



ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Masters of Business Administration (MBA)

**THE EFFECT OF MOBILE BANKING SERVICE QUALITY ON CUSTOMER
SATISFACTION: THE CASE OF BANK OF ABYSSINIA**

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July 2023

Addis Ababa, Ethiopia

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**A THESIS SUBMITTED TO ST. MARRYS UNIVERSITY, SCHOOL OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF REQUIRMENTS FOR THE DEGREE OF MASTERS OF
BUSINESS ADMINISTRATION**

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July 2023

Addis Ababa, Ethiopia

DECLARATIONS

I, Redet Teklu, Registration I.D. Number SGS00084/2013B hereby declare that the thesis entitled **INVESTIGATING THE EFFECT OF MOBILE BANKING SERVICE QUALITY ON CUSTOMER SATISFACTION: THE CASE OF ABYSSINIA BANK** is my original work and that it has not been submitted partially or in full, for an award of a degree in any other university or institution.

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ENDORSEMENT

This is to certify that the thesis entitled “investigating the effect of mobile banking service quality on customer satisfaction in the case of bank of Abyssinia “submitted to the school of graduate studies of St.Mary’s university in partial fulfillment of the requirements for the degree of master’s in business administration (MBA) is a record of original research carried out by Redet Teklu under my supervision, and no part of the thesis has been submitted for any other degree or diploma. The assistance and help received during the course of this investigation have been duly acknowledged. Therefore, I recommend it to be accepted as fulfilling the thesis requirements.

Advisor: Yibeltal Nigussie (Assistant professor)

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Date_____

St.Mary’s university, Addis Ababa June, 2023

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Table of Contents

Declarations	i
Approval	Error! Bookmark not defined.
Endorsement	iv
Acknowledgements	v
List of Tables	ix
List of Figures	x
Abstract	xi
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.2 Background of Bank of Abyssinia	2
1.3 Statement of the problem.....	4
1.4 Research Questions	6
1.5 Research Objectives	7
1.5.1 General Objective.....	7
1.5.2 Specific Objectives.....	7
1.6 Significance of the Study.....	7
1.7 Scope and Limitation of the study	8
1.7.1 Scope of the Study.....	8
1.7.2 Limitation of the study	8
1.8 Organization of the study	8
1.9 Definition of Key Terms.....	9
CHAPTER TWO	12
LITERATURE REVIEW	12
2.1. Theoretical review	12
2.1.1 Background of M- Banking	13
2.1.2 Introduction of M-banking in Ethiopia.....	13
2.1.3 Benefits of Mobile Banking.....	14

2.1.4 Benefits of Mobile Banking to Banks	14
2.1.5 Benefits of Mobile Banking for Customers	15
2.1.6 Customer Satisfaction and Mobile Banking:	15
2.1.7 Effect of Reliability on Customer Satisfaction	15
2.1.8 Effect of Responsiveness on Customer Satisfaction:	16
2.1.9 Effect of Convenience on Customer Satisfaction	16
2.1.10 Effect of Efficiency on Customer Satisfaction	18
2.1.11Effect of Security on Customer Satisfaction.....	18
2.2 Empirical Literature	19
2.3 Research Gap	21
2.4. Conceptual Framework of the Study.....	22
2.5 Research Hypotheses.....	22
CHAPTER THREE.....	23
RESEARCH METHODOLOGY.....	23
3.1 Research Design.....	23
3.2 Research Approach	24
3.3 Population, sample size and sampling procedure	24
3.3.1Target Population	24
3.3.2 Sample Size.....	25
3.3.3 Sampling Procedure	26
3.4. Data Sources and Methods of Collections	26
3.4.1. Primary Source.....	26
3.4.2 Secondary Source	27
3.5 Methods and Tools for Data Collection	27
3.6 Methods of Data Analysis and Presentation	27
3.7. Reliability and Validity	28
3.7.1. Reliability.....	28
3.7.2. Validity	28
3.8 Ethical Consideration	29

CHAPTER FOUR.....	29
DATA PRESENTATION, ANALYSIS AND INTERPRETAION.....	29
4.1 Response Rate.....	30
4.2 Demographic Characteristics of the Respondents.....	30
4.3 Descriptive Analysis of Mobile Banking Service Quality	32
4.3.1 Reliability	32
4.3.2 Responsiveness	33
4.3.3 Visibility	34
4.3.4 Security	36
4.3.5 Convenience.....	37
4.3.6 Efficiency.....	38
4.4 Customer Satisfaction in Mobile Banking System	39
4.5 Inferential Statistics Data Analysis	39
4.5.1 Correlation Analysis	39
4.5.2 Regression Analysis Assumption Test	41
4.5.3 Interpreter Analysis of Regression Results.....	45
4.6 Discussion of the Findings.....	48
4.7 Hypothesis Testing and Interpretation of Results	50
CHAPTER FIVE	50
SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....	50
5.1 Major Findings.....	51
5.2 Conclusions.....	52
5.3 Recommendations	53
Reference	55
Appendix I	60

List of Tables

Table 3. 1: Alpha Coefficient for Each Section of Questionnaire	28
Table 4.1: Response rate of respondents (N=270).....	30
Table 4.2 Demographic Analysis of the Respondents	30
Table 4.3 Respondents response towards Reliability	32
Table 4.4 respondents response towards service Responsiveness in the bank.....	33
Table 4.5 respondents response towards service Visibility in the bank.....	34
Table 4.6 respondents response towards security in the bank	36
Table 4.7 respondents response towards Convenience in the bank	37
Table 4.8 respondents response towards service Efficiency in the bank	38
Table 4.9 respondents response towards Mobile banking system.....	39
Table 4.10 Correlations	40
Table 4. 11: Multi collinearity Test	43
Table 4.12 Model Summary	45
Table 4.13 ANOVAa	45
Table 4.14 Coefficient of determination	46
Table 4.15: Summary of the overall outcome of the Research Hypotheses	50

List of Figures

Figure 1.1 Head of Abyssinia bank in the early time.....	3
Figure 2.1 conceptual framework of the study	Error! Bookmark not defined.
Figure 4.1 Linearity Test	42
Figure 4.2 Histogram (Normality test).....	43
Figure 4.3 Homoscedasticity	44

Abstract

This research investigated the effect of mobile banking service quality on customer satisfaction: the case of Abyssinia bank. Descriptive and explanatory research designs were used to achieve the purpose of the study. Descriptive research design was used to describe the data collected from the respondents as it exists while explanatory research design employed in this study to explain the relationship between independent and dependent variables. The study used quantitative research approach to quantify the data in numeric form. Primary and secondary data sources were used to attain the purpose of the study. 284 questionnaires were dispatched to Legehar, Sarbet and Dembel branch of Abyssinia bank in Addis Ababa. Among the total distributed questionnaire, 270 samples were used for the analysis. The data was analyzed quantitatively through descriptive statistics such as frequency, %, mean and standard deviation while the inferential statistics of the data was presented through Pearson correlation coefficient and multiple linear regression coefficients. The finding of the study identified customers were satisfied by the mobile banking service offered by Abyssinia bank with an average mean score of 4.05. The study also indicated the mean score of reliability, responsiveness, visibility, security, convenience and efficiency was 3.58, 3.82, 3.53, 3.73, 3.71 and 3.68 respectively. The results of this study indicate that, the six service quality dimensions (reliability, responsiveness, visibility, security, convenience & efficiency) have positive and significant relationship with customer satisfaction. The regression result of the study also showed that the five mobile banking service qualities such as reliability, visibility, security, convenience and efficiency had a significant positive effect on customer satisfaction. The study concluded that visibility was the main factors that influence the satisfaction of customers in the mobile banking services. The study advises that it's better the bank work together with the Ethiopian telecommunication sector to address the problem of full access of the mobile banking due to internet connectivity.

Key words: *Convenience, efficiency, reliability, responsiveness, security, visibility*

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

According to Timothy, (2012), globally the financial service industry has been changing rapidly from the old ways of doing business. Three or four decades ago, banking was a simple business Qureshi T.(2008), observed this change and noted that many banks have shifted from the traditional arm chair banking to online banking system, where customers can use self service channels such as mobile banking to satisfy their financial needs. All banks provide online banking facility to their customers as an added advantage. These applications can carry out virtually all banking functions relying heavily on information collection, storage, transferring and processing. Most of the general services are on all banking websites such as view account balances, pay bills, view records of transactions, transfer money to linked accounts with the same bank, transfer money to specially selected unlinked accounts, check interest in accounts, send money overseas, Change your details, etc. however, banks are not limited with only these services, due to their competitive nature they are always offering new features to attract customers. Banks create their banking interfaces and websites in a viewable and user-friendly manner, which enable customers to conduct their financial transactions with ease.

However the internet banking has some obstacles hence the banking sector adopts new technology called Mobile Banking (Athuman, 2014). Mobile device is commonly known as cell phone and users commonly use it for communication and as a wireless delivery channel (Anckar, & Incau, 2002).

According to Amin (2007) mobile banking is defined as “a form of banking transaction carried out via a mobile phone”. Mobile banking users can perform almost the same transactions of internet banking by using a mobile device (mobile phone, Smartphone, or tablet) (Shaikh & Karjaluoto, 2015). Mobile banking and internet banking are commonly perceived as two similar alternative self-service channels for banks to deliver products and services for their customers (Thakur, 2014).

Many banks are encouraging theirs customers to adopt self-service technology, which allows additional benefits such as cost savings and cross-selling activity (Hoehle & Huff, 2012; Sharma

& Govindaluri, 2014; Sharma et al., 2015; Al-Somali et al., 2009). At the same time, offering different multi-channel services and products enhances the relationship between banks and their customers (Lauk, 2007).

