

**EXPLORING CUSTOMER SATISFACTION WITH ONLINE
BANKING SERVICES IN BANGLADESH**

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This Report is submitted in Partial Fulfillment of the Requirements for the
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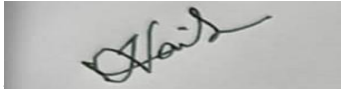
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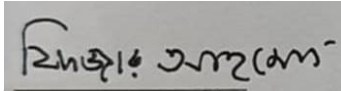
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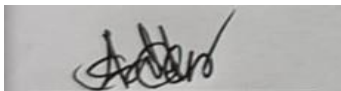
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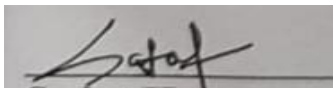
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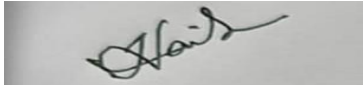
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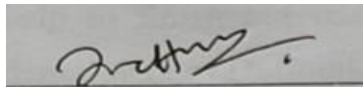
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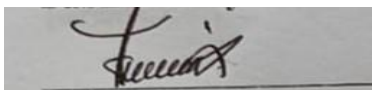
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ACKNOWLEDGEMENT

Initially, I would want to unreservedly thank the Almighty God for His great grace, which enabled us to successfully finish our final year thesis.

I am deeply grateful to Dr. Sheak Rashed Haider Noori, Professor and Head of the Department of Computer Science and Engineering at Daffodil International University, Dhaka. His profound expertise and genuine enthusiasm in the field of CSE greatly contributed to the direction and depth of our research. This work would not have been possible without his continuous support, insightful guidance, valuable feedback, and dedicated supervision. His commitment to excellence inspired us throughout the journey, even as he meticulously reviewed and improved our early drafts.

I want to sincerely thank the head of the MIS department for his helpful assistance in finishing our thesis, as well as the other faculty members and staff of Daffodil International University's MIS department.

I am also thankful to our fellow students who engaged with us during the research process and contributed to our discussions and project work.

Finally, I owe a special debt of gratitude to our parents for their unwavering encouragement, patience, and moral support, which sustained us through every step of this academic pursuit.

ABSTRACT

In today's technological era, everyday tasks have become significantly easier compared to the past. Compared to earlier times, daily chores have gotten more simpler in the current technological era. Almost every part of life, including banking, has been mechanized by technology. Advancements in technology have transformed the banking sector into a fully digital experience, removing the necessity for customers to visit bank branches in person or wait in long queues for tasks such as opening accounts or transferring funds through electronic banking services. Customers and financial institutions now find processes quicker, more effective, and more convenient as a result of this change. Furthermore, banks are now under more pressure to offer superior services in order to draw in and keep more clients as a result of increased competition brought on by e-banking. The primary objective of this research was to examine how consumers' trust in online banking services influences and moderates their overall satisfaction levels. Evaluating general client happiness was another goal. One of the biggest problems facing any business is maintaining customer happiness. The study polled 500 conveniently chosen and randomly chosen people in order to address this. Using VS Code as the editor and Matplotlib for visualization, data analysis was carried out. According to the study's findings, client satisfaction with online banking services in Bangladesh is closely correlated with elements like security, online bill payment, financial transfers, website design, ease, and speed.

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CHAPTER 1

INTRODUCTION

1.1 Preliminary Overview of the Study

The internet stands as one of the most transformative innovations in human history, fundamentally shaping a digitally connected global society in the modern era. Because it provides the most practical means of obtaining important information, its use is rapidly growing. The internet is becoming more and more integrated into people's daily lives. Online communication is the foundation of commercial and economic activities in this age of sophisticated information technology, and it has a significant impact on consumer behavior. The financial industry has experienced significant change and has quickly responded to these developments by embracing information technology on a large scale. As a result, digital banking solutions are progressively replacing the conventional banking model that relies on physical branches. Countries like Bangladesh are joining other developing nations in embracing the shift to online banking as the norm. In order to provide both traditional and novel products, modern banking practices now incorporate electronic services, enabling customers to conduct financial transactions and access services through electronic platforms. Customers can now use a computer connected to their bank from the comfort of their home to handle duties like bill payment authorization, account reconciliation, and other banking operations. Expanding online banking services, raising household internet penetration, and establishing a solid legal and regulatory framework are the three essential components needed to fully utilize internet banking for the advancement of the country. The development of online and electronic banking has also resulted in the improvement of instruments for measuring service quality, most notably the SERVQUAL model, which was first presented in 1988. Considering how internet banking has revolutionized the way banks interact with their customers, this instrument is still frequently employed to measure consumer satisfaction. Bangladesh's banking sector has actively embraced this shift.

The growing number of internet users and the increasing demand for digital access suggest that banks in Bangladesh are beginning to fully appreciate the strategic value of the internet. In an intensely competitive market, local banks are striving to distinguish themselves by aligning their offerings with shifting consumer expectations and technological advancements. This not only allows them to serve customers more efficiently and effectively but also reduces the cost burden associated with maintaining physical branches.

As banks move toward innovative digital solutions, assessing how customers perceive the quality of service and their overall satisfaction becomes essential. Understanding these perceptions will help banks craft strategies to enhance service delivery, foster customer loyalty, and maintain a competitive edge. Measuring customer satisfaction provides critical insights into retention trends and helps position service excellence as a key differentiator in the highly customer-oriented financial services sector.

1.2 Problem Statement

Banks have been actively encouraging the use of electronic banking in recent years by offering alluring incentives like reduced service fees and favorable exchange rates. Despite these alluring advantages, many consumers are still apprehensive because they are divided between the ease of online banking and the possible loss of face-to-face communication with bank employees. This conundrum raises an important question: Can finding the ideal balance between digital services and human interaction increase customer satisfaction? Furthermore, can banks increase e-banking adoption by fostering greater confidence in these online services?

Many people still find security to be a significant barrier when using online banking systems. Cybercriminals employ advanced methods to obtain illegal access to private data, such as account credentials, allowing financial theft, therefore worries about cyber threats are justified. Another important factor influencing users' decisions is the financial cost of online transactions. Furthermore, some people find it challenging to understand and fully utilize e-banking services due to a lack of digital literacy.

1.3 Aim of the Research

This study's primary objective is to assess customer satisfaction in light of various important aspects of online banking. These factors include reduced transaction fees, user familiarity with the banking platform, money transfers, digital bill payments, electronic account statements, system security, and convenience of use. In order to better understand Bangladeshi users' experiences and behaviors when using online banking services, the research focuses on gathering user insights. Additionally, the study aims to help the improvement of digital banking offers in the nation by providing practical recommendations based on the investigation.

1.4 Research Methodology

This study uses a descriptive methodology and mostly collects data through surveys. A thorough survey framework and a well-crafted questionnaire were developed with the goal of gathering consumer opinions regarding the online banking services provided by commercial banks in Bangladesh. Thirteen questions made up the poll, which was given to a wide range of banking customers. Five hundred clients of The City Bank PLC, BRAC Bank LC and Dutch-Bangla Bank PLC three private banks in Bangladesh provided responses. There were five possible answers for each question. Python was used to analyze the collected data, and Matplotlib and Visual Studio Code were used for processing and visualization.

1.5 Expected Contributions of the Research

The purpose of this study is to evaluate how satisfied customers are with the online banking system. Customer reactions fall into five categories, according to the main findings: Highly Dissatisfied, Dissatisfied, Neutral, Satisfied, and Highly Satisfied. With over 50% of the replies falling into the "Satisfied" category, the research shows that consumer satisfaction is very high. Furthermore, between 20% and 25% of respondents said they were "Neutral," while between 20% and 22% said they were "Highly Satisfied." In contrast, only 1% to 2% were "Highly Dissatisfied," while 3% to 10% voiced displeasure.

Recommendations:

- ✓ To increase client confidence, fortify the security protocols for online banking transactions.
- ✓ To draw more people to online banking, keep improving the services you offer.
- ✓ To encourage increased usage, make sure that online transactions are easy to use and straightforward.

1.6 Conclusion

The research background, problem statement, objectives, methodology, and suggested solutions have all been covered in this study. It also summarizes the findings of each chapter, giving a general overview of the research. The next chapters explore relevant data and variables in further detail.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Customer satisfaction with online banking systems is evaluated and examined in this chapter. It is primarily separated into two primary categories: customer satisfaction theories and concepts, and the elements that affect customer happiness in the context of online banking. It also fills in the gaps found in the body of current literature. Furthermore, a carefully selected and proposed theoretical framework has been developed to clearly articulate the concepts discussed.

2.2 Background Research Overview

“An Investigation into Customer Satisfaction Regarding Online Banking Transaction Services: A Case Study of Coimbatore City.” was carried out by Ramya, M. Evaluating consumer satisfaction with online banking transactions was the primary goal. 120 respondents in Coimbatore City provided the data. The researcher employed ranking analysis and simple percentage analysis for analysis. The study specifically looked at online banking programs' privacy and security features, pointing out that users frequently face serious security risks. Hackers try to obtain consumers' personal data illegally. In light of the results, the study suggested strengthening online transaction security to promote increased usage of online banking. Additionally, it recommended streamlining the transaction procedure. Given how closely the research goal and my understanding of client satisfaction with online banking coincide, [2]

Their goal was to evaluate how satisfied Bangladeshi consumers were with One Bank Limited's online offerings. They surveyed people from a variety of occupations, including businesspeople, students, service holders, lawyers, and teachers the majority of whom had formal education in order to gather information from 50 clients spread over five branches in Dhaka City.

One challenge was respondents' unwillingness to share information due to safety concerns.

Understanding client satisfaction with e-banking system, identifying services offered by private commercial banks in Bangladesh, and weighing the benefits and drawbacks of online banking were among its supporting goals.

Four criteria security, usability, update frequency, and system overall were used in the study to gauge satisfaction. About 60% of responses were positive (Agree or Strongly Agree), showing a majority degree of satisfaction. The majority of responses were classified as Neutral, Agree, and Strongly Agree.

Reading this paper gave me insights into the facilities offered to customers and areas needing improvement [3]

In 2016, Ling G.M., Fern Y.S., Boon L.K., and Huat T.S. published a paper in *Procedia Economics and Finance* titled “Understanding Customer Satisfaction of Internet Banking: A Case Study in Malacca.” Their objective was to determine the elements that affect online banking customers' satisfaction. They concentrated on five factors: speed, convenience, security and privacy, online design and content, and service quality. Two hundred internet banking users from different branches and occupations participated in the surveys. The results showed that consumers were quite happy with the speed, ease of use, and design and content of online banking services. However, client expectations were not met in terms of security/privacy and service quality. The survey underlined how important these aspects are to consumer happiness and how banks should not ignore them [4].

