the several demographic factors that affect people's inclination for self-service technologies, particularly in New Delhi and the surrounding areas. Many significant obstacles still need to be overcome in order to boost the number of clients utilizing Indian banks' self-service technologies.

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APPENDIX

Questionnaire

Greetings to all the respondents!

This questionnaire is created in relation to a research project on the "Impact of advancements in technology on performance of the banking sector in India" for Doctor of Business Administration, or DBA, students. I would very appreciate it if you could take a few minutes to fill out the survey. Your responses will be kept private and used exclusively for scholarly purposes.

Customer's preference towards Self-service technology in ……..Bank, Branch……

1. Name of customer (Optional) ……

2. Sex: Male ☐ Female ☐

3. Age: 18-25 years ☐ 26-35 years ☐ 36-45 years ☐ 46-60 years ☐ 60 years or more ☐

4. Education status: Xth Std. ☐ XIIth Std. ☐ Graduate ☐

Post-Graduate ☐ Professional ☐

5. Occupational Status: Salaried person ☐ Business person ☐ ☐

Student ☐ Self Employed ☐ Homemaker ☐

Others

6. Are you aware of the following I.T. enabled banking services offered by the banks?

E-banking ☐ Tele-banking ☐ ATM ☐

7. What is the frequency of your visit to the bank?

Everyday ☐ Once/twice per week ☐ Fortnightly ☐ Monthly ☐ ☐

Rarely

8. How frequently do you use the following I.T. enabled banking services offered by the banks?

	Everyday	Once/twice per week	Fortnightly	Monthly	Rarely
e-banking					
Tele-banking					
ATM (Automated Teller Machine)					

9. What is the duration of usage of the following I.T. enabled banking services offered by the banks?

	0-1 years	1 to 2 years	2 to 3 years	3 to 4 years	More than 4 years
e-banking					
Tele-banking					
ATM (Automated Teller Machine)					

10. If you use ATM (Automated Teller Machine) of your bank, please suggest the kind of services used by you in that case.

- Account Statement ☐
- Instructions for payment of due bills ☐
- Request for Demand Draft/Pay order etc. ☐
- Request for funds transfer ☐
- Request for funds withdrawal/deposit ☐

- Request for Cheque book ☐
- Others services ☐

11. If you use Tele-banking, please suggest the kind of services used by you in that case.

- Account Statement ☐
- Instructions for payment of due bills ☐
- Request for Demand Draft/Pay order etc. ☐
- Request for funds transfer ☐
- Request for funds withdrawal/deposit ☐
- Request for Cheque book ☐
- Others services ☐

12. If you use e-banking, please suggest the kind of services used by you in that case.

- Account Statement ☐
- Instructions for payment of due bills ☐
- Request for Demand Draft/Pay order etc. ☐
- Request for funds transfer ☐
- Request for funds withdrawal/deposit ☐
- Request for Cheque book ☐
- Others services ☐

13. In case of your dissatisfaction in regard to the above mentioned I.T. enabled banking services, please share your reasons of dissatisfaction which may help the banks to make improvements in these areas.

- e-banking ……..
- Tele-banking ……..
- ATM (Automated Teller Machine) ……..

14. You are requested to rate the following I.T. enabled banking services on the basis of following parameters: (1 = very dissatisfied. 5= very satisfied)

	Convenient location	Time savior	Saves cost	More comfortable	Secure method	Better than interacting with bankers (human interface)
e-banking						
Tele-banking						
ATM (Automated Teller Machine)						