Most studies investigating the youngest channel in the financial industry m-banking focus on adoption. Most empirical studies of m-banking seek to understand the factors and motivations that influence the adoption or behavior intention (Baptista & Oliveira, 2016). However, there is a paucity of studies on the post-adoption phase, retention, or even continuance of using m-banking. This study focuses on understanding the use of m-banking as a benefit for the user, especially on the individual performance. Although several authors relate “performance” to effectiveness and productivity (Manzoor, 2012; Adler & Benbunan-Fich, 2012; Mahdi et al., 2014), that associate individual performance in the mobile banking context with efficiency and effectiveness in the performance of m-banking tasks as a benefit for the user. Mobile banking offers many advantages such as good security, easy access and plentiful applications for smart phones. The biggest benefit is that you have more control of your money. Instead this paper tried to investigate the effect of mobile banking service quality on customer satisfaction.

A strong banking industry is important in every country and can have a significant effect in supporting economic development through efficient financial services. In Ethiopia, the role of the banking industry needs to change to keep up with the globalization movement, both at the procedural level and at the informational level. This change will include moving from traditional distribution channel banking to electronic distribution channel banking. In this regard, Mobile technology, its introduction, and usage are used prolifically in the world today. The innovation has impacted positively on the lives of ordinary people more than any other technology. Their usage has presented opportunities with different dimensions to all groups of individuals and businesses. Mobile commerce (M-commerce) means all forms of interface between a consumer and a mobile device (Alex 2010), these may also include but not limited to the issuance of electronic coupons and shopping over the internet through a mobile device. Mobile financial services therefore fall under this umbrella such as mobile personal banking and payments.

1.2 Background of Bank of Abyssinia

Banking in Ethiopia began in 1905 with the Bank of Abyssinia, a private company controlled by the Bank of Egypt. In 1931 it was liquidated and replaced by the Bank of Ethiopia which was the

bank of issue until the Italian invasion of 1936. During the Italian occupation, Bank of Italy banknotes formed the legal tender. The current Bank of Abyssinia (BOA) was founded in February 1996. (90 years to the day after the first but defunct private bank was established in 1906 during Emperor Menelik II). BOA began operations with Birr 50 million in authorized and paid-up capital, respectively, with only 131 owners and 32 employees. Bank of Abyssinia has seen tremendous growth in its paid-up capital and total assets during the last two decades. It also attracted a diverse group of professional employees, significant shareholders, and major clients from all walks of life. This performance reflects public trust in the Bank, as well as its reliability and contentment with its services.

The Bank of Abyssinia is a private company with experience and success in a variety of fields such as business, entertainment, and education. The company's capacity to work together to develop a successful business venture and commercial bank service is reflected in its varied ownership, which not only represents the company's determination and willingness to succeed in the area in which it works.



Figure 1.1 Head of Abyssinia bank in the early time

Vision

- To become a leading bank in East Africa by the year 2030”

Mission

- We are committed to provide excellent financial services through competent, motivated employees and digital technology in order to maximize value to all stakeholders”

Value

1. Customer Satisfaction:

- We are committed to provide the highest quality service to our customers at competitive price;
- We continuously work towards achieving excellence in all our endeavors.

2. Integrity:

- We Promote and stand guard to a set of high moral standards and ethical values.

3. Team work and Collaboration:

- We foster teamwork and collaboration to achieve our goals.

4. Caring for our community:

- We promote sustainable and responsible business practices that are conscious of the community we operate in.

1.3 Statement of the problem

Banks also need to retain their customers and attract new ones and one of the ways of doing that is through customer satisfaction. This can be effective when the bank offer good mobile banking service quality at large. In addition, there is also need for improvement in service quality as well as security to ensure that customers feel secure doing their business and the service that they get is top notch (Shah et al, 2015).

In the present study, factors including service quality, reliability, security, convenience, visibility, responsiveness and efficiency are adopted from prior literature. Customer satisfaction is referred to as the feeling or attitude of the customer towards a certain product or service after using such

product or service. It is the major result of marketing activity and it serves as a connection between different phases of customer buying behavior; for example, when customers are satisfied with a specific service following its use, they are more likely to repeat their purchase and attempt at trying out the service line extensions (East, 1997).

Banks in Ethiopia are involved in tough competition to attract customers by delivering various services. It is better for customers to have broad choices to select best bank for them to satisfy their needs. For banks as well, they have to find the ways to satisfy customers and keep competitive advantages above other banks. In pursuit of round the clock customer services and keep abreast with the developing global banking technology, almost all banks in Ethiopia are fast moving toward launching new technology based products and services such as Mobile Banking, Internet Banking, ATMS and POS.

Bank of Abyssinia want to achieve a competitive position in the domestic and international market through building strong relationship with customers by provision of new service with good quality and high secure, so bank of Abyssinia has investing and updating its information technology to present a service to get confidence and satisfaction that customer to try to reach aspire through mobile banking service (Data from the bank itself). Mobile banking not only offers facilitates like balance check, or do transactions they are also affecting customer behavior. Integration of banking with their personal mobile devices, customers are engaging themselves in apps more than ever. The transaction costs of providing these services are lower than the traditional approach. The rapidly growing information and communication technology is knocking the front door of every organization in the world (Booz & Hamilton, 1997).

Customers are forever switching from one bank to the other being attracted by new services and different offers that come up. This had led banks themselves to keep this from happening by striving to improve customer satisfaction. This is being done in different ways like increasing emphasis on service quality; addressing and improving security concerns so that customers can access and use the bank's services safely.

As the researcher tried to get the banks practical evidence from the bank, banks in Ethiopia adopt m-banking products only to differentiate their services from each other and attract customers but they do nothing to understand as to how the m-banking services affect their customer's satisfaction.

Mobile banking in Ethiopia has extensively increased. Currently every bank has a mobile banking service transaction service either Account to Account transfer, utility payments, Air ticket payments, traffic charge ticket payment, cash withdrawal, CPO ticket, or loan settlement, LC document settlement.

It is harder to keep online customer satisfaction. In banking, which has traditionally been a high contact service, the lack of direct human interaction in m-banking service entails the need to examine the role of technology to construct m-banking customer satisfaction.

Customer satisfaction measurement allows an organization to understand the key factors that affect customer's satisfaction during service experience Ankit, (2011). A research that has been conducted in Thailand on the impact of mobile banking service on customer satisfaction identified that reliability, responsiveness, visibility; Security, convenience and efficiency have significant impact on customer's satisfaction Rangsan & Titida (2013).

Therefore, this study tried to answer the following research questions.

1.4 Research Questions

1. What is the major impact of reliability of mobile banking service quality on customer's satisfaction in Abyssinia bank?
2. What is the effect of responsiveness of mobile banking service quality on customer's satisfaction in Abyssinia bank?
3. How visibility of mobile banking service quality affect customer's satisfaction in Abyssinia bank?
4. What is the major effect of security of mobile banking service quality on customer's satisfaction in Abyssinia bank?
5. What is the effect of mobile banking service quality in terms of convenience on customer's satisfaction in Abyssinia bank?
6. What measures should be taken to increase customer's satisfaction of mobile banking service quality in terms of efficiency of in Abyssinia bank?

1.5 Research Objectives

1.5.1 General Objective

The main objective of the study was to investigate the effect of mobile banking service on customer's satisfaction in the case of Abyssinia bank of Ethiopia.

1.5.2 Specific Objectives

- To determine the reliability of mobile banking service quality affecting customer's satisfaction in Abyssinia bank.
- To examine the responsiveness of mobile banking service quality affecting customer's satisfaction in Abyssinia bank.
- To show the visibility of mobile banking service quality affecting customer's satisfaction in Abyssinia bank.
- To investigate the security of mobile banking service quality affecting customer's satisfaction in Abyssinia bank.
- To examine the convenience of mobile banking service quality affecting customer's satisfaction in Abyssinia bank.
- To investigate the efficiency of mobile banking service quality affecting customer's satisfaction in Abyssinia bank.

1.6 Significance of the Study

The findings of this study would serve a benefit to the customers in understanding the effect of mobile banking service on customer satisfaction with reference to Abyssinia bank of Ethiopia.

The significance of the study is to give a good quality service for customers and avoid those factors affecting customer satisfaction. Future researchers who will be undertaking other researches related to this will be benefited because it increases their knowledge on the effect of mobile banking service on customer satisfaction.

In general, the study aids banking sectors in determining the impact of M-banking service quality on customer satisfaction, as well as providing recommendations for improving these services. Furthermore, it contributes to the current knowledge about M-banking and customer satisfaction in the banking business, and the study may be utilized to do additional research on the subject.

Furthermore, it assists the bank in gaining information into the impact of the bank's m-banking services on client satisfaction.

1.7 Scope and Limitation of the study

1.7.1 Scope of the Study

This research was limited in Bank of Abyssinia. The geographic scope of this study was therefore limited to the study of the effect of mobile banking service quality on customer satisfaction in bank of Abyssinia selected branches in Addis Ababa districts customers who are using mobile banking. Other branches which are yet to use such services were not considered in this study.

Conceptually, this study focuses on independent and dependent variable customer satisfaction (Reliability, Responsiveness, visibility, security, convenience and efficiency). The target populations are limited to customers' who are currently using the system, perspective of mobile banking services in Abyssinia bank.

1.7.2 Limitation of the study

The study has certain limitations. The first limitation was the researcher used only quantitative research methodology. This mainly affected the data in order to triangulate it from various data sources. It is also difficult to ensure the accurateness of the data by solely used questionnaire as a data collection instruments. For this purpose of this study, only questionnaires are conducted of those customers who are directly related to quality customer services. The other limitation is selected of branch of the bank. In this case, the researcher used only three branch of Abyssinia bank in Addis Ababa. Therefore, the finding of this study was only limited the three branches rather than other branch of the bank found in Addis Ababa. Also, there was lack of willingness to respond the questionnaires.