Siddika, A. and Sarker, B. investigated the connection between customer satisfaction and the different online banking services offered by Agrani Bank Limited the study considered five independent variables: customer income (IC), account maintenance (MA), ATM card usage (ATM), online purchases made over the past 12 months (PP), and frequency of bank visits (FV). To investigate causal linkages, ANOVA and coefficient analysis were employed. The majority of users primarily used internet banking for cash withdrawals (52%), bill payments (20%), fund transfers (12%), and payroll administration (16%), according to the findings.

Additionally, while 76% of respondents viewed internet banking as safer than traditional methods, a small portion expressed concerns over security or lacked a full understanding of the system. In terms of satisfaction, 50% of respondents were satisfied, 20% were highly satisfied, 16% were neutral, and 14% were completely dissatisfied [5].

In their 2019 study "The Impact of E-Banking on the Use of Banking Services and Customer Satisfaction," which was published in the International Journal of Trend in Scientific Research and Development, Renu, D.P. and Singh, K. examined how technological advancements have reduced the need for in-person bank visits by automating banking tasks like opening accounts and transferring funds. For both consumers and institutions, e-banking has sped up, simplified, and improved the efficiency of banking services. Due to a lack of technology knowledge and education, some consumers are still reluctant to adopt e-banking. Older workers who are less accustomed to computerized systems provide a problem for public sector banks in particular, requiring more funding for training. Notwithstanding these problems, the study found that technology is essential to enhancing banking. Despite these issues, the study concluded that technology plays a critical role in improving banking operations and benefits both banks and customers [6].

Through a study of Arab Bank branches in Amman, Jordan, Ali Karam, A. and Sleimi, M. (2018) investigated "The Impact of E-Banking Services Quality on Customer Satisfaction Moderated by Customer Trust." They used SPSS to evaluate 300 valid replies from 500 questionnaires that were distributed. According to demographic data, 64% of respondents were men, and the majority (57.3%) were between the ages of 18 and 30. The majority's salary ranged from 601 to 800 JOD. In terms of experience, 85% had bachelor's degrees, and 43.3% had used online banking for four to seven years. In order to determine how customer satisfaction was impacted by e-banking service quality variables such as assurance, empathy, reliability, tangibility, and responsiveness all of which were regulated by customer trust the study employed multiple linear regression. With 0.878 as the R² value, the study concluded that customer satisfaction was significantly high. It emphasized that Arab Bank customers were particularly satisfied with assurance, empathy, reliability, tangibility, and responsiveness.

To further enhance satisfaction, it suggested that bank management should prioritize improving responsiveness and employee motivation and behavior for better service delivery [7].

Al Kabir, A. and Poddar, S.C. (2015) conducted a study titled “E-Banking and Customer Satisfaction in Bangladesh,” which was published in the European Journal of Business and Management, examined Bangladesh’s experience with electronic banking. The primary goals were to assess customer satisfaction with e-banking service quality and to determine whether these services meet Bangladeshi customers’ expectations. They developed questionnaires focusing on two main research questions: (i) identifying the key factors influencing customer satisfaction with e-banking services, and (ii) evaluating the general level of customer satisfaction.

Additional objectives included:

- ✓ Offering a comprehensive overview of the electronic banking system in Bangladesh,
- ✓ Examining the importance and influence of service quality on customer satisfaction within e-banking,
- ✓ Identifying the most influential service quality factors driving satisfaction.

The research employed a combination of primary and secondary data. Primary data was gathered via structured questionnaires administered to customers of commercial banks providing e-banking services. Out of 400 distributed questionnaires, 382 valid responses were received. Respondents were selected randomly as the total population was unknown.

Descriptive statistics indicated an average satisfaction score of 3.81 on a Likert scale, suggesting a level above neutral satisfaction.

Customers expressed higher satisfaction regarding factors such as reliability, ease of use, service charges, assurance, and responsiveness. Positive experiences included fast service, smooth deposit and withdrawal processes, and satisfaction with physical facilities and ATM services. However, dissatisfaction was noted in areas like service fees, charges for using other banks' ATMs, and miscellaneous fees. Regression analysis was recommended to better understand the factors contributing to customer satisfaction above neutral levels [8].

The study had several limitations:

- ✓ Some participants had limited knowledge of Bangladesh’s e-banking services,

- ✓ Time constraints affected participants' ability to complete the survey
- ✓ The research was confined to Dhaka city,
- ✓ Potential biases among respondents were recognized.

Naveed, R.T., Irfan, M., Aslam, H.D., Anwar, B., and Ayub, A. (2019) in their study "The Effect of General Banking Information Technology System on Customers' Satisfaction with the Moderating Effect of Customer Trust" investigated how customers view online banking technologies and the degree of trust they have in them. They gathered primary data through a five-point Likert scale questionnaire, targeting customers from various commercial banks. Out of 350 distributed questionnaires, 300 responses were collected from customers and bank staff, mainly from major metropolitan areas in Pakistan. Some staff mentioned time constraints when filling out the survey, though many still provided complete responses. Additionally, a Google Form was used to ease distribution among employees.

Convenient sampling was applied, and major banks like MCB Bank, UBL, ABL, HBL, NBP, Dubai Islamic Bank, and Mehran Bank were mainly represented. The study relied solely on cross-sectional data. The tools used to measure the study variables showed high reliability, with Cronbach's alpha values exceeding 0.70, indicating strong internal consistency.

Among the respondents, 51% were female and 49% were male, most holding bachelor's or master's degrees, which added depth to the study since the participants were generally educated and familiar with banking technology.

Findings revealed that while customer satisfaction was influenced by the banking transaction processing system, customer trust had a moderating effect that slightly decreased satisfaction ($P = 0.001$, $\beta = -0.020$). One of the contributing factors identified was the occurrence of faulty banking transactions, which, alongside occasional system breaches by hackers, negatively impacted customer satisfaction [9].

The research focused on young consumers, aiming to understand their satisfaction levels, preferences, and key factors influencing mobile banking adoption and continued use. The study objectives were to:

- ✓ Identify crucial factors impacting customer satisfaction in mobile banking,
- ✓ Evaluate the importance of each factor from a Bangladeshi perspective,
- ✓ Explore the link between satisfaction and loyalty in mobile banking.

Primary and secondary sources supported the study, and the research instrument included 22 items divided into two parts: demographic information and Likert-scale questions covering many cost, security, relative advantage, responsiveness, convenience, customer satisfaction, and loyalty.

The PLS-SEM analysis was conducted in two stages:

- ✓ Outer model analysis (assessing indicator reliability, internal consistency, convergent and discriminant validity),
- ✓ Inner model analysis (examining path coefficients, explained variance (R^2), multicollinearity (VIF), and effect sizes (f^2)).

The study concluded that satisfaction strongly influences loyalty in Bangladeshi mobile banking. Various factors affect young users' satisfaction, with cost emerging as the most significant. Although cost does not directly impact loyalty, it substantially affects satisfaction. Unlike previous studies that emphasized security and trust, this research highlights cost as the primary factor.

Bangladesh still faces challenges in expanding mobile banking adoption.

Key recommendations include:

- ✓ In order to promote increased use of mobile banking, banks should concentrate on lowering transaction costs.
- ✓ Banking representatives should receive sufficient training to stay current with emerging technologies.
- ✓ Ensuring a dependable and quick mobile network.
- ✓ Enhancing the secrecy, safety, and security of mobile banking apps and services.
- ✓ Increasing the availability of mobile banking services across all banks, as just 15 of the 61 scheduled banks presently provide them.

2.3 Finding the Gapes

The previous discussion has led to the identification of a number of research gaps. One significant drawback is the dearth of research conducted in Malaysia that focuses on the outside influences that deter consumers from utilizing internet banking. More empirical study concentrating on the underlying obstacles to online banking usage is required in order to facilitate a more accurate identification of the critical factors influencing customer satisfaction in Malaysia's banking industry.

Furthermore, comparatively little study has been done to identify the elements influencing customer satisfaction in developing countries like Bangladesh, Cambodia, and Nepal, despite the fact that there is a wealth of information on the use of online banking in both developed and developing nations.

Although internet banking services are available in many Least Developed Countries (LDCs), many studies fail to address this aspect or its connection to customer satisfaction. As a result, the reliability and accuracy of data or statistics on online banking collected from websites may be compromised due to this oversight.

2.4 Conclusion

This section highlights the achievements of previous research endeavors, offering valuable insights into internet banking. The literature review and conceptual frameworks established the groundwork for formulating the study's hypotheses. The subsequent chapter will detail the methodologies employed in this investigation.

CHAPTER 3

RESEARCH FRAMEWORK

3.1 Introduction

This chapter provides a thorough review and analysis of earlier studies on online banking consumer satisfaction. It is divided into a number of significant components, such as a review of the literature, sampling techniques, sample size calculation, research site, and analytical tools for assessment. The chapter also identifies gaps in previous research and presents a theoretical framework intended to effectively communicate the main ideas examined.

3.2 Data Sampling Strategies

After establishing the sample size, selecting a suitable sampling technique for the target population was essential. Sampling approaches are generally divided into two categories: probability sampling and non-probability sampling.

Probability-Sampling:

Every member of the population has an equal and known chance of being chosen using this method. It is frequently employed for extensive surveys, such as national polls or public opinion research, that seek to yield findings that are typical of the broader population. This approach can be time-consuming and resource-intensive, although providing higher accuracy and dependability. However, it continues to be the gold standard for studies that aim to broadly generalize findings.

Non-Probability-Sampling:

Some people may not have a chance of getting selected because this method depends on non-random selection techniques. Researchers may approach participants in particular locations or disseminate surveys inside well-known networks. It is frequently used in qualitative or exploratory research, as well as when a certain subgroup such as program recipients or targeted user segments is the main emphasis. This approach has a higher chance of sampling bias even if it is faster and less expensive.

For this particular study, a non-probability sampling approach was deemed most appropriate.

Given that a relatively small segment of the population regularly uses internet banking and a large portion still relies on traditional methods a purposive sampling strategy was used. Data was collected primarily through interviews with both bank employees and active account holders at the selected banks. A structured questionnaire was developed and distributed, and in some instances, responses were gathered manually at branch locations.

In summary, although probability sampling is ideal for studies aiming for broad generalization, purposive non-probability sampling was more suitable for this research due to its focus on a targeted group of online banking users.

3.3 Sample Size

The decision to select a sample size of 500 participants for this study was influenced by several practical considerations. Data collection occurred within a limited timeframe, which constrained the ability to engage a larger number of participants. Additionally, the majority of respondents were students, corporate officers, and engineers, reflecting the accessibility of these groups during the data collection period. This demographic was targeted due to their familiarity with internet banking services, ensuring relevant insights for the study.