1.8 Organization of the study

Overall, the study was organized into five chapters. The first chapter presents the background of the study, problem statement, objectives of the study (general and specific), research questions, scope of the study, limitation, significance of the study, and definition of key terms. Chapter two deals with related literature on theoretical framework, empirical literature reviews, and conceptual frame work. Chapter three highlights the research methodology was employed .The fourth chapter

presents the analysis, discussion and interpretation of data. The final and fifth chapter give due attention to the summary, conclusion and recommendation.

1.9 Definition of Key Terms

Convenience: According to Chang and Polonsky (2012) is the ability to reduce consumers non-monetary costs (i.e. time, energy and effort) when purchasing or using goods and service.

Customer: A customer sometimes known as a client, buyer, or purchaser is the recipient of a good, service, product, or idea, obtained from seller vendor or supplier for a monetary or other valuable consideration (Athumun, 2014).

Customer satisfaction: According to Saha & Zhao (2005), customer satisfaction is defined as a collection of outcome of perception, evaluation, and psychological reactions to the consumption experience with a product/service. In other words, Saha and Zhao further defined customer satisfaction as a result of a cognitive and affective evaluation where some comparison standard is compared to the actually perceived performance. If the performance perceived is less than expected, customers will be dissatisfied. On the other hand, if the perceived performance exceeds expectations, customer will be satisfied.

Efficiency: This is customers expect efficient and hassle free service from the mobile banking companies such as easy transfer of money from bank to mobile, fund transfer and other services. Customers had to visit branches to reproof their transactions but by using mobile banking services they can check the condition of their fixed deposits or checking account information (Saoji & Goel, 2013).

In a competitive market place where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy (Carl & McDaniel, 2005). It is seen as a key performance indicator within business and is often part of a Balanced Scorecard. Therefore, it is essential for organizations to effectively manage customer satisfaction. To be able do this, organizations need reliable and representative measures of satisfaction.

Mobile Banking: is a popular term. Mobile Banking means a financial transaction conducted by logging on to a bank's website using a cell phone such as viewing account balances, making

transfers between accounts, or paying bills. It is a term used for performing balance checks, account transactions, payments etc. via a mobile device such as a mobile phone. In recent time Mobile banking is most often performed via SMS or the Mobile Internet but can also use special programs called clients downloaded to the mobile device (Athumun, 2014).

Reliability: refers to the ability to perform the promised service accurately and consistently. It involves accuracy in billing, keeping records correctly, and performing the service at the designated time. Reliability consists of providing services as promised, dependability in handling customers' service problems, prompt reply to customer enquiries, provide services at the promised time and maintaining error-free record. Reliability is the most important factor in -conventional service (Parasuraman et al., 1988).

Responsiveness: According to Parasuraman et al. (1988) "Responsiveness is the willingness to help customers and provide prompt service.

Security: An issue involves the introduction of trust as a main factor in the analyst of m-banking /m-payment use. Nowadays evidence and intuition alike suggest that "trust" plays a main role in use for example; users feel more comfortable to deal face-to-face contact while using m-banking/m-payments system. It was considered to be one of the greatest concerns in adoption of mobile banking services, as individuals may worry about security issues during mobile banking service transactions such as data input and output mechanisms loss of connection risk and personal performance mistakes. As a result, many people may decide not to use this service and ignore the extra benefits of using mobile banking (Yu, 2009).

Service Quality: Customers experience service quality and perceive the value of delivered service, and it also improves operational readiness for short time-to-market of new innovative services (Ma et al., 2008). It is now the most powerful competition weapon and organization's life giving blood. Perceived service quality refers to the consumer's global attitude or judgment of the overall excellence or superiority of the service. It is a result from comparisons by consumers of expectations with their perceptions of service (Caruana & Malta, 2002). That means it can be termed as the extent of matching or the degree of discrepancy to which the service delivered matches customer expectations (Parasuraman, 1988). Delivering quality service means conforming to customer expectations on a consistent basis (Thakur, 2011). Therefore services

marketing researchers based their work on developing a service quality concept focused on consumer behavior instead of using manufacturing quality concepts (Dhandabani, 2010).

Visibility: Visibility is considered as firm's representatives, physical facilities, materials and equipment as well as communication materials. This dimension related to the reality of products and services (Mersha et al., 2012).

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter contains both the theoretical and empirical review also conceptual framework of the study. The theoretical review includes: background and Definition of mobile Banking, introduction of mobile banking in Ethiopia, benefits of Mobile Banking to customers and banks sector respectively.

2.1. Theoretical review

Banking industry is going through many transformations such as offering their customers services over the handheld mobile devices. Such services are not constrained by the geographic locations, legal or other barriers and therefore if it has facilitated the customers on hand. The development and coverage of wireless telecommunications has served as a stage for mobile banking services. Hibberd (2007) informed there were three billion mobile phones users worldwide and it has been keep growing at a fast pace. Banks have recognized the potential of phone devices to reach out to customers through advertisements. . Furthermore, Keen andMac kintosh (2001) portrayed that advancement in technology played a significant part in the selection of mobile value-added services. He further predicted that services offered through mobile devices may further grow over time with new innovations in mobile banking. Wavermanet Al, (2005) found that many studies have been conducted in different countries worldwide over the use of mobile phones for banking.

Mobile banking furnishes the stage where clients interface with a bank through a cell phone or personal digital assistant (Barnes & Corbitt, 2003). Mobile banking (m-banking) is a part of m-banking that provides customers access to a range of banking services like saving and credit information and customers can do payments or transfers of money through electronic channels (Macharia, 2001). It can be said that these days a large number of the population across all demographic and socio-economic levels use mobile phones in their daily life. Such users of mobile phones, if they sign for m-banking, can get the services like checking account balance, mini statement, transfer of funds and transactions and password administration and others right on their mobile phones.

2.1.1 Background of M- Banking

Mobile banking (also known as M-Banking) is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device such as a mobile phone or Personal Digital Assistant (PDA). The earliest mobile banking services were offered over SMS, a service known as SMS banking. Mobile banking is used in many parts of the world with little or no infrastructure, especially remote and rural areas. This aspect of mobile commerce is also popular in countries where banks can only be found in big cities, and customers have to travel several miles to the nearest bank. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information (Tiwari & Buse, 2007).

Currently in addition to the electronic banking products in Ethiopia mobile banking is adapted widely. Literally this is getting banking service on the mobile phone. Based on, Clottey (2008) Mobile banking is a system or platform in which customers are automatically updated on any changes in their account. These changes are may come in the form of account debits and credits or any charges to the account. All it needs for mobile banking is a mobile phone with a well-functioning text messaging system. SMS banking falls under this category. This system uses short text messaging system to inform customers of their account (Clottey; 2008).

2.1.2 Introduction of M-banking in Ethiopia

The electronic banking service was ushered into the Ethiopian market in 2001 when the largest state owned, Commercial Bank of Ethiopia (CBE) introduced ATM to deliver service to the local users (Gardachew, 2010). After this the electronic banking service scope was further expanded to mobile banking when Dashen Bank signed an agreement with iVery, a South African E-payment technology company, for the introduction of mobile commerce in April 21, 2009. According to the agreement, iVery Payment Technologies has licensed its Gateway and MiCard E-payment processing solution to Dashen Bank. Dashen's Modbirr users can transfer 500 birr to other Modbirr users in 24 hours a day. This would make Dashen Bank the first private bank in Ethiopia to acquire E-commerce and mobile merchant transactions (Amanyehun, 2011). However, mobile banking came into full practice after several years of trials and errors as well as wait-and-see attitude by customers. Since then, mobile banking has shown a gradual growth across many various parts of Ethiopia. Despite the very high mobile penetration rate, the use and adoption of mobile banking

services remains low. With the advent of new mobile technologies, such as Blackberry, iPhone, Androids, etc., which serves as a catalyst, mobile banking is on the edge to draw millions of new users 10 within the world teeming population (Agwu 2012). Many customers who are tired of the old banking systems are looking for time saving alternatives. The review of the existing literature showed that mobile banking has been widely researched in the developed and emerging economies; however, there is no research for the developing Ethiopian economy. This research is therefore believed to fill this gap.

2.1.3 Benefits of Mobile Banking

Mobile banking allows anytime, anywhere (within the network coverage) banking with all the inherent advantages (Pousttchi & Schurig. 2007). the high penetration of mobile phones across the strata of society makes it a natural tool for taking electronic banking to its next level. It is more than likely that Internet banking and mobile banking would exist as allies rather than competitors for each other. Convenience is one of the benefits of mobile banking as banking transactions and other related activities can be performed in the comfort of customer's home or offices. The usefulness of conducting banking transactions at home or from the office eliminates the difficulties that are associated with driving to the bank, the cost of petrol, and parking. Mobile banking also allows customers to perform banking transactions 24 hours a day, 7 days a week, and 365 days a year (Eckhardt et al., 2009).

2.1.4 Benefits of Mobile Banking to Banks

Banks can utilize the time saved by the channel migration of customers to mobile banking for expansion of business through better marketing and sales activities. Mobile banking enables banks to reduce cost of courier, communication, paper works, etc and also it reduces costs in setting up a branch and the resources to process transactions (Sunil & Durga, 2013). Also banks providing mobile banking services can have competitive advantage over those banks, which are not providing this service. It has also been found to increases customer loyalty that is using mobile banking customers need not to go in banks braches for fund transfer or for information, which creates a good relationship between banks and customers which helps in increasing loyalty towards the banks. Goswami & Raghavendran (2009) point out, mobile banking services will enable banks to not only increase fee-based income but also enable significant cost savings, improve service quality and provide cross-selling opportunities.

2.1.5 Benefits of Mobile Banking for Customers

Customers don't need to stand at the bank counter for various enquiries about their account. Customers can save their valuable time and travelling cost in reaching the bank for their financial transactions (Sunil & Durga, 2013). Customers can pay their utility bills on time and save themselves from paying penalties, since alerts are received from the bank. Ubiquitous access, convenience and mobility are the main benefits that mobile banking confers to customer (Laforet and Li 2005). Delport (2010) points out that with mobile banking customers no longer need to use scarce time and resources to travel to bank branches. Nevertheless, despite the widespread proliferation of mobile phones and the numerous advantages that mobile banking offers, mobile banking is still not widely adopted (Riquelme & Rios, 2010).

2.1.6 Customer Satisfaction and Mobile Banking:

Customer satisfaction shows how well a product or service meets the customer expectations. Dahlberg & Mallat (2002) consider customer satisfaction as "ease of use, security, low transaction costs, and wide applicability of the solutions increase perceived customer value and should be managed by mobile payment solution provider". The adoption of mobile banking by banks is a way to reach the unreached customers especially those who lack banking services and making banking services accessible at all time without physically visiting a bank hall. In relation to the normal banking, mobile banking services enables customers save on time. Customer satisfaction has a positive effect on banks success. The further customers are contented with banks services rendered, the greater the chances for success as customer satisfaction yields to repeat buying, product loyalty and positive word of mouth marketing. Niveen et al. (2015) asserts that companies are placing a high priority on customer satisfaction which is critical to improved organizational performance in a global market scenario. With better understanding of customers' perception, companies can determine the actions required to meet their customers' needs. They can identify their own strengths and weaknesses, where they stand in comparison to their competitors and they can chart out path for future progress and improvement (Santhiyavalli, 2011).

2.1.7 Effect of Reliability on Customer Satisfaction

Reliability entails consistency of performance and dependability. This means that the services offered by the service provider should always be of same quality and form. Reliability involves

offering services; on timely basis, responding to customer request and complaints without delay and the services having the same quality aspects (Parasuraman, 2002). Banking industry has realized the significance of customer-centered philosophies and is turning to quality management approaches to help managing their businesses. Many scholars and service marketers have explored consumers' cognitive and affective responses to the perception of service attributes in order to benefit by providing what consumers need in an effective and efficient manner. Consumer satisfaction is considered the primary intervening constructs in the area of service marketing because ultimately it leads to the development of consumer loyalty or re-patronization of a product or service (Ravichandran et al., 2010).

2.1.8 Effect of Responsiveness on Customer Satisfaction:

Responsiveness concerns the readiness or promptness of employees to make available a service or good. Responsiveness is attributed to the period that an employee is able to offer a service requested by a customer (Parasuraman, 2002). According to Souranta & Laukkanen (2004) there are several diverse mobile banking services such as account balance retrieval, transaction history retrieval, transfer of funds between to a third party account, stock trading, portfolio management, and bill settlements. Herzberd (2003) asserts that there are many advantages that mobile banking brings to customers. Those benefits include, relieve of use, low cost, confidential and ease are the factors that lead to the prolific execution of mobile banking needs.

Mobile banking services can be acknowledged as an influential selling tool that maintains close links between the client and banks. Effect of Accessibility on Customer Satisfaction: Access is the ability and easiness of a consumer to be able to approach or use a service. Mobile banking can be easily accessed by customers no matter the location where the customers are. Also the time of accessing and using mobile banking service is not limited to working hours but a customer can access the service 24 hours in a day (Parasuraman, 2002).

2.1.9 Effect of Convenience on Customer Satisfaction

Strategic implications and customer perception of m-banking services are explored (Laukkanen, 2005) with a focus on the consumer value creation and a better understanding about the customer-perceived value of m-banking services. For instance, mobile internet service has been quite popular in Japan (over 60 million users in 2003) especially for those young and single consumers (Scornavacca, 2004). The terms m-banking, m-payments, m-transfers and m-finance refer

collectively to a set of applications that enable people to use their mobile telephones to manipulate their bank accounts, store value in an account linked to their handsets, transfer funds, m-banking or even access credit or insurance products. This paper uses the compound term M-Banking/MPayments systems to refer to the most common features. The first targets for these applications were consumers in the developed world. By complementing services offered by point-of-sale networks, and internet resources, the mobile platform offers a convenient additional method for managing money without handling cash (Karjaluoto, 2002).

For users in the developing world, on the other hand, the appeal of these m-banking/mpayments systems may be less about convenience and more about accessibility and affordability (Cracknell, 2004; infoDEV, 2006). An exploration is underway—between banks, mobile operators, hardware and software providers, regulatory agencies, donors, and users—to determine the shape of m-banking/m-payments services in the developing world (infoDEV, 2006; Ivatury, 2006; Ivatury & Pickens, 2006).

Mobile phone operators have identified m-banking/m-payments systems as a potential service to offer customers, increasing loyalty while generating fees and messaging charges (infoDEV, 2006). There is no universal form of m-banking; rather, purposes and structures vary from country to country. The systems offer a variety of financial functions, including micropayments to merchants, bill-payments to utilities, transfers between individuals, and long-distance remittances. Currently, different institutional and business models deliver these systems. Some are offered entirely by banks, others entirely by telecommunications providers, and still others involve a partnership between a bank and a telecommunications provider (Porteous, 2006).

The new services offer a way to move money from place to place and present an alternative to the payment systems offered by banks, remittance firms and pawn shops. The uptake of m-banking/m-payments systems has been particularly strong in the Philippines, where three million customers use systems offered by mobile operators Smart and Globe (infoDEV, 2006); in South Africa, where 450,000 people use Wiz it (—the bank in your pocket) (Ivatury & Pickens, 2006) or one of two other national systems (Porteous, 2007); and in Kenya, where nearly two million users registered with Safaricom M-Pesa system within a year of its nationwide rollout (Ivatury & Pickens, 2006; Vaughan, 2007).

2.1.10 Effect of Efficiency on Customer Satisfaction

Mobile banking is indeed effective on cost and dispenses services to the unbanked due to the fact that there is no need for branches physical establishment to aid the customers. It is simply a branchless bank model that has the capabilities of handling limited bank dealings through the mobile phone (infoDEV, 2006). M-banking is a cost effective way to provide banking services to the unbanked because there is no need to set up physical branches to facilitate customers it called as it is ‘branchless banking’. It is branchless bank model includes enhanced ability to carry out limited banking transactions via mobile phone (Porteous 2006). Banks should develop their m-banking system and register their customers electronically for m-banking. It is noted that, initial cost for establishment of m-banking system may be high but marginal cost for additions of new customers in m-banking will declines continuously till full utilization of existing installed capacity. Connectivity for mobile device is not the part of banking service it is duty and part of business of telecommunication department and cellular service providers. Hence, banks should only lease the telecommunication lines provided by telecommunication department to provide access to the customers (Vaughan, 2007).

2.1.11 Effect of Security on Customer Satisfaction

A crosscutting issue involves the introduction of —trust as a factor in the analysis of m-banking/m-payments use. Early evidence and intuition alike suggests that —trust plays a role in use (Ivatury, 2004; Porteous, 2007). For example, users feel more comfortable with at least some face-to-face contact and assistance while using an m-banking/m-payments system like Wiz it (Ivatury & Pickens, 2006). Ling (2004) proposed a modified technology acceptance model that included a trust variable—perceived credibility—to predict m-banking adoption in Taiwan.

Yet their modification also included another variable, self-efficacy, and a form of trusting one’s self. Indeed, trust itself is a multifaceted concept, which must be handled carefully in any analysis of m-banking/m-payments use (Benamati, 2007). Trust is a crosscutting concept in that people can trust (or mistrust) their own skills. They can trust the interface, the network across which their funds travel, the representatives of the institutions (channels) who control their money, and/or trust the institutions themselves (Maurer, 2008). And, of course, they can differentially trust various people in their networks: some might be eligible as exchange partners using m-banking/m-payments systems while others might not. These forms of trust may change over time with use of

the system. People might become more or less trusting along any of these dimensions as their experience of the system changes, relative to friends, family, and others in the community.

The role of trust is a crosscutting issue because multiple research traditions examine economic transactions in their social context—not as discrete acts but as markers and reinforcements of a set of interrelated responsibilities, roles, and transactional networks in which trust plays a central role (Geertz, 1978; Granovetter, 1985). Often these transactions are seen as either being structured by or creating a form of —social capital (Coleman, 1988). These transactions need not be face-to-face; researchers have used social capital/social networks lenses to explore how the information technologies generate and reinforce social/economic relationships in ways that provide returns to actors (Huysman, 2004) For example, Horst (2006) described the practice of link up in Jamaica, where mobiles are used quite strategically to build and maintain networks of resources for future assistance or loans.

2.1.12 the Effect of Visibility on Customer Satisfaction

It is related to tangible proof of physical components, depictions, properties, amenities and ingredients of the service firm (Othman & Owen, 2001). Service staff and staff's costumes, interior decoration and service instruments were fragment of this dimension (Endara et al., 2019). In the banking service sector, some elements also added with this visibility dimension impact on customer satisfaction such as the frontline outlook of a bank, different offer for smooth operation, reasonable banking hour and potential and swift service of banking (Kant & Jaiswal, 2017; Pakurar et al., 2019). (Islam et al., 2020) found a significant relationship between visibility and customer satisfaction.

2.2 Empirical Literature

Several studies have been conducted to examine the relationship between Mobile banking adoption and its determinants in developed and developing countries. Given the amount of empirical literature available on the topic of this research it would have been quite difficult to present the results of all the studies, therefore here are some of international researches done on mobile banking.

Yang (2005) carried out a study “Exploring factors affecting the adoption of mobile banking in Singapore” using Technology acceptance model (TAM) and suggested that apart from TAM

factors there were other key factors that affect adoption of this technology. They were “consumer innovativeness, past adoption behavior, technology cluster adoption, age and gender” .The result also mentioned that men are more favorable adopters of mobile banking technology as opposed to women.