3.4 Study Area

The study was conducted across Bangladesh; however, the majority of respondents were from Dhaka. The sample predominantly consisted of students, with smaller numbers of corporate officers and engineers participating. This distribution reflects the accessibility and convenience of reaching these groups during the data collection period.

Additionally, students are often more engaged with digital technologies, making them a relevant demographic for studies on internet banking adoption.

3.5 Data Analysis Tools Used

- ✓ VS Code as an Editor
- ✓ Matplotlib for Plotting and Visualization

3.6 Conclusion

Several moral principles were adhered to during the investigation. Initially, each participant was provided with a clarification of the study's objectives & the questionnaires to be used. After being informed about the purpose of the study confidentiality would be maintained before they filled out the questionnaire.

CHAPTER 4

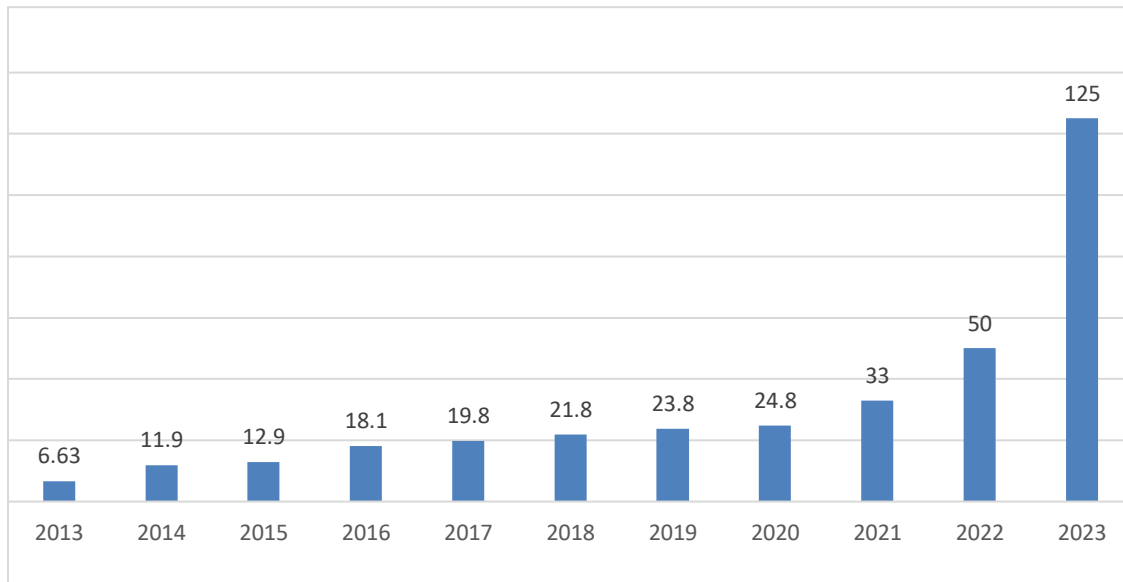
INTERNET-BASED BANKING IN BANGLADESH

4.1 Introduction

Customers can use a bank’s website or mobile application used to access customer accounts and obtain essential information about its products and services. For clients, this banking approach provides a straightforward, economical, and successful system. With the ongoing digital transformation of the country’s financial industry, online banking in Bangladesh has experienced substantial growth over the years. Numerous private and local banks now provide online banking services in response to consumer demand for speedy banking. Online banking not only provides round-the-clock banking services but also facilitates the nation's integration with international corporate and commercial networks.

Just 3% of internet users in Bangladesh use online banking, according to statistics. Bangladesh's online banking usage rate peaked in 2020 at 24.8%, with an average of 5.41% from 1990 to 2020.

Diagram 1: Growth Trends in Bangladesh’s Digital Banking Sector



Instant, round-the-clock access to bank accounts is becoming more and more necessary as global company activity continues to rise. Cross-border purchasing and selling of items is also made easier by online banking.

Banks see a useful consumers in an increasingly cutthroat banking industry, all while lowering the expenses associated with handling paper and interacting with teller machines. This approach, also referred to as online banking, enables clients to safely complete payments and transactions via a bank's website, which is normally reachable with a web browser and any regular internet connection.

Since its introduction in the early 2000s, online banking in Bangladesh has grown to be a crucial component of the banking industry. Over time, there has been a notable surge in the quantity of online banking transactions. With a 19% rise in internet users from 2020 to 2021, 28.8% of Bangladesh's population have internet connection by January 2021. The demand for internet banking keeps growing as more individuals get internet access thanks to the government's successful efforts to increase internet services.

Online banking is essential in the fast-paced era of real-time transactions. The demand is rising as more Bangladeshis become aware of the substantial advantages of internet banking for quicker transactions and company operations.

4.2 Online Banking in Bangladesh

In Bangladesh, E-banking has grown rapidly as the financial sector increasingly adopts digital services. Various facilities are available through online banking in Bangladesh, which are discussed in the following sections.

Although all private banks in Bangladesh offer online banking, not all have gained widespread popularity. These are all private institutions. On the other hand, government-owned banks have not yet delivered strong online banking services, which is a concerning issue. It is important for government banks to improve their online banking capabilities and expand their services.

4.2.1 Fund Transfer

In February 2011, Bangladesh introduced its first paperless electronic system for interbank payment transfers with the launch of the Bangladesh Electronic Funds Transfer Network (BEFTN). This system marked a major advancement over traditional check clearing by enabling both credit and debit transactions. BEFTN supports a wide range of credit transfers, including payroll payments, domestic and international remittances, social security disbursements, business dividends, bill payments, corporate transactions, and government tax collections. Similarly, it processes debit transactions such as utility bills, membership fees for clubs or associations, insurance premiums, and EMI payments. Today, BEFTN handles most government salary payments, social security benefits, social safety net distributions, and various other financial transactions.

4.2.2 Online Bill Payment

Nowadays, most banks don't require previous registration in order to accept credit card payments using debit cards. You can make payments by using your debit card at a bank-operated ATM or by entering your card details directly into the payment gateway. In Bangladesh, debit card transactions can be made from any location at any time. Online and in-store shopping is made easier by both debit and credit cards. In addition to shopping, credit cards can be used to cover costs like taxes, tuition, and utility bills like water and electricity. Using a card instead of writing a check is a quick and easy solution when a payment deadline is approaching. However, it may not always be the most suitable payment method for every situation.

4.2.3 Utility Bill Payments

People in Bangladesh are becoming more and more reliant on the internet as digital technology develops. Currently, most banks across the country provide digital services, including mobile transaction capabilities. It is now possible to pay utility bills online for services including internet, phone, water, electricity, and gas. People used to have to stand in line for hours in order to pay their bills. Time is being saved with the current computerized system. The many methods for paying utility bills online in Bangladesh will be discussed in this section.

This approach is among the most effective ways to save money and time. Online bill payment, particularly using mobile banking apps, is incredibly convenient for me personally.

4.2.4 Mobile top-ups

City Bank is recognized as one of Bangladesh's leading and trusted private commercial banks. To enhance customer convenience, efficiency, and user-friendliness, the bank launched the City Touch online banking app. Among the many services provided by City Touch are shopping, ticket booking, credit card & mobile bill payment, money transfers to educational institutions, and account management for current, savings, fixed deposit, and loan accounts. Likewise, BRAC Bank and Dutch Bangla Bank offer similar online banking services. Users may conveniently recharge their mobile phones' balances and use of a number of additional banking services with these apps.

4.2.6 ATM Withdrawal

Users can access their bank accounts and take out cash without a physical card thanks to cordless ATMs. Rather, they use mobile banking apps or SMS messaging for account verification. Cardless ATM technologies come in a variety of forms, such as biometric authentication, near-field communication (NFC), verification codes, and quick response (QR) codes.

NFC: By opening the app, choosing the desired bank account, and touching your phone near the ATM's NFC scanner, you can start a withdrawal using NFC technology, which is utilized by apps like Apple Pay. Then, as if you had inserted a card, you will be asked to enter your PIN.

Verification Codes: This approach involves opening the mobile app for your bank, selecting the desired ATM transaction type, and then entering your PIN to acquire a one-time verification code to complete your transaction, you need to enter this code at the ATM. Generally, the code remains valid for a short duration, typically around 30 minutes.

Biometric Verification: Facial recognition and fingerprints are frequently used to unlock smartphones, and some banks have expanded this feature to their automated teller machines. You can verify your identity at an ATM and carry out operations like cash withdrawals without a physical card by registering your biometric information with your bank.

4.2.7 Tele Banking

Customers can access banking services via telebanking without the need to visit a physical branch. Through this service, customers can communicate with their bank over the phone in a timely and comfortable manner. Customers can use telebanking to report the loss or theft of ATM cards, debit cards, credit cards, or checkbooks, as well as to access account information and carry out specific transactions. The bank manager retains the authority to provide or refuse access to telebanking, even though any customer with an account can apply for it. All current or individual savings account customers of the bank providing the service can use telebanking. Based on projected client needs, a procedure known as "Data Pumping" periodically updates the system by moving the most recent account information from the bank's records to a computer. Along with their account number, which serves as their login ID, customers are given a password. It is imperative that users maintain the confidentiality of their PINs and passwords. A tone-dialing phone is necessary in order to use the service. Additionally, customers can request services like checkbook delivery, which will only be sent to the address they have on file with the bank.

Through telebanking, customers can perform financial transactions without having to visit a bank branch or ATM. Some banks offer this service 24/7, providing greater flexibility compared to branch hours. From the bank's perspective, telebanking helps reduce transaction processing costs by minimizing the need for physical visits for non-cash transactions.

Telebanking services typically include:

- ✓ Online balance inquiry
- ✓ Viewing the last five transactions
- ✓ Accessing recent transaction details
- ✓ Requesting various services

- ✓ Detailed transaction information
- ✓ Requesting account statements
- ✓ Requesting a new checkbook

4.2.8 Credit Card

Credit card is a tangible payment instrument Functions as a means for purchases, bill payment, and cash withdrawals. A credit card might be thought of as a short-term loan, to put it simply, which is the most amount you can spend on purchases or payments.

In essence, a credit card allows users to make payments to businesses according to the amount they owe for goods and services.

In addition to being convenient for paying bills and making purchases, credit cards can also save you money by offering a number of incentive programs. Furthermore, a solid credit history can be developed through responsible credit card use.

Key Takeaways:

- ✓ Credit cards allow you to make purchases using a borrowing limit, which you repay later.
- ✓ Carrying a balance on your card may result in interest charges.
- ✓ Always read the fine print carefully, especially for promotional credit card offers.
- ✓ Many credit cards offer rewards such as cashback, travel miles, or points spending.