The result of the study indicated that, the major barriers Ethiopian banking industry faces in the adoption of mobile banking are: service quality based on reliability, responsiveness, visibility, security, convenience and efficiency. The study suggests a series of measures which could be taken by the banking industry to address various challenges identified. These measures include establishing a clear set of legal framework on the use of technology in banking industry, supporting banking industry by investing on ICT infrastructure and banks needs to be focused on technological innovation competition rather than traditional bases of retail bank competition.

Furthermore, Assefa (2013) conducted a study on the impact of e-banking on customer satisfaction in two private banks in Gondar city. The researcher employed descriptive and inferential statistics in analyzing this study and it was limited to customers of two private banks only. The results of the study implied that majority of users of e-banking are the young, the educated, salaried and students, business men and women are not actively using the service of e-banking, e-banking currently provided for saving and current accounts holders only, e- banking reduced frequency of bank hall for banking service, reduced waiting time for customers, there are customers who don't know the fee charged for being e-banking users , the bank customers satisfaction increased after being e-banking users, enabled customers to control their account movements and there is high opportunity to expand e-banking service in the city.

The other descriptive case study analysis conducted by Khalfan et al (2006) on „Factors influencing the adoption of internet banking in Oman, aimed to identify the main potential factors or impediments that are currently inhibiting the incorporation or adoption of E-commerce applications in the Omani Banking sector. Data, used in their study were collected using semi structured interviews and survey questionnaire as well as reviewing some bank documents. The results of their study provide a Pragmatic picture about the adoption of E-Commerce applications in the core financial sector domain of Oman. One of the main findings is that security and data confidentiality issues have been a major barrier. The banking sector was reluctant to use E-commerce applications as they felt that transactions conducted electronically were open to hackers

and viruses, which are beyond their control. Lack of top management support is the other inhibiting factor in the adoption of electronic commerce applications as per their finding. Similarly the study of Ghazi & Khalid (2012), found that, the most important barriers for E-business growth are technological issues, such as, security risk, quality of internet and cost of implementation to be the most prominent.

A research conducted by Souza (2002) on the comparative performance of public and private sector banks in the decade of the 1990s shows that though the turnover ratio rose in public sector banks (PSBs), the turnover per employee in private and foreign banks doubled relative to the ratio for PSBs.

Also, this is not due to the presence of a large rural and semi-urban concentration of bank branches amongst PSBs but rather due to technological up gradation in the private and foreign banks. Private and foreign banks have changed the structure of their employment towards a higher skilled workforce by increasing the recruitment of officers and reducing clerical and subordinate staff. The combination of higher technology and higher skills have posted a higher turnover for these banks as they have been able to provide better customer support and have managed their assets well.

2.3 Research Gap

There isn't enough local research on the effect of mobile banking service quality on customer satisfaction in a few Abyssinian branches in Addis Ababa. However, a study by Sintayehu and Sapana (2022) on the impact of electronic banking on customer satisfaction used data from Ethiopian commercial banks that operated in the Hawassa municipal administration. The Ethiopian government bank was the primary subject of this study. Similar to this, Addisu and Tadele (2018) investigated the impact of high-quality service on customers' satisfaction with interest-free banking: a case study of Awash Bank S.C. in the town of Diredawa. They mainly used the five quality service delivery of service quality such as reliability, assurance, empathy tangibility and responsiveness. However, this study try to fill this knowledge gab in the context of Abyssinia bank by undertaken reliability, responsiveness, security, efficiency, convenience and visibility in Abyssinia bank.

2.4. Conceptual Framework of the Study

The picture below is drawn to show a diagrammatic relationship among the variables under the study. As can be seen in the picture there are about three independent variables which are dimensions or factors affecting customer satisfaction and the dependent variable is customer satisfaction.

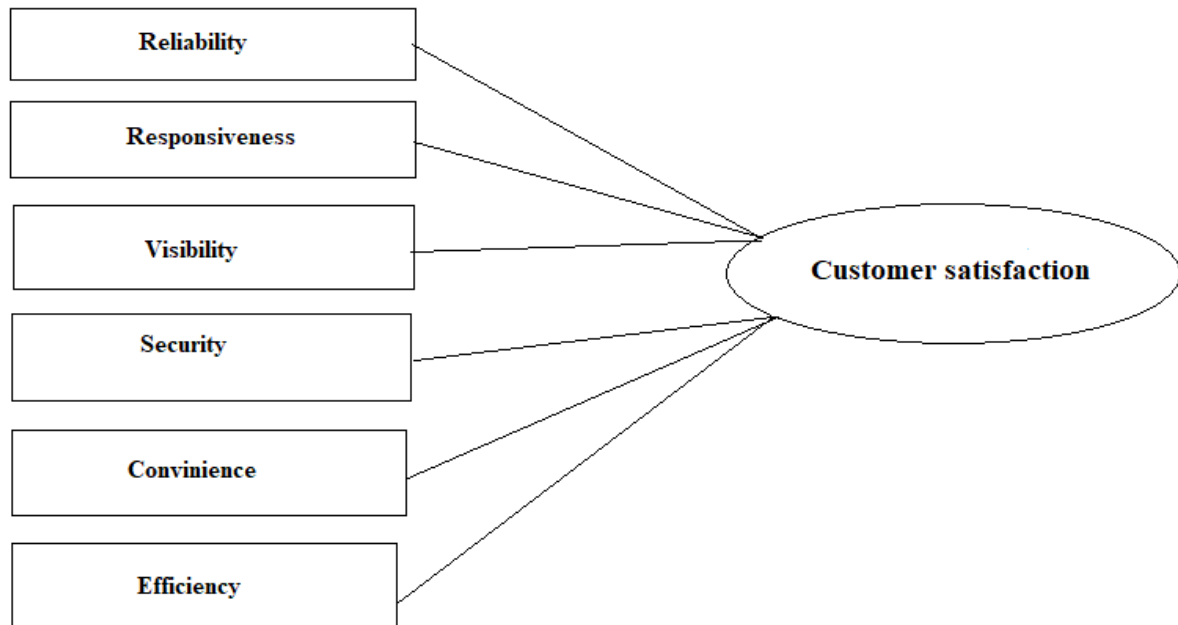


Figure 2.1 conceptual framework of the study (Adapted Abdul, 2018 and modified by the researcher)

2.5 Research Hypotheses

From the research questions, the researcher formulated the following hypotheses

H1: Reliability has positive and significant effect on customer's satisfaction in mobile banking service.

H2: Responsiveness has positive and significant effect on customer's satisfaction in mobile banking service.

H3: Visibility has positive and significant effect on customer's satisfaction in mobile banking service.

H4: Security has positive and significant effect on customer's satisfaction in mobile banking service.

H5: Convenience has positive and significant effect on customer's satisfaction in mobile banking service.

H6: Efficiency has positive and significant effect on customer's satisfaction in mobile banking service.

CHAPTER THREE

RESEARCH METHODOLOGY

In this chapter, the design and methodology of the research was discussed. It consists the research design, the sample and sampling techniques, procedure used to collect data, method of data analysis and reliability and validity.

3.1 Research Design

“A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure” (Kothari, 2004 p.31). In this study, descriptive and explanatory research designs were employed to address the

research objective. Descriptive answer questions of who, what, where, when, how, and how many. It looks individuals, groups, institutions, methods, and materials in order to describe, compares contrast, classifies, analyzes and interprets the entities various field of inquiry (Abiy et al, 2009). In line with this, the study was used descriptive research to enable describing the extent of service quality dimension on customer satisfaction whereas explanatory research design focuses on studying the relationship between variables. It is crucial to use explanatory design to show the relationship between the six dimensions of service quality such as reliability, Responsiveness, visibility, security, convenience and efficiency with customer satisfaction.

Therefore, the researcher tried to explain the effect of the independent variables on the dependent variable customer satisfaction based on the result that were found by multiple regression, because of this, the research design was explanatory and descriptive type.

3.2 Research Approach

To get a thorough understanding of the effect of mobile banking on customer satisfaction under Quantitative methods of research approach was used for this study, because quantitative method of research approach was useful to determine the relationship between one independent variable and another dependent or outcome variable within a population. Therefore quantitative data was collected on the service quality measurement dimensions by using conceptual model by Rangsan & Titida (2013).

3.3 Population, sample size and sampling procedure

3.3.1 Target Population

The target population for the research, the group to which the findings are applicable should be defined, consistent with the statement of the problem and objectives. A population was the total possible membership of the group being studied. Customers at bank of Abyssinia include as a target population. Convenience sampling technique are selected the target population for this study that means both selected branches that are currently providing the service. The questionnaire administered to the managements of each responder by using convenience sampling technique. This selection of the respondent made in a way to get sufficient data regarding mobile banking who are using mobile banking service in bank of Abyssinia from selected branches (Sarbet, Dembel & Legehar branch) in Addis Ababa districts customers because those branch banks have

many customers that utilized mobile banking service than other branch of the bank. At the same time, those branches of the bank are proximate to the researcher to gather the relevant information from the customer in a short period of time.

Thus, the study population's includes 284 out of 980 customers who are using mobile banking service customers are considering as populations for this particular study. The reason for selecting these branches was they have large number of active mobile banking users.

3.3.2 Sample Size

To conduct the study convenience sampling technique was used and the sample size has been determined quantitatively by using Yamane Taro's (1967) sample size determination formula which is presented below. This formula assumes the confidence level of 95%. According to Yemane (1967) $n = N / [1 + (Ne^2)]$

Where: N=Population size which is the at three branches in Addis Ababa

n= sample size

e= margin of error (degree of accuracy) (0.05) the basis of 95% confidence level

Therefore, $n = 980 / [1 + 980 (0.05)^2]$.

$n = 980 / 3.45$

$n = 284$

Therefore, a total number of 284 questionnaires were administered and distributed during the research. In order to determine the sample size of the three branches, the researcher taken a proportional sample size. Based on the information obtained from the head office of Abyssinia bank, the branch of Sarbet, Dembel & Legehar have 320, 327 and 333 customers use mobile banking service respectively. Thus, the proportional sample size sated as follows.

$n = N / [1 + (Ne^2)]$

$n = 320 / [1 + 320(0.05)^2] = 93$

$n = 327 / [1 + 327(0.05)^2] = 95$

$$n = 333 / [1 + 333(0.05)^2] = 96$$

Branches	Number of customers
Sarbet	93
Dembel	95
Leghar	96
Total	284

3.3.3 Sampling Procedure

To select participants to the study convenience sampling procedure was used because it wasn't possible to get access to the list of M-banking customers to conduct probability sampling procedure. As a procedure, each respondent asked that whether he/she was the customers and the banking user of the selected branch before the questionnaire distribution.

Convenience sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher (Black et al, 2017). Saunders et al. (2009) described about convenience sampling that it involves selecting haphazardly those cases that are easiest to obtain for your sample and the sample selection process is continued until your required sample size has been reached. It was a sampling technique where samples are obtained from convenient elements. This refers to happening of the element at the right place at the right time, that is, where and when the information for the study was collected. The selection of the respondents was left to the discretion of the interviewer.

3.4. Data Sources and Methods of Collections

3.4.1. Primary Source

Primary data refers to the data that are original and not yet published which are always called fresh data that one collects directly from the field. In order to realize the target, the study uses well-designed questionnaire as best instrument.

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Foddy, 1994). The questionnaire was adopted from different sources which are found to be appropriate for the study.

3.4.2 Secondary Source

Data can be obtained from existing sources or from surveys and experimental studies designed to collect new data (Anderson et al., 2011). Secondary data has drawn from different reports and statistics on the bank have been used. And from journal articles, books and published literatures that can support the study from empirical & conceptual backgrounds.

3.5 Methods and Tools for Data Collection

A survey method was adopted for collecting evidences from customers through;

Questionnaire

The questionnaire was administered on customers, which contains both close ended and open-ended questions. The questionnaire has structured to capture factual information on the research objective. The open-ended questions helps to get answers that reflect the customer's opinion on the issue under study. The dimension of mobile banking and outcomes of customer satisfaction items are measured on 5- point Likert- scale ranging From 1 (strongly disagree) to 5 (strongly agree). Secondary data were draw from the bank itself, journal articles, and books and published literatures that support the study from empirical studies.

3.6 Methods of Data Analysis and Presentation

For the purpose of the study, the researcher used customers questionnaire response obtains from the sample as an input to analyze the data. The other thing was descriptive technique and inferential statistics applied to discuss the analysis and interpretation of the data. In order to code the quantitative data, the researcher used SPSS application 23 version.

Harri (2012) explains that SPSS is a statistical procedure for social science and is specifically designed to compute statistics.

SPSS provides to an effective data management. Moreover, it helps to analyze the quantitative data since the application locates the cases and variables. It also provides methods, complex graphs, contingency table and so on. On the other hand, inferential statistics such as correlation and regression were used to show the relationship between independent and dependent variables.

3.7. Reliability and Validity

3.7.1. Reliability

Golafshani (2003) defines reliability as the extent to which results of a study are consistent over time and there is an accurate representation of the total population under study. According to Toke, (2012), the aim of reliability analysis was to find the extent to which a measurement procedure produced the same result if the process is repeated over and over again under the same conditions. The most common technique used in the literature to assess the scales reliability and stability were used of the Chronbach Alpha Statistics. Chronbach Alpha should be above 0.70 to produce a reliable scale and any scale with Chronbach Alpha less than this standard should be eliminated Sekaran (2005).

Table 3. 1: Alpha Coefficient for Each Section of Questionnaire

S/n	Section	No. of Items	Alpha Value
1	Factors of Reliability	3	0.728
2	Factors of Responsiveness	3	0.739
3	Factors of Visibility	3	0.706
4	Factors of Security	4	0.807
5	Factors of Convenience	4	0.803
6	Factors of Efficiency	4	0.757
7	Factors of customer satisfaction	3	0.996

Source: Research Questionnaire (2023)

As shown the reliability result indicated above, the internal consistency of the data was acceptable because the *alpha coefficient was greater found between above 0.7*

3.7.2. Validity

Validity is according to Kirk & Miller (1986) the measurements that the authors has taken to make sure that everything is relevant to the context, in other words, make sure that the research is valid. By doing so, the researcher was focused on the subject. Thus the instruments were carefully designed and then review by subject experts, who are knowledgeable in the area. In addition, the instruments were evaluated by the thesis advisor. Based on the feedback obtained from the subject experts and the thesis advisor, the instruments were modified and further

enriched finalized in a form that they would be clear and easily understandable to the respondents of the study.

3.8 Ethical Consideration

This research was considered the research voluntary participation, and respondents from any harm that could arise from participating in the study. It was introduced the purpose of the study as a MBA (a master's degree) study program and not for any other hidden agenda. The Research was requested the respondents to participate in the study on a voluntary participating was permitted. The researcher also assured the respondents confidentiality on the given information only to be used for the intended purposes.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETAION

This section divided in to two parts which present the findings of the study. The first part presents the respondents profile/ background information. The second part presents the findings which are related with reliability, responsiveness, visibility, security, conveniences and efficiency of mobile banking service quality on customer's satisfaction. The demographic analysis that means age, gender, marital status, educational level, income level and occupation of customers of m-banking used could be analyzed as follows.

4.1 Response Rate

Table 4.1: Response rate of respondents (N=270)

No	Questionnaire	Number	%
1	Dispatched/distributed	284	100
2	Return	270	95
3	For analysis	270	95

Source: field survey (2022)

The response of respondent rate is displayed in Table 4.1. In this instance, 270 completed questionnaires with a response rate of 95% were included in the analysis out of a total of 284 respondents who were invited to participate in the study. The remaining 14 surveys, however, were not returned by the deadline since the respondent weren't busy by other tasks when the researcher wants to gather the relevant information's.

4.2 Demographic Characteristics of the Respondents

The demographic characteristics of the respondents include gender, age, marital status, Nationalities, monthly income, academic qualification and occupation. Therefore, the data collected from the respondents indicated in table 4.2.

Table 4.2 Demographic Analysis of the Respondents

Respondents' profile	Categories	Frequency	Percentage
Gender	Male	161	59.6
	Female	109	40.4
	Total	270	100.0
Age	Less than 18	14	5.2
	19-30	115	42.6
	31-40	85	31.5
	41-50	45	16.7
	Above 50	11	4.1
	Total	270	100.0
Marital status	Married	147	54.4

	Unmarried	123	45.6
	Total	270	100.0
Nationality	Ethiopian	270	100%
	Total	270	
Monthly income	Under 5000	25	9.3
	15000-25000	76	28.1
	25000-35000	34	12.6
	Above 35000	34	12.6
	Cannot share	80	29.6
	Not applicable	21	7.8
	Total	270	100.0
Academic qualification	PHD	1	.4
	Masters	92	34.1
	Bachelor Degree	139	51.5
	Diploma	28	10.4
	High School	10	3.7
	Total	270	100.0
Occupation	Self-employed	54	20.0
	Unemployed	16	5.9
	Public Sector	30	11.1
	Private Sector	132	48.9
	NGO Employee	28	10.4
	Other	10	3.7
	Total	270	100.0

Source: survey result (2023)

The above table shows the frequencies and percentage related to the respondents' profile. From the total of 270 respondents 161(59.6%) of respondents are male while 109(40.4%) are female. The result indicates that more percent of m-banking users are Male. The age statistics indicated that the least age groups were those above 50 which were represented 11(4.1%) from the total respondents. Additionally, the highest age groups from the study were those between 19-30 years. These age groups were 115 respondents which represented 42.6% of the respondents.

The next highest age group was those 31-40 years 31.5% of the respondents. Between 41-50 and less than 18 years old represents 16.7% and 5.2% of the respondents respectively. Furthermore, the marital status of respondents shows that 54.4% of the respondents were married and 45.6% of the respondents were unmarried. The total numbers of the respondents are Ethiopian.

The table above also summarizes respondents monthly income 25(9.3%) of the respondents salary were under 5000 ETB, 76(28.1%) of the respondents were 15,000-25,000 while 34(12.6%) of the respondents had 25,000-35,000 income. The remaining 34(12.6%) of the respondents had above 35000 while 29.6% and 7.8% of the respondents didn't share and not applicable income respectively.

In the case of academic qualification of respondents the survey showed that 139(51.5%) have bachelor degree while 92(34.1%) have masters and PHD is 1(0.4%). In addition, diploma 28(10.4%) but the remaining 10(3.7%) were high school students. This can be an indication that the majority of the respondents have good academic background that can help them to understand easily the language in mobile banking display and the registration process.

According to the above table 54(20%) of the respondents were self-employed, 16(5.9%) were unemployed, 30(11.1%) work at public sector while 132(48.9%) are engaged in private sector the other 28(10.4%) were NGO employees. Finally 10(3.7%) engaged under other sector. As can be seen in the table, one can inferred that majority of the mobile users were engaged in private sector.

4.3 Descriptive Analysis of Mobile Banking Service Quality

Descriptive statistics (mean and standard deviations) of the respondent scores were computed. Analysis has been done by comparing these mean scores and deviations among respondents. The reason for using descriptive statistics is to compare the different factors that affect the level of customer satisfaction of Abyssinia bank by using the means and standard deviations values. The six mobile banking service qualities such as reliability, responsiveness, visibility, security, convenience and efficiency were computed by mean and standard deviation. Therefore, the response of the respondents indicated briefly as follows.