4.2.9 Electronic payment card

Electronic payment card is linked directly to the user's checking account, meaning money is deducted instantly when it's used. Often referred to as "check cards" or "bank cards," debit cards allow for making purchases, withdrawing cash from ATMs, or even adding funds to a purchase at certain businesses.

It's connected to the user's checking account, and the amount of money that can be spent is determined by the account balance.

Debit cards serve as a combination of credit cards and ATM cards, enabling both purchases and cash withdrawals from ATMs. Many banks are replacing standard one-use ATM cards with debit cards issued by major payment processors like Visa or MasterCard.

These cards are automatically tied to the user's checking account. Whether used for making a purchase or withdrawing cash, a debit card immediately deducts the corresponding amount from the linked account.

Debit cards often come with daily spending limits, which prevent purchases above a certain amount within one day. Additionally, while some debit card transactions may require a Personal Identification Number (PIN), others especially those with payment processor logos can be used similarly to credit cards without a PIN.

4.2.10 ATM

These machines are generally available 24/7, making them a convenient alternative for customers to manage routine banking needs. ATMs support a wide range of functions, including depositing cash, withdrawing money, transferring funds, viewing account details, updating ATM PINs, and linking bank accounts to numbers significantly reducing the need for in-person interaction at banks.

Also referred to as an Automatic Banking Machine (ABM), the ATM empowers users to complete basic banking transactions independently. There are two main categories of ATMs: the standard version, which is limited to cash withdrawals and balance inquiries, and the advanced version, which can also accept deposits, facilitate credit card payments, and provide more detailed account services.

An ATM's system architecture mainly consists of two input components and four output elements. The card reader and keypad serve as input interfaces, allowing users to interact with the machine. The output components include a speaker, a display screen, a receipt printer, and a cash dispenser, which together deliver the necessary responses and services.

Card-Reader

A card reader is an input device that extracts data from a card. It reads the magnetic stripe on the back of an ATM card to link with the reader, enabling it to recognize your unique account number. When the card is either swiped or inserted, the information is transmitted to the host processor (server), which then accesses the account holder's details using this data.

Speaker

The speaker provides audible feedback when a specific key is pressed.

Cash-Dispenser

The main part of the ATM, the cash dispenser, is in charge of supplying the required amounts. It takes money out of the central system of the ATM and gives it to the user. The right amount is delivered after each bill has been counted. A banknote is placed in the reject bin if it is folded or damaged. Accurate counting and dispensing are guaranteed by high-precision sensors. Every transaction is recorded by the ATM using a Real-Time Clock (RTC) chip.

ATM Operation Steps

Using an ATM is a straightforward process. Here's a step-by-step guide:

- ✓ Select your desired language from the available options shown on the screen.
- ✓ Select the type of transaction you wish to perform (e.g., deposit, withdrawal, or transfer).
- ✓ Choose your account type.
- ✓ Input the amount you wish to withdraw along with your 4-digit ATM PIN.

4.2.11 SMS Banking

This service also allows users to perform certain financial transactions via SMS.

Push and Pull Messages Concept

SMS banking can utilize both push and pull messages to provide services to customers.

- ✓ **Push messages** are alerts that banks send to a client's mobile device without the client asking for the information. These messages often serve as alerts about activities on the user's account, such as money transfers, deposits, or purchases. Push messages can also notify users about any critical updates, such as insufficient balance, upcoming payments, or completed transactions.

- ✓ **Pull messages**, on the other hand, involve customers requesting specific information. For instance, one-time passwords (OTPs) used for secure transactions are sent via SMS in this scenario. OTPs serve as an additional layer of security, replacing traditional passwords. Once the OTP is used in a transaction, it expires.

Overview of Push and Pull Functionalities in SMS Banking

- ✓ Periodic account balance updates
- ✓ Alerts about deposits, such as salaries or other credits
- ✓ Insufficient funds notifications
- ✓ Payment reminders
- ✓ Notifications of withdrawals from the account
- ✓ Alerts for completed cheque payments
- ✓ OTP creation and authentication

Typical pull services include:

- ✓ Electronic bill payments
- ✓ Checking account balance
- ✓ Requesting mini-statements
- ✓ Fund transfers

Benefits of SMS Banking

SMS banking offers several advantages, such as:

- ✓ It allows users to send and receive banking information via their mobile phones.
- ✓ Customers can check account balances, manage accounts, pay bills, and perform other financial tasks.
- ✓ It reduces the need for frequent visits to the bank, providing greater convenience.
- ✓ It enables quick and easy access to bank account information whenever needed.

4.2.12 Help Desk Facility

The goal of call centers is to provide customer service over the phone, available 24/7. Banks in Bangladesh have set up customer service lines to assist clients anytime, anywhere, eliminating the need for physical visits to the bank. These call centers can handle multiple calls simultaneously, offering a one-stop solution for all banking inquiries.

4.3 Top Internet Banking Offerings in Bangladesh

4.3.1 Overview BRAC Bank

BRAC Bank Limited provides a range of customer-centric products delivery methods, including Services such as cash flow management, electronic debit card usage, mobile-based banking, online banking platforms, and automated teller machine (ATM) access. With digital products, your banking experience becomes more efficient, saving both time and money. BRAC Bank also employs a two-factor authentication system, enhancing transaction security and protecting against online hacking attempts.

Only a year ago, digital banking made up approximately 16–17% of BRAC Bank’s operations; however, this figure has now surged to 42%. From 2018 to 2020, the bank allocated an average investment of Tk170 crore annually in technological advancements. Additionally, BRAC Bank has announced that it will allow self-registration for its internet banking services using credit cards.

4.3.2 Overview IFIC Bank

These include checking account balances, reviewing transaction histories, transferring funds between accounts, checking credit card limits, deactivating cards, requesting checkbooks, obtaining bank certificates, and more.

4.3.4 Overview Dutch Bangla Bank

Dutch-Bangla Bank was the first bank in Bangladesh to implement full automation and adopt electronic banking. Although the automation process was completed in 2003, the bank continues to introduce new features and improvements.

The same advanced automation system used by Dutch-Bangla Bank is now being utilized by several major international banks. While the system was more expensive than other options, the added value it provides to customers makes the extra cost worthwhile.

Today, Dutch-Bangla Bank clients enjoy unparalleled access to banking services from any of the bank's branches, ATMs, or POS terminals completely free of charge. These services are not only convenient but also highly affordable for users. Despite the electronic banking sector not being inherently profitable. This approach reflects the same philosophy behind the bank's corporate social responsibility efforts. As a result, customers benefit from services that are almost free, unlike in many other countries and banks where such services come at a high cost. No bank has ever provided so many services at no cost.

4.4 Bangladesh's Online Banking: Future Prospects

Internet banking aligns with the global shift toward a fast-paced, mobile, and tech-driven society. Waiting in lines for services is not only inefficient but also increasingly outdated. In today's world of instant and on-the-go solutions, online banking simplifies and enhances the convenience of managing finances.

It is now time for Bangladesh to fully adopt online banking technologies, promote digital financial services, and move toward the modern, digital future we all envision for the 21st century.

4.5 Conclusion

Online banking, as the latest advancement in electronic financial transactions, has created fresh opportunities for traditional banks and financial institutions. While many banks maintain websites, not all of them provide full online banking services. This is largely due to inadequate IT infrastructure and insufficient security systems.

This reinforced the conclusion that e-banking brings additional benefits. Online banking also supports key improvements such as expanding into new markets and reducing operational, administrative, and staffing costs factors that are increasingly vital to a bank's competitiveness.

CHAPTER 5

IMPACT OF ONLINE BANKING ON CUSTOMER SATISFACTION IN BANGLADESH

5.1 Introduction

Amid the fast-moving pace of modern life, customers increasingly demand access to financial services anytime and anywhere, without being limited by time or location, and in a cost-effective manner. Finland as an early leader in electronic banking, well before other countries followed. As internet capabilities grew and competition among banks intensified, electronic banking quickly gained popularity among consumers. This evolution contributed to a broader understanding of online banking service quality, which now includes customer expectations, service delivery outcomes, and the response when problems arise.

Although customer satisfaction has been interpreted in various ways, it has long been a subject of study. One of the earliest definitions came from Hop pock, who described it as a range of psychological and emotional conditions that lead individuals to feel satisfied with a product or service. Later, in 1969, Locke expanded on this by defining satisfaction as a positive emotional reaction linked to specific job-related or service-related factors—a definition that remains widely recognized today. More broadly, customer satisfaction is now understood as a positive emotional experience resulting from evaluating service encounters, which encompasses aspects like service quality, reliability, and guarantees.

5.2 Influence of Customer Satisfaction on E-Banking in Bangladesh

Banking through digital platforms involves accessing banking services and products through the internet, blending traditional banking with modern telecommunications technology. The introduction of online banking has brought considerable transformation to Bangladesh's financial landscape. Despite facing various challenges, banks in Bangladesh have adapted swiftly to this digital shift. The adoption of online banking has streamlined banking operations and made them more efficient.

It has also enabled Bangladeshi banks to elevate their standards and compete effectively on a global scale. The banking industry believes that embracing modern technologies like online banking can enhance customer service and foster stronger relationships with clients. However, the system still faces ongoing challenges, such as fraud, delays in transaction reversals, long queues, and other operational issues.

5.2.1 Service Excellence

E-service quality represents a customer's overall assessment and perception of the standard of services delivered via digital or online platforms. As traditional service methods have increasingly been replaced by digital channels. This led to the necessity of creating dedicated measurement scales to assess the quality of electronic services. Researchers have proposed various models to evaluate website performance, with one such scale including twelve key factors: interactivity, response speed, reliability, responsiveness, user interface design, ease of use, visual attractiveness, creativity, seamless navigation, emotional engagement, integrated communication, business functionality, and the availability of alternatives. In the context of online banking, nine service quality dimensions have been identified: efficiency, reliability, responsiveness, fulfillment, privacy, communication, personalization, technological updates, and the availability of technical infrastructure. Among these, the first five have been extensively tested as core components of internet banking service quality. Additionally, communication and personalization have emerged as critical factors.

5.2.2 Digital Interface and Content Creation

Website design and impact on how customers behave while making purchases online and how long they stay engaged. Key elements include color schemes, typography, text formatting, graphic quality, and the use of 2D or 3D images, along with the overall structure and organization of the website. Usability is a major factor in website quality, influenced by how easily users can interact with content, how quickly they can find essential information, navigation speed, page loading times, and page size. These elements collectively determine how user-friendly a website is.

Bank websites serve as important tools for customer communication and marketing.