4.3.1 Reliability

The service reliability holds it three items which indicate promised service provided by the mobile banking system, the accuracy completed of mobile banking tasks and customer cares. The customer's responses to the questions of service reliability are analyzed below in table 4.4.

Table 4.3 Respondents response towards Reliability

S/No	Statements	N	Mean	Std. Dev
1	Mobile banking provides customers with the services exactly as promised.	270	4.10	1.17
2	Mobile banking completes a task accurately.	270	2.47	.87
3	If there are transactional mistakes, customer care service is readily available to the customers.	270	4.17	1.16
Grand mean		3.58		

Source: survey result (2023)

The above table shows as descriptive statically analyzing providing customer service as promised, has the mean value of 4.104 and standard deviation of 1.17. This suggests that mobile banking was provided service for the customers as promised. This study was consistent with the finding by Alice et al (2016). They confirmed that Mobile banking provides customers with the services exactly as promised.

In addition to this, respondents are asked to indicate their view about the statement "Mobile banking completes a task accurately." Based on this statement, the average mean score of 2.47 and standard deviation of 0.87 showed that accurate completes of the service in the mobile bank was limited. This study was inconsistent with Nonhlanhla (2017). The author confirmed that customers were used available service when they need in the bank. Therefore, the study was incomparable with the finding of the above researchers.

Furthermore, the customer care service availability on transactional mistakes mean value is 4.17 and standard deviation of 1.16. This implies when mistakes occurred during the transaction, the customer cares that solve the mistakes was available. Therefore, the finding of this study was supported by Alice et al (2016). The researcher affirmed that mobile banking provides prompt response incase the transaction is not processed.

4.3.2 Responsiveness

Provide prompt service for the customers are vital in order to enhance the customer satisfaction in the long run. In line with this issue, the response of the respondents towards the service responsiveness in the mobile banking system was briefly stated as follows.

Table 4.4 respondents response towards service Responsiveness in the bank

S/No	Statements	N	Mean	Std. Dev
1	Mobile banking provides prompt response if the transactions are not well processed.	270	3.87	1.16
2	The bank quickly resolves mobile banking related problems.	270	4.0	.79
3	The customers know immediately when the transaction is performed.	270	3.60	1.14
Grand mean			3.82	

Source: survey result (2023)

Table 4.4 displays the response of the respondents toward service responsiveness in the mobile banking application. The average mean score ranges from 3.60 to 4.0. Based on the 1st statements of "Mobile banking provides prompt response if the transactions are not well processed" has received a mean score of 3.87 and standard deviation of 1.16. This suggests that mobile banking was provided rapid responses when the transactions aren't well processed. This study consistent was consistent with the finding by Alice et al (2016).

However, the 2nd statement "The bank quickly resolves mobile banking related problems" had received a mean score of 4.0 and standard deviation of 0.79. This implies that there is lack of providing special attention about the problems encountered in the mobile banking system. The finding of this study was inconsistent with Alice et al (2016). The researcher finding indicates that the bank tried to resolve the problems associated in the use of mobile bank.

The last statements "The customers know immediately when the transaction is performed" had received a mean of 3.60 and standard deviation of 1.14. This implies that customers had got the advantage to immediately know when the transaction was performed in the bank. The study was similar with the finding by Alice et al (2016). The assured that the mobile bank applications provide opportunity information's when transaction happened. In the same way, the above study was matched with the finding of Nonhlanhla (2017). According to the finding, one can infer that the customers were gotten the necessary notification after use the mobile bank application.

4.3.3 Visibility

Visibility is the other service quality dimension which is relevant for the customers to get rapid service about the mobile banking application. Therefore, the finding collected from the respondents stated briefly in table 4.5.

Table 4.5 respondents response towards service Visibility in the bank

S/No	Statements	N	Mean	Std. Dev
1	The mobile Banking registration process is easy and simple.	270	4.06	1.18
2	Using mobile banking fits well with the way I like to manage my finances.	270	4.06	1.19
3	Mobile banking provides full day service.	270	2.46	1.09
Grand mean			3.53	

Source: survey result (2023)

Table 4.5 shows the opinion of the respondents towards service visibility. The average mean score of each statement was ranges from 2.46 to 4.06. Based on the 1st statement" the mobile banking registration process is easy and simple" had received a mean score of 4.06 and standard deviation of 1.18. This implies that the mobile banking registration process was easy and simple for the customer to utilize the service they need in the bank. This finding of this study was similar with the finding by Alice et al (2016). They assured that mobile banking process was easy and simple to register and use the service right.

The statements of“using mobile banking fits well with the way I like to manage my finances" had received a mean score of 4.06 and standard deviation of 1.19. This indicates that using mobile banking fits well with the way that customers manage their finance in the bank. Therefore, the finding of this was study supported by Alice et al (2016). The researcher confirmed that mobile banking application was well fitted to manage the finance operate in the bank.

The last statement of "mobile banking provides full day service” had received a mean score of 2.46 and standard deviation of 1.09. This implies that the bank wasn’t always delivering full day services. In other words, due to power supply, network problem and other reason, the mobile banking system was out of work in the bank. This study was inconsistent with Alice et al (2016). This implies that mobile bank didn’t provide full day service in the case of the study conducted in Abyssinia bank.

4.3.4 Security

Security is the other service quality factors which play an important role for ensuring customers feel safe and deliver rapid mobile banking application systems in the long run. The response of the respondents clearly stated briefly as follows.

Table 4.6 respondents response towards security in the bank

S/No	Statement	N	Mean	Std. Dev
1	Mobile banking provides security for transaction data and privacy	270	4.13	1.17
2	I feel safe when using mobile banking	270	4.12	1.18
3	Mobile banking keeps accurate record of transaction	270	4.09	1.20
4	I don't use mobile banking because of possibilities of identity theft, fraud or hacking	270	2.56	.83
Grand mean			3.73	

Source: survey result (2023)

Table 4.6 specifies the respondents view towards security in the bank. The mean score of the above statements ranges from 2.56 to 4.13 respectively. In line with this, the 1st and the 2nd statements of "Mobile banking provides security for transaction data and privacy" and "I feel safe when using mobile banking" had received a mean score of 4.13 and 4.12 respectively. This implies that the security of the mobile bank was found in a good conduction for the customers freely delivered the service need in the bank. Likewise, the mean score of 4.09 and standard deviation of 1.20 revealed that mobile bank was kept accurate record of transaction in the bank

On the other hand, respondents asked to indicate their opinion about the statement "I don't use mobile banking because of possibilities of identity theft, fraud or hacking." Based on this statement, the average mean score of 2.56 and standard deviation of 0.83 indicated that the customers were used mobile bank to get rapid service in the bank.

4.3.5 Convenience

Convenience quality service is the other important issues which needs special attention in the banking sector. Therefore, the issue of convenience was connected with the mobile banking system used by the customers in Abyssinia bank. The response of respondents towards convenience quality service was briefly discussed in table 4.7 as follows.

Table 4.7 respondents response towards Convenience in the bank

S/N o	Statements	N	Mean	Std. Dev
1	The language in mobile banking displays is easy to understand.	270	4.07	1.19
2	I am afraid of using mobile banking while a transaction because of the network connectivity.	270	4.07	1.18
3	Use of mobile banking service is costly.	270	2.67	.93
4	Mobile banking is convenience than conventional (visiting banking).	270	4.03	1.19
Grand mean		3.71		

Source: survey result (2023)

The table shows the perception of respondents about the service convenient of mobile banking provided by Abyssinia bank. The mean score of all listed statements in table 4.7 ranges from 2.67 to 4.07. Based on the 1st statements of the respondents one can inferred that the language in mobile banking displays was easy to understand. The mean score of the statement was 4.07 with a standard deviation of 1.19. Likewise, the average means score of 4.07 and standard deviation of 1.18 revealed that customers were afraid of using mobile banking while a transaction because of the network connectivity.

In relation the 3rd statement of “Use of mobile banking service is costly” had a mean score of 2.67 and a standard deviation of 0.93. This suggests that the use of mobile bank by the customer didn’t well need much cost. Furthermore, the data collected from the questionnaire showed that mobile banking was convenience than visiting banking with an average mean score was 4.07 and standard deviation 1.19. This suggests that mobile banking is comfortable for the customers to give prompt service and enhance their satisfaction by the bank.

4.3.6 Efficiency

Efficiency is the way of deliver rapid and quick service for the customer with a minimum cost. When we see mobile banking system, it was deliver service in home without got the bank. In line with this, the study responses towards efficiency in the bank were stated briefly as follows.

Table 4.8 respondents response towards service Efficiency in the bank

S/No	Statements	N	Mean	Std. Dev
1	Mobile banking provides complete help function.	270	4.07	1.21
2	Transaction process is fast.	270	2.59	.97
3	Mobile banking allows me to manage my finances more efficiently.	270	4.05	1.25
4	Mobile banking allows transacting among other banks accounts.	270	4.02	1.22
Grand mean		3.68		

Source: survey result (2023)

Table 4.8 exemplifies the response of the respondents towards service efficiency in the bank. The average mean score of the above four statements were ranged from 2.59 to 4.07. For this reason, the average mean score of 4.07 and standard deviation of 1.21 showed that mobile banking was provided complete help functions. This means mobile banking was helped the employees to save their time and cost while using the technology.

However, the average means score of 2.59 and standard deviation of 0.97 indicated that transaction process wasn’t fast as the customer perspective. This implies there was lack of network connectivity to deliver rapid service when customers want to deliver using mobile applications.

The 3rd and the 4th statements of "Mobile banking allows me to manage my finances more efficiently" and "Mobile banking allows transacting among other banks accounts" had received a mean score of 4.05 and 4.02 respectively. Based on the two statements one can deduced that mobile banking play a vital role for the customers to use their finance more efficiently. In the same way, the bank system can easily transfer money to other accounts with a specific period of time.