Therefore, the quality and relevance of website content directly affect customer satisfaction. Effective web design and engaging content are crucial in creating a positive customer experience and enhancing overall satisfaction.

5.2.3 Privacy & Security

There are several issues with online banking, but security, privacy, and fraud are the main ones. Privacy can be viewed as a legal notion as well as an individual's right to privacy. It describes the capacity of people, organizations, or groups to decide how, when, and to what degree their private information is disclosed to third parties. From a privacy perspective, it can also be understood as the confidence that consumers have in internet companies to manage their data appropriately. Which is particularly pertinent to the internet, describes people's ability to regulate how their personal data is utilized. People's privacy is jeopardized when they lose control over their data.

These aspects of security are crucial for evaluating the safety of information systems, including in e-commerce. Various factors, such as technical issues, environmental factors, or human actions (intentional or unintentional), can affect these security elements.

Security measures are put in place to protect customers and prevent unauthorized access to their personal information. These security systems directly influence customer satisfaction. Privacy concerns, on the other hand, often lead to customer anxiety. Consumers generally expect banks to safeguard their personal data and maintain their trust.

5.2.4 Simplicity of Use

When banks provide a range of services that are simple to set up and access online, there is a positive correlation between the ease of use and the quality of service delivery. Therefore, for users to fully embrace and utilize online banking, the technology must be perceived as "user-friendly." A user-friendly app is one that is straightforward, intuitive, and easy to navigate. Once the app is installed, it should be simple to use, as customers do not benefit from unnecessary complexity. The ease of use of internet banking has a direct impact on customer satisfaction.

Customers are more likely to adopt and stick with internet banking if the services are simple to use. Therefore, usability should be considered when designing the website

and all of its features. Customers are more likely to utilize an application more frequently if they find it straightforward to use.

5.2.5.1 Service Standards

The word "service quality" describes how clients view a business's long-term service performance. High service quality is a clear notion, but because it depends on personal impressions, which might differ widely from person to person, it is difficult to quantify. In 1985, the first model for assessing service quality was presented, and it was further improved in 1988 and 1991 by taking into account suggestions from other researchers. In order to determine how customers view and rate a particular service, the SERVQUAL model employs 22 questions that measure service quality across five dimensions: tangibles, responsiveness, assurance, empathy, and reliability. One inquiry, for instance, inquires as to whether corporate employees provide services on time, which would indicate dependability.

Positive answers to the four questions in each dimension show that the service lives up to expectations in that particular area.

SERVQUAL is a popular tool used by businesses and academics to evaluate service quality. Robinson (1999), however, reexamined the model's capacity to measure service quality. It maintained that SERVQUAL functions best in settings that are comparable to its original context and that new models had to be created for various scenarios.

Despite this critique, SERVQUAL is still widely used because of its adaptability to different businesses' particular requirements. Service quality evaluation is a complicated process that takes into account several variables. SERVQUAL has drawn a lot of criticism despite its efforts to evaluate a service's quality by taking into account all relevant factors.

Therefore, it is crucial to concentrate on a feature that is easier to evaluate and that offers a reliable indicator of service quality for the purposes of this study specifically, customer satisfaction. As mentioned in the methodology section, the experiment will be based on the SERVQUAL dimensions, which will result in a pleasant service experience.

5.2.5.2 Customer Approval

A response to customer happiness is known as customer satisfaction, where customers feel fulfilled by the product or service they have received. Instead of focusing solely on satisfaction immediately after a purchase, it is essential to consider the entire customer journey as the core of overall customer happiness. This broader customer experience includes factors such as product quality, pricing, functionality, and personal benefits. The overall customer experience leads to deeper, longer-lasting satisfaction compared to satisfaction based purely on a single transaction.

On the other hand, comprehensive satisfaction reflects the contentment derived from all aspects of a customer-business interaction, whereas transactional satisfaction is limited to the satisfaction gained from a specific transaction between the customer and the business.

If a customer's overall experience with a company is positive, they are more likely to return and repeat the transaction.

Customer satisfaction is one of the most studied topics in marketing, it is an enduring concept that has been researched for over two centuries, suggesting that it will remain crucial in the years to come and should be a focal point for businesses aiming for long-term success.

Customer satisfaction with an application is directly tied to their ongoing use. If Therefore, it is essential for banks to focus on meeting their customers' needs and demands, which will, in turn, encourage increased use of online banking.

5.2.6 Convenience

Customers primarily use online banking for its convenience. Previous studies have shown that most users prioritize convenience when engaging with online banking services. Additionally, customer satisfaction was found to have a positive relationship with ease of use. Customers who preferred simpler methods for conducting banking transactions were more likely to be satisfied with their online banking experience. In summary, the convenience of online banking plays a significant role in customer satisfaction.

5.2.7 Speed

Speed includes things like how often a network connection fails, how long it takes to navigate an online banking site, how long it takes for pages to load, and how fast banks respond to consumer complaints. Online banking experiences can often be delayed by the usage of high-resolution graphics and slower server speeds. Speed significantly improves customer satisfaction and has been a major contributor to the rise of e-banking. Actually, the speed of the service has a direct impact on how satisfied customers are with online banking.

5.2.8 Merits

Customers can automatically access both conventional and cutting-edge banking goods and services through interactive and electronic communication channels. Through public and private networks, such as the internet, online banking systems enable people and organizations to access their accounts, conduct transactions, and get information about financial goods and services. Intelligent electronic devices including touch-tone phones, automated teller machines (ATMs), kiosks, personal computers (PCs), and personal digital assistants (PDAs) can be used by customers to access these services.

Benefits for Customers include:

- ✓ 24/7 availability of online banking services.
- ✓ Quick and easy access to account information.
- ✓ Convenient payment options for online purchases of goods and services.
- ✓ Simple electronic fund transfers between locations.

5.2.9 Demerits

Few Drawbacks include

- ✓ Certain credit institutions offer a limited range of products.
- ✓ Eligibility is required to become a member.
- ✓ A membership fee is necessary to join.
- ✓ Sharing card details while shopping online can pose security risks.

5.3 Conclusion

Many global developments have been brought about by the third wave, and inventions like computerized banking have substantially benefited the financial sector. In the financial sector, online banking has emerged as the main electronic distribution channel. Banks are always creating new distribution channels to improve client satisfaction in spite of a number of obstacles. Online banking has thereby significantly enhanced banking services. However, as many consumers still encounter daily difficulties when utilizing online banking services, especially with automated teller machines (ATMs), customer satisfaction has not yet been greatly impacted.

CHAPTER 6

DATA ANALYSIS & INTERPRETATION

6.1 Introduction

This chapter presents the patterns and analysis of the results in relation to the proposed hypotheses. Data from 500 individuals was gathered in order to test the hypothesis, and Matplotlib was used to analyze the data and determine whether the hypotheses were valid. The chapter, which is organized into three primary sections scale evaluation, measurement, and inference presents the results in tables. Examining the survey questions is part of the data analysis and interpretation process. My goal was to learn how consumers felt about the internet banking system. Customer input was gathered through a survey, which revealed a number of interesting facts. It is not enough to rely only on staff opinions or secondary sources. Only after obtaining firsthand user feedback can a proper judgment be made. The results of the survey point to online banking.

6.2 Data Analysis

A key component of data analysis is the process of altering, processing, and cleansing raw data in order to extract pertinent insights for well-informed business decisions. Analyzing data is crucial to every research project. To collect information for my study, I made a Google Form. But using Matplotlib and Visual Studio Code greatly simplified the data analysis process. Given that my research was descriptive in nature, these resources were immensely helpful. This section will describe how the data gathering procedure fits in with the paper's research goals. Based on the answers gathered from the questionnaire, I performed primary data investigation before using pie chart.

6.3 Customer Experience and Satisfaction in E-Banking

The survey included several questions regarding the respondents' level of satisfaction. These questions focused on aspects such as energy savings, availability of services anytime/anywhere, lower transaction costs,

E-statements, the convenience of not carrying cash, ease of use, frequency of online banking use, preferred traditional bank, and overall satisfaction with online banking services.

1. Are you satisfied with the security of e-banking?

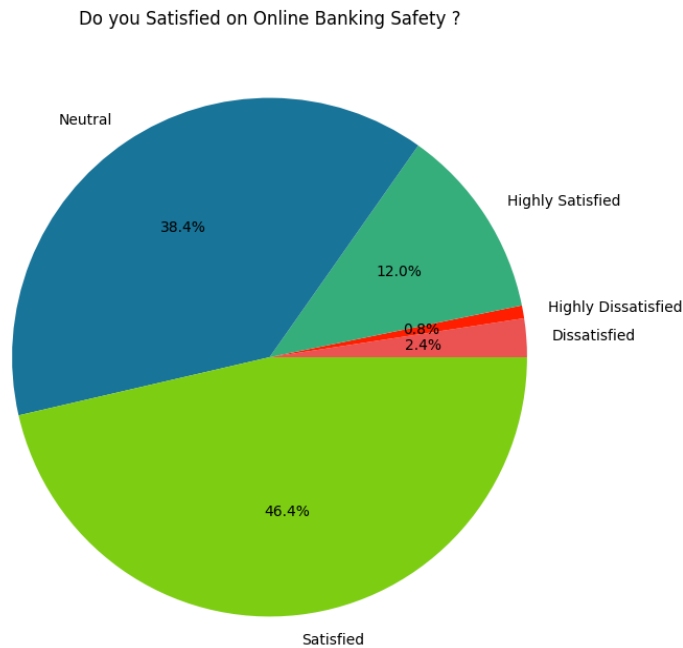


Diagram 2: User Safety Awareness Level

Among the responses, 46.4% of customers reported being satisfied with online banking security, while 38.4% remained neutral. Only 12% expressed a high level of satisfaction. A small percentage of customers were dissatisfied (2.4%) or highly dissatisfied (0.8%). Overall, the majority of respondents are satisfied with the security of online banking.

2. Convenience of Updating Details via Online Banking

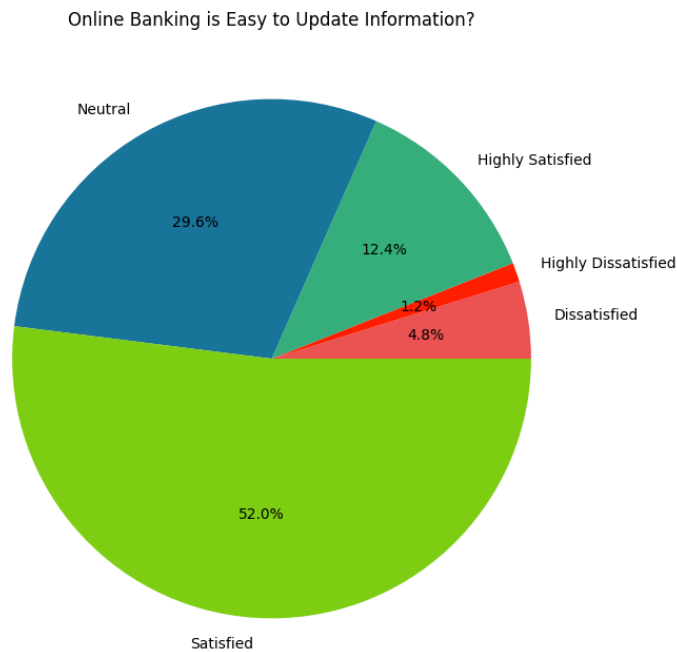


Diagram 3: Respondents' Awareness of Updated Information

A comprehensive summary of customer satisfaction with regard to online banking changes may be seen in the above chart. The results showed that 52% of consumers were happy with the updates that online banking offered. Furthermore, 12.4% said they were extremely satisfied, and 29.6% said they were neutral. Just 4.8% of respondents expressed dissatisfaction, and 1.2% expressed extreme dissatisfaction.

3. How would you rate your satisfaction with online banking's privacy and security?

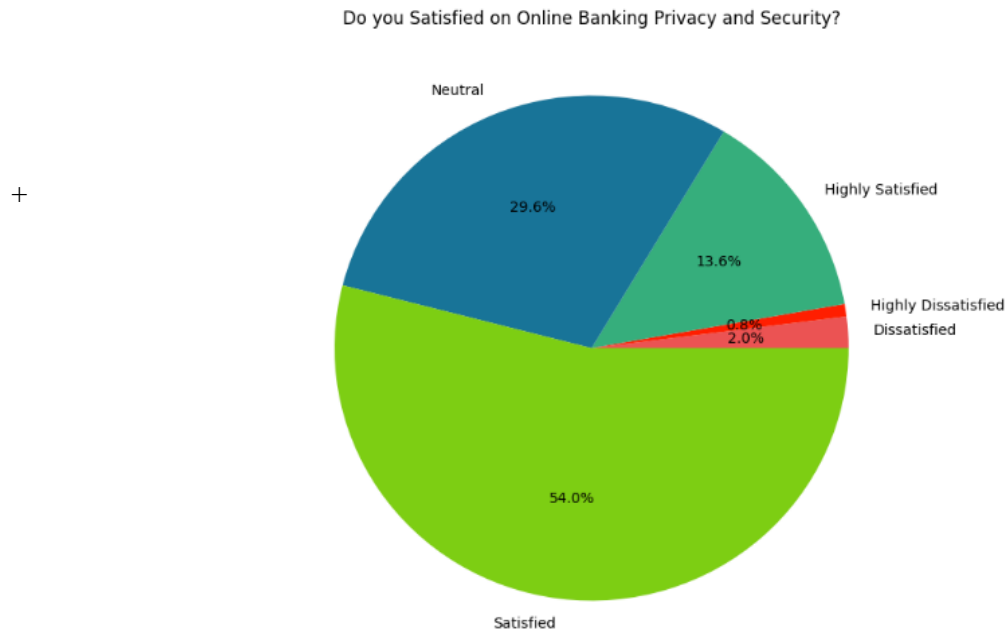


Diagram 4: User Sensitivity toward Privacy and Security

The previously mentioned graphic unequivocally demonstrates that the majority of respondents (54%) are content with the flexibility of internet banking. On the issue, the second-largest group, 29.6%, is neutral. Furthermore, 13.6% of those surveyed said they were extremely happy with internet banking's security and privacy. Just 2% of respondents expressed dissatisfaction with the ease of utilizing online banking at any time or location, and 0.8% expressed extreme dissatisfaction.

4. Can online banking save your time and energy?

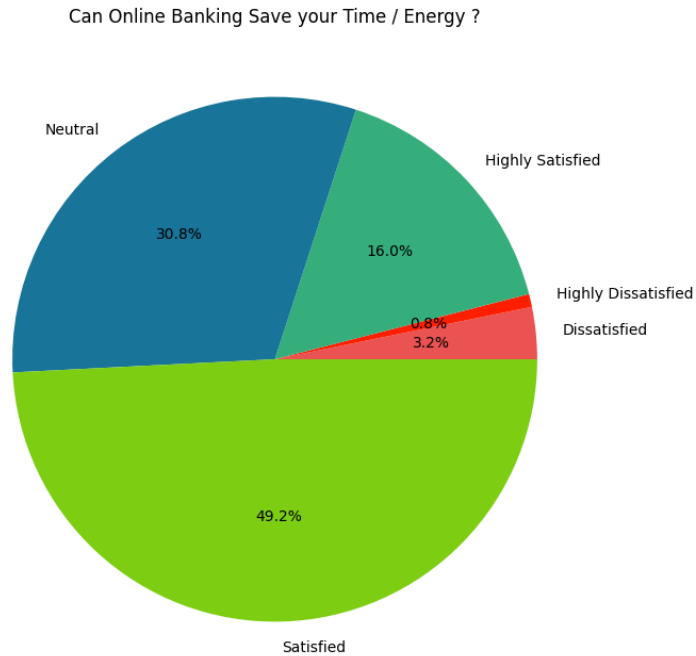


Diagram 5: Respondents' Perception of Time and Energy Efficiency

Half (49.2%) of all respondents said they were happy with the time and energy savings they received from internet banking. 30.8%, the second-largest group, responded in a neutral manner. Furthermore, 16% of those surveyed expressed great satisfaction with the time and energy savings. Only 0.8% of the smallest groups expressed high levels of dissatisfaction, while 3.2% expressed dissatisfaction.

5. Is Online Banking User Friendly?

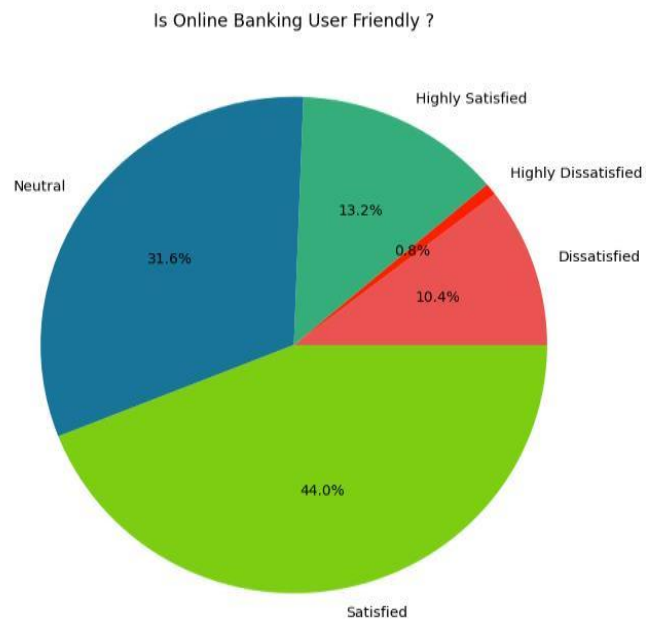


Diagram 6: Respondents' Perception of User-Friendliness

Compared to other possibilities, the majority of clients (44%), expressed satisfaction. After that, 13.2% of respondents said they were extremely satisfied, and 31.6% said they were neutral. 10.4% of customers selected dissatisfied, while the smallest number, 0.8%, selected severely unsatisfied.

6. Does online banking offer 24/7 accessibility from any location?

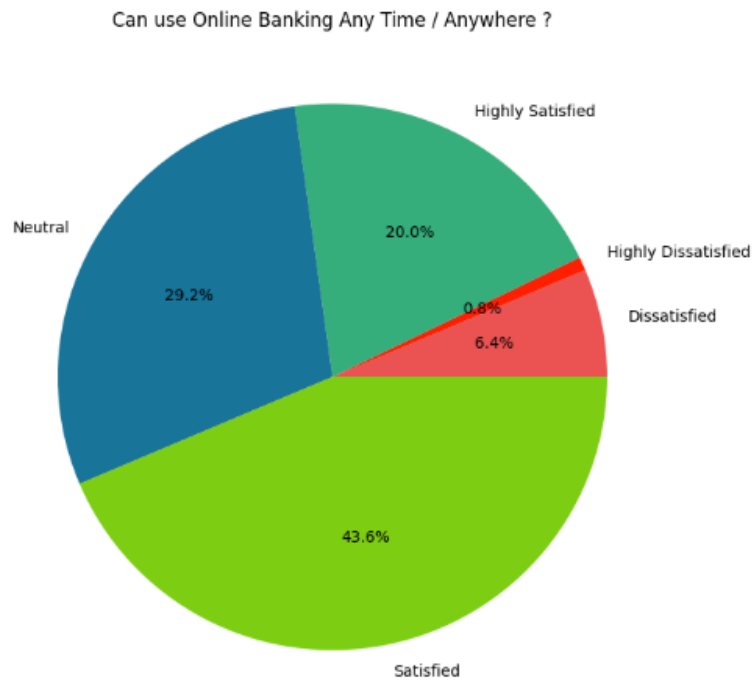


Diagram 7: Level of Satisfaction with Anytime, Anywhere Availability

A majority of 43.6% of respondents are satisfied with the ability to use online banking anytime, anywhere. Meanwhile, 20% of respondents are highly satisfied, and 29.2% are neutral. The remaining 0.8% of respondents are highly dissatisfied, while 6.4% are dissatisfied.

7. Online Banking Reduce Transaction Cost?

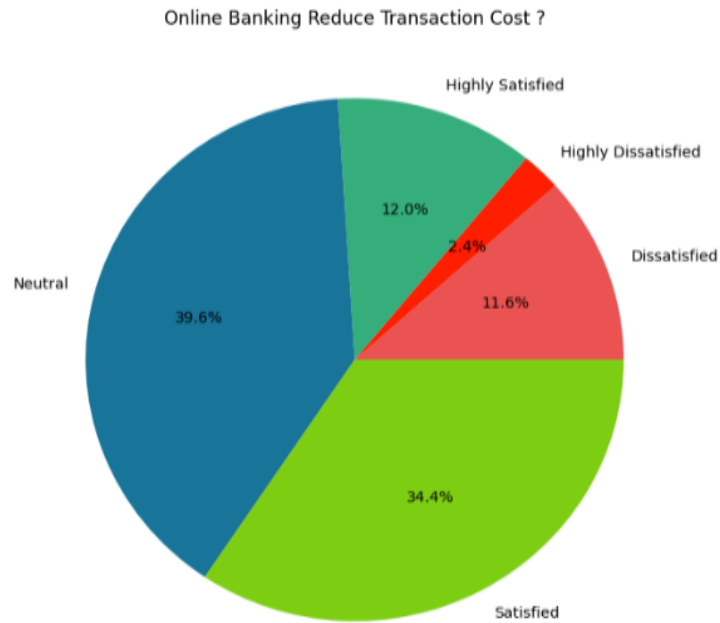


Diagram 8: User Feedback on Minimizing Transaction Expenses

34.4% of respondents said they were satisfied with the way online banking reduced transaction expenses. Twelve percent said they were extremely satisfied, while the largest group, 39.6%, said they were ambivalent. Furthermore, 11.6% of respondents expressed dissatisfaction, with 2.4% expressing extreme dissatisfaction.

8. Free from Cash Carry?

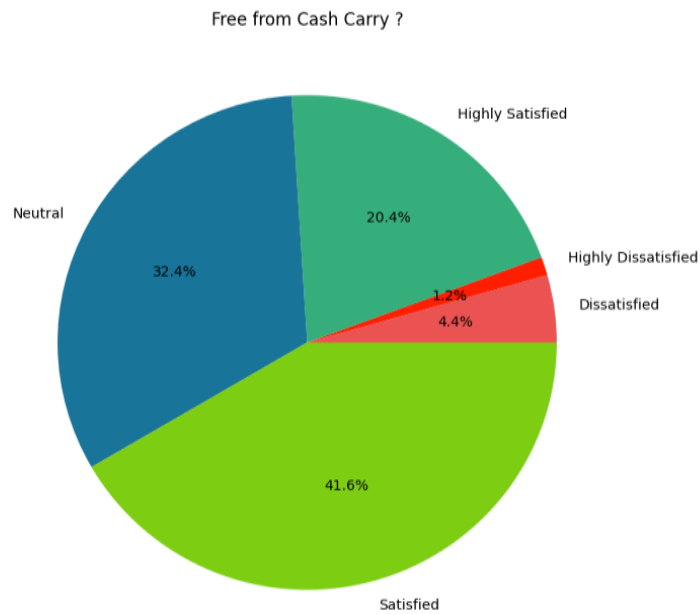


Diagram 9: User Feedback on Cashless Transaction Convenience

Most respondents, accounting for 41.6%, expressed satisfaction. Additionally, 20.4% reported being highly satisfied, while 32.4% remained neutral. On the other hand, 4.4% of participants indicated dissatisfaction, with only 1.2% expressing strong dissatisfaction.

9. E-Statement?

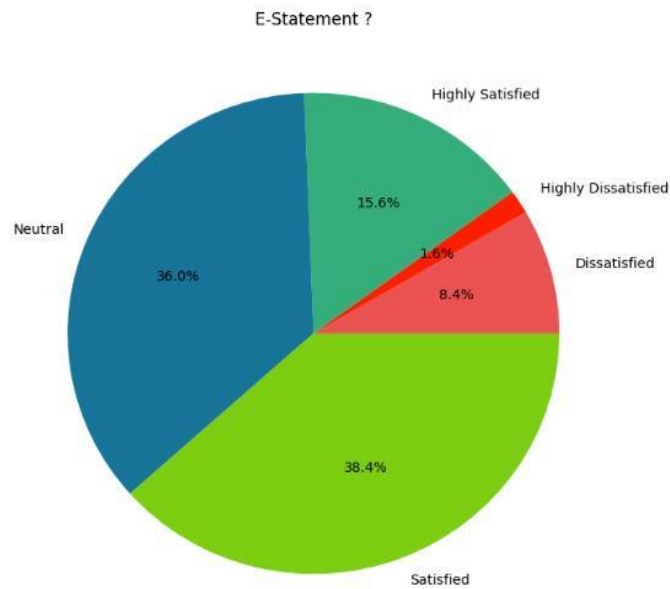


Diagram 10: User Interaction Level with E-Statements

38.4% of respondents said they were satisfied with using internet banking to collect e-statements. Furthermore, 36% responded in a neutral manner, whilst 16.6% expressed strong satisfaction. Of the respondents, 8.4% indicated discontent, with the lowest percentage, 1.6%, being extremely dissatisfied.

10. Online Bill Pay?

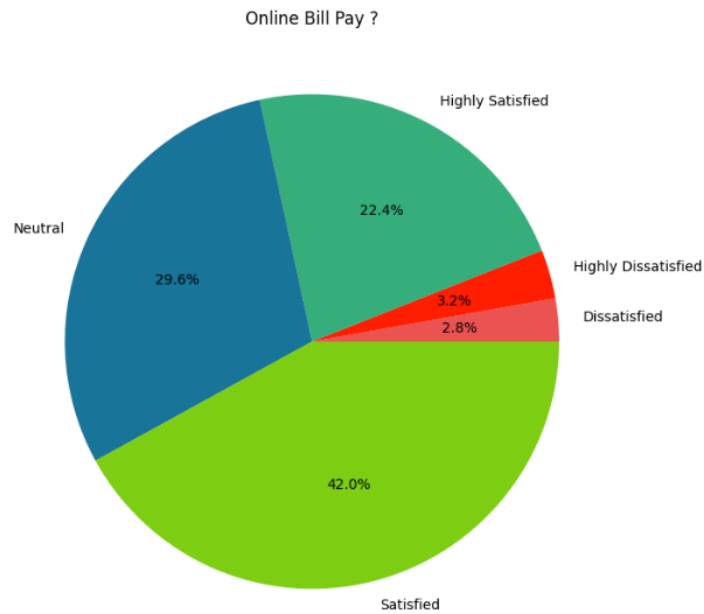


Diagram 11: User Feedback on Online Bill Payment Services

The majority of internet banking customers use the service to pay their bills, according to the poll results. Of those surveyed, 42% said they were satisfied with online bill payment, while 22.4% said they were extremely satisfied. Furthermore, 29.6% responded in a neutral manner. Conversely, 2.8% of consumers expressed dissatisfaction with the online bill payment process, and 3.2% expressed extreme dissatisfaction.

11. Fund Transfer?

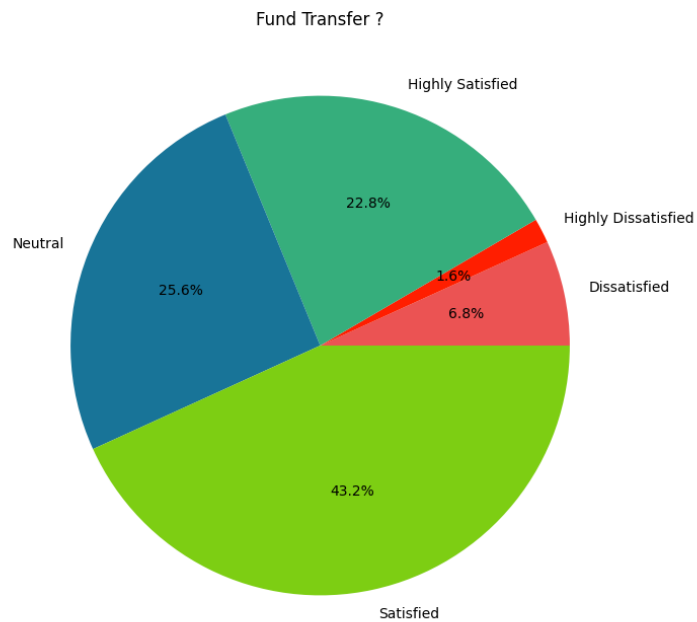


Diagram 12: User Feedback on Fund Transfer Convenience

Based on the feedback, 43.2% of customers reported being satisfied, while 22.8% expressed high satisfaction. Meanwhile, 25.6% remained neutral. At the lower end, 6.8% of respondents indicated dissatisfaction, and 1.6% were highly dissatisfied.

12. Do you find online banking simple and user-friendly?

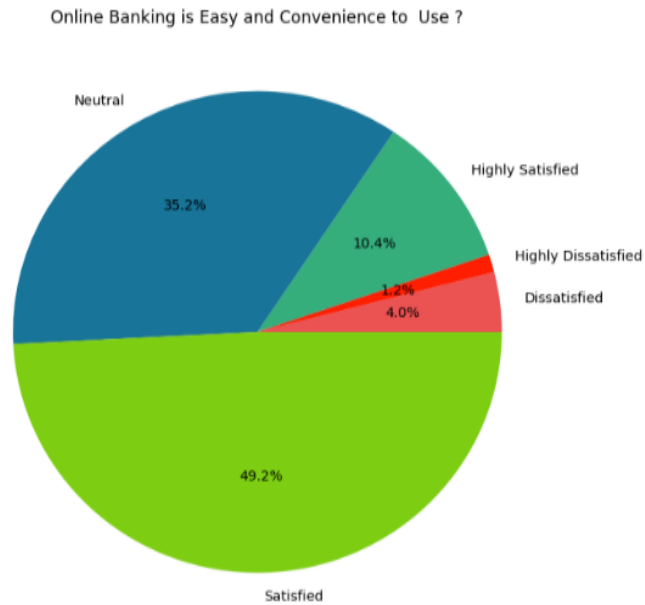


Diagram 13: Extent of Convenience and Ease Reported by Users

49.2% of consumers are happy with the security offered by internet banking, per the report. 10.4% are also really satisfied. In contrast, 35.2% of those surveyed expressed no opinion. However, 4% of respondents voiced displeasure, with 1.2% being the least happy with the security measures.

13. Overall Satisfaction?

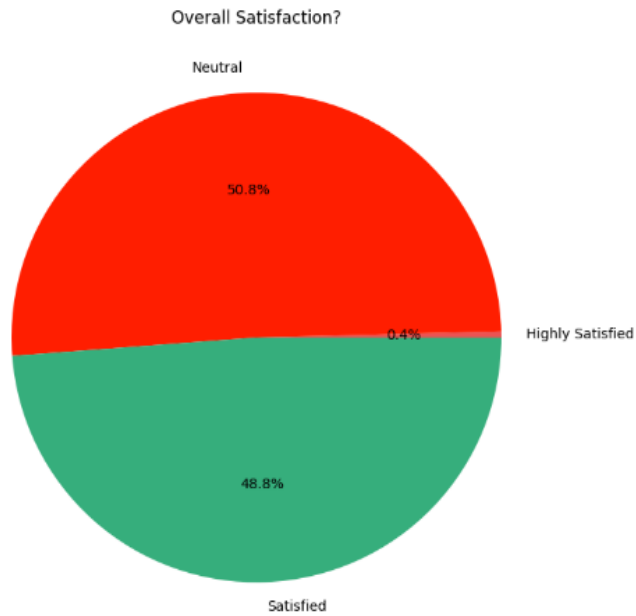


Diagram 14: Respondents level at Overall Satisfaction

The findings showed that 48.8% of consumers were happy with their entire online banking experience. Just 0.4% of respondents were extremely satisfied, compared to a somewhat higher percentage of 50.8% who responded in a neutral manner. Remarkably, none of the respondents expressed dissatisfaction or extreme dissatisfaction with their level of overall contentment.

6.4 Findings

- ✓ One observation is that elderly individuals tend to show little interest in online banking. Their lack of technical proficiency leads them to view digital banking as more complicated than traditional methods.
- ✓ Another insight is that many users are unfamiliar with how to transfer funds using online banking apps. Initially, they often require assistance and remain anxious until the recipient confirms the transaction.
- ✓ It was also found that users have significant concerns about cyber threats and hacking, which leads to a lack of full trust in the bank's digital platforms.
- ✓ Regarding ATM services, customers particularly those using private banks other than Dutch-Bangla Bank expressed dissatisfaction with the limited availability of ATM booths. The scarcity of government bank ATMs was also noted as a common complaint.
- ✓ Furthermore, many banks' online systems are outdated, resulting in frequent issues such as server errors, which frustrate users.

6.5 Result & Discussion

This study's primary goal was to assess Bangladeshi consumers' satisfaction with online banking. Customers are usually satisfied with the nation's online banking system, according to the research findings. Customer satisfaction and a number of online banking features were found to be positively correlated, albeit certain criteria were more important than others.

The findings show that consumers are especially happy with cashless transactions, online bill payments, fund transfers, user-friendliness, safety, privacy, security, ease of use, convenience, information updates, time and energy savings, accessibility, and overall performance of online banking in Bangladesh. Between 42% and 54% of poll participants said they were satisfied, whereas 25% to 38% said they were neutral.

Only 12% to 22% of respondents said they were extremely satisfied. The range of dissatisfaction was 2% to 10%, with occasional highs of 11.6%. The lowest proportion, ranging from 0.8% to 3%, expressed extreme dissatisfaction. In particular, 50.8% of users expressed neutrality, 0.4% expressed great satisfaction, and 48.8% expressed overall satisfaction with internet banking.

Interestingly, none of the participants expressed dissatisfaction or extreme dissatisfaction, highlighting a generally pleasant customer experience. The report does, however, also recommend that bank executives in Bangladesh pay greater attention to responsiveness because it is crucial to guaranteeing client pleasure. Increasing responsiveness may also boost worker productivity and performance. Survey responses indicate that service quality measured by privacy, safety, user-friendliness, accessibility, e-statements, convenience, up-to-date information, transaction cost reduction, and online bill payment significantly affects customer satisfaction. These findings could prove valuable for both academic research and banking management strategies.

Additionally, participants noted that banks' human resource management has to be improved, especially with relation to employee conduct and communication. Many respondents believed that bank staff should be given more authority to provide customers with faster and more accurate information. The majority of consumers believe they are treated fairly in the financial sector, according to the research. However, a sizable percentage of respondents stated that stress might occasionally be exacerbated by job demands and the workplace.

6.6 Conclusion

In order to ascertain consumer satisfaction in a number of categories, I examined the primary data that was gathered in this chapter. For this investigation, two programs were used: VS Code as the code editor and Matplotlib for data visualization. The results show that when consumers are aware of the features of online banking, they are more likely to react favorably to it. Since only private banks currently provide e-banking services, there may be a need for a reevaluation and eventual wider extension. Furthermore, the findings demonstrate that although consumers express interest in utilizing electronic banking systems, general confidence and dependability in these services have not yet reached a completely satisfying degree.

CHAPTER 7

CRITICAL APPRAISAL

7.1 Introduction

The expansion of ICT technologies has become more and more important in recent years for banking operations around the world, especially in Bangladesh and Nigeria. In almost every nation, the use of ICT for service delivery has grown significantly. Following suit, Bangladesh's banking industry has seen both public and private banks expand their networks by using ICT tools including POS terminals, online and mobile banking, ATMs, and green channel services. The spread of electronic banking services is currently receiving significant financial and human resources from numerous financial institutions. This emphasizes the necessity of determining the underlying reasons for the low adoption rate and creating appropriate plans to deal with them. Hence, the objective of this essay is to analyze the key elements that affect how well e-banking services are used. By doing this, financial institutions can lessen the strain on branch-level service counters and optimize the advantages of electronic channels.

7.2 Strategic SWOT Review

The primary purpose of a SWOT analysis is to identify an organization's external. It functions as a strategic planning tool to define industrial goals, direct choices, and make the required modifications to successfully handle obstacles. Businesses may identify which opportunities to pursue, which threats to be ready for, which weaknesses to overcome, and which strengths to capitalize on by employing SWOT analysis. The banking industry is going through a period of fast innovation due to the rise of digital transformation. Evaluating internal and external factors that may influence the effectiveness of e-banking projects is made easier by performing a SWOT analysis.

7.2.1 Positive Attribute

The swift growth of digital banking in Bangladesh has significantly elevated customer expectations for prompt and personalized financial services. With each passing day, an increasing number of users are embracing online banking platforms and gradually adapting to this digital shift.

Below are some key advantages of online banking in Bangladesh:

- ✓ Provides customers with round-the-clock access.
- ✓ Saves considerable time for users.
- ✓ Enables quicker transactions at reduced costs.
- ✓ Enhances customer convenience.
- ✓ Creates a competitive advantage through scalability.
- ✓ Delivers greater operational efficiency and user-friendly service.

7.2.2 Negative Attribute

Weaknesses highlight the areas that need development and practices that should be carefully reconsidered. Below are some identified challenges of online banking in Bangladesh:

- ✓ With the rise of digital transactions, instances of financial fraud have also surged, making many people hesitant to trust online banking. Strengthening cybersecurity is essential.
- ✓ Although banks are upgrading their systems and introducing advanced features, customer adoption of these innovations remains slow.
- ✓ Online banking's performance is influenced by global economic trends, requiring adaptability.
- ✓ Internet connectivity is still not widespread across the country, limiting access to digital banking services in certain areas.
- ✓ Services are often targeted toward a limited customer segment, leaving others underserved.

7.2.3 Opportunities

Opportunities represent favorable conditions or openings that can lead to positive outcomes. The following are some potential opportunities for the growth of e-banking in Bangladesh:

- ✓ Enhancing awareness of the benefits of digital banking.
- ✓ Connecting domestic banks with international markets.
- ✓ Expanding banking services beyond urban areas to reach all villages.

- ✓ Improving areas such as risk management and customer relationship management (CRM).
- ✓ Developing advanced technologies to prevent system failures and provide a secure and efficient platform for online transactions.

7.2.4 External Disruption

Threats are factors that may pose risks create negative impacts on the online banking sector. Below are some significant threats faced by digital banking in Bangladesh?

- ✓ The widespread use of digital payment methods such as credit and debit cards demands strong cybersecurity measures to protect users.
- ✓ A major barrier to adopting online banking is the concern over personal data breaches and the potential for identity theft.
- ✓ Intense competition within the financial sector.
- ✓ Vulnerability to fluctuations in the global economy.
- ✓ Weak enforcement of financial regulations and oversight.
- ✓ Declining levels of customer retention and brand loyalty.

7.3 Conclusion

The integration of digital banking systems by private banks in Bangladesh has advanced significantly, raising client expectations for quick and individualized financial services. An increasing number of people, whether at home or in the workplace, are turning to digital platforms for managing their financial. Traditional branch visits and face-to-face encounters Problems experienced with bank employees have issues with bank employees have significantly lessened as a result of this trend. Digital innovation adoption is now required, not optional. The banking industry's future is being actively redefined by digitalization.

The growth in digital involvement originates from altering client choices, rising service demands, and the broader digital transformation across businesses and society.

Consequently, banks now view technology investment as a key strategy for improving customer experience.

Nevertheless, it's important to acknowledge that not all customers will immediately switch to fully digital services. Most users of online banking are educated and comfortable navigating digital interfaces, whereas individuals with limited literacy tend to favor traditional, in-person banking methods. Considering that a significant segment of the population has low educational attainment, making online banking accessible to all remains a considerable hurdle.

CHAPTER 8

CONCLUSION

8.1 Conclusion

Electronic banking, or e-banking, adds a layer of convenience that allows individuals and businesses to manage their finances at any time and from any location. This digital approach benefits both customers and financial institutions, enabling account management, fund deposits, and withdrawals without requiring a physical visit to a bank branch. The adoption of information technology has profoundly changed the banking landscape. E-banking offers numerous benefits, including increased accessibility, ease of use, enhanced security, faster service, and reduced operational costs for both banks and users. Banks in Bangladesh give their customers significant opportunities while cultivating stable, long-term relationships while providing dependable support through the introduction of advanced banking solutions and facilitating seamless financial transactions.

As clients increasingly desire speedier and more efficient banking experiences, financial institutions are turning to cutting-edge technologies to deliver exceptional services and maintain their competitive edge.

Moreover, online banking allows users to conserve both time and commuting expenses. This study's results reveal that elements like data privacy significantly impact, secure systems, fund transfer capabilities, 24-hour accessibility, digital account statements, ease of use, and online bill payment are important factors that influence consumer satisfaction in the context of online banking. Service providers must constantly improve these functionalities to satisfy changing consumer expectations. Although there is still need for improvement in areas including bill payment systems, cybersecurity, transaction fees, fund transfer efficiency, and user-friendliness, prior research confirms their significance in fostering a positive online banking experience. Overall, these findings offer critical insights for digital banking providers, enabling them to better understand customer needs and identify areas requiring attention. Addressing these factors can significantly boost customer satisfaction and service effectiveness in the digital banking domain.

8.2 Further Suggested Work

To address the limitations encountered in this study, several strategic measures can be taken. One effective approach to mitigating time-related constraints is to allocate a longer timeframe for upcoming research initiatives. This would provide researchers with the opportunity to access a wider participant base, conduct more comprehensive interviews, and distribute a greater number of surveys to working professionals. Additionally, encouraging the adoption of secure digital platforms could boost participation in online banking activities. Expanding the sample size is another critical factor, as a small sample may compromise the precision and trustworthiness of the findings. By increasing participant numbers, the correlation between independent and dependent variables can be better established, enhancing the overall reliability of the study. Given that two hypotheses in this research were not validated, employing a larger and more varied sample in future studies can significantly strengthen the validity and applicability of the results. It would also enable the inclusion of a more representative cross-section of employed individuals throughout Bangladesh, offering a truer reflection of public sentiment. Moreover, the construction and relevance of survey questions play a pivotal role. Questions should be carefully formulated to accurately measure how independent variables influence the dependent ones. While these issues posed limitations for the current study, implementing these recommendations in future work can lead to more accurate and trustworthy outcomes.

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