4.4 Customer Satisfaction in Mobile Banking System

Customer satisfaction is important in a bank sector so as to get the maximum income generated from them. In the mobile application technology, deliver rapid services and response the necessary feedback help for the bank to ensure its sustenance. In line with this, the data gathered from the respondents discussed briefly as follows.

Table 4.9 respondents response towards Mobile banking system

S/No	Statements	N	Mean	Std. Dev
1	Do you think that you get a good customer service in Bank of Abyssinia (According to mobile banking)	270	4.06	1.17
2	Staff can describe step and guide to use and condition to use clearly?	270	4.05	1.18
3	In general, I am satisfied with the mobile banking service provided by the bank.	270	4.03	1.20
Grand mean			4.05	

Source: survey result (2023)

Table 4.9 specifies the opinion of the respondents towards customer satisfaction in mobile banking application ranges from 4.03 to 4.06. Based on the first statements, the mean score of 4.06 depicted that customers were gotten good mobile service in the bank.

Likewise, the mean score of 4.05 and 4.03 indicated that staffs were described step and guide to use and condition to use clearly in the bank. Also most of the respondents were satisfied with the mobile banking services provided by the bank at large.

4.5 Inferential Statistics Data Analysis

4.5.1 Correlation Analysis

Correlation coefficient statistics measure the degree to which two sets of numbers are related. In this section, the researcher tried to accomplish the goal of the study through applying Pearson's correlation (r) as it is the most widely used method of measuring the degree of relationship between two variables.

The relationship between two variables were: a correlation of .10 is described as a small effect size, a correlation of .30 is described as a medium effect size and a correlation .50 is described as a large effect size.

The correlation coefficient (r) ranging from 0.10 to 0.29 may regarded as indicating a low degree of correlation, r ranging from 0.30 to 0.49 may considered as a moderate degree of correlation, and r ranging from 0.50 to 1.00 may be regarded as a high degree of correlation Cohen (1988).

Table 4.10 Correlations

		Customer satisfaction
Customer satisfaction	Pearson Correlation	1
	Sig. (2-tailed)	
	N	270
Reliability	Pearson Correlation	.877**
	Sig. (2-tailed)	.000
	N	270
Responsiveness	Pearson Correlation	.828**
	Sig. (2-tailed)	.000
	N	270
Visibility	Pearson Correlation	.896**
	Sig. (2-tailed)	.000
	N	270
Security	Pearson Correlation	.783**
	Sig. (2-tailed)	.000
	N	270
Convenience	Pearson Correlation	.897**
	Sig. (2-tailed)	.000
	N	270
Efficiency	Pearson Correlation	.908**
	Sig. (2-tailed)	.000
	N	270
**. Correlation is significant at the 0.01 level (2-tailed).		

The correlation between the independent variable and the dependent variables is displayed in Table 4.10. Customer satisfaction was the dependent variable measured by overall satisfaction of the mobile banking service, while reliability, responsiveness, visibility, security, convenience and efficiency were the independent variables.

Based on the correlation coefficient indicated in table 4.10, reliability has positive correlated with customer satisfaction ($r=0.877^{**}$). This implies the reliability had high degree of correlation with customer satisfaction about the mobile banking system. In other word, this indicates as the reliability of mobile banking increase so does the customer satisfactions was increased vice versa.

Similarly, responsiveness had a sig-value of 0.000 which can be considered as a low degree of correlation with customer satisfaction ($r=0.828^{**}$). This implies providing rapid response for the customer leads to increase customer satisfaction using mobile banking applications vice versa.

In the context of visibility of service, the result of coefficient of correlation showed that visibility had a high degree of correlation with customer satisfaction ($r=0.896^{**}$). This indicates that the service visibility increased by using mobile banking would increase the satisfaction of employees in the long run.

The researcher decides security was the other determinants of customer satisfactions in a mobile application system. For this reason, the coefficient of correlation result depicted that security had a high degree of positive correlation with customers satisfactions ($r=0.783^{**}$). This suggests that the improvement of good security system in the bank would result employees satisfactions increase vice versa.

The other independent variable that determines customer satisfactions was convenience. Based on the correlation result, one can infer that convenience had a high degree of positive correlation with customer satisfaction ($r=0.897^{**}$). This implies convenient service available in the bank leads to the enhancement of customer satisfaction.

The last independent variable of quality service was efficiency. Based on this, the coefficient correlation result also deduced that efficiently had a high degree of positive correlation with customer satisfaction ($r=0.908^{**}$). This implies providing efficient service in a continuous manner leads to increase the customer satisfactions in the bank sector.

4.5.2 Regression Analysis Assumption Test

Before applying regression analysis, the researcher tests its assumptions like normality, linearity, multicollinearity assumption and autocorrelation.

- i. **Linearity test** □ in order to determine normality graphically, one can use the output of a normal P-P Plot. If the data are normally distributed, the data points were closed to the diagonal line. If the data points stray from the line in an obvious non-linear fashion, the data are not normally distributed. As shown in figure 4.1 the normal P-P plot below, the data is normally distributed.

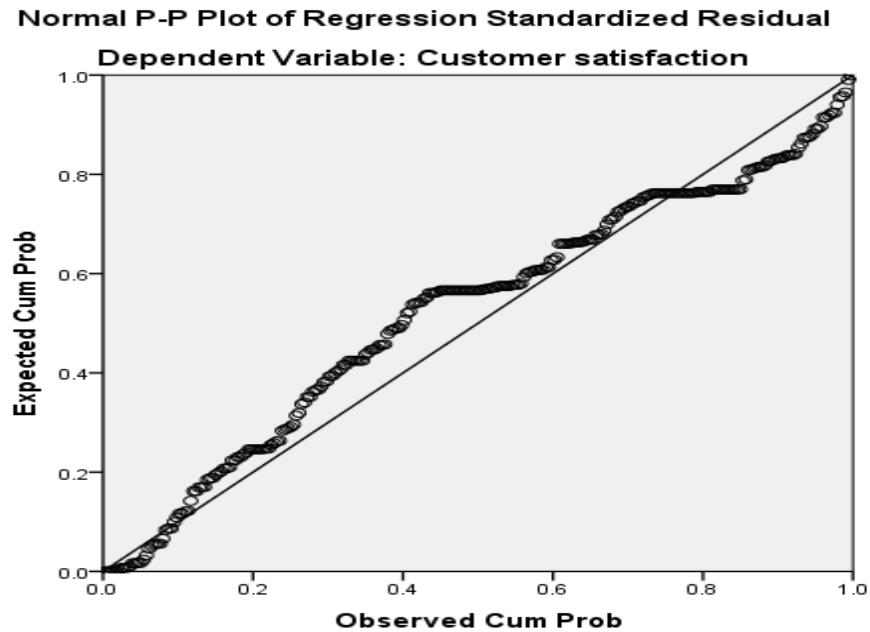


Figure 4.1 Linearity Test

- ii. **Normality Test:** This assumption is used to determine whether the residuals are normally distributed. This can be tested by looking at the Histogram. To say the Normality assumption of this study is met, the Histogram should be symmetric along the center 0. In this case Histogram is symmetric.

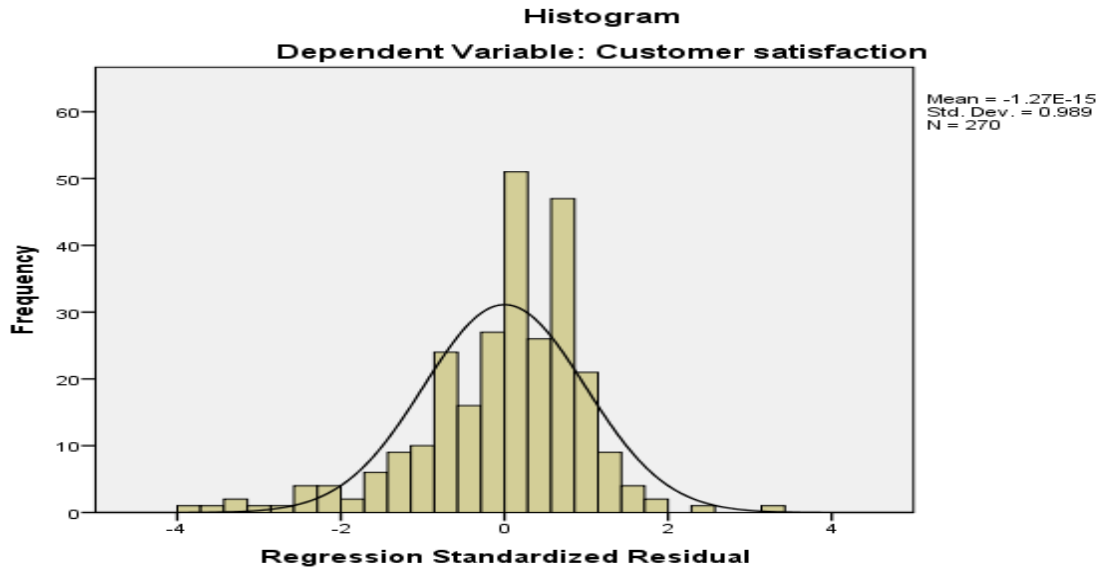


Figure 4.2 Histogram (Normality test)

The histogram graph also illustrates that the data was normally distributed.

- iii. **Multicollinearity analysis test:** The researcher has checked if multicollinearity problem exist or not before running the regression. Multicollinearity refers to the situation in which the independent/predictor variables are highly correlated. When independent variables are multicollinear, there is “overlap” or sharing of predictive power. Multicollinearity can be checked using the tolerance and variance inflation factors (VIF) which are the two Collinearity diagnostics factors Multi collinearity Test.

Table 4. 11: Multi collinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
Reliability	.263	3.803
Responsiveness	.302	3.307
Visibility	.247	4.047
Security	.301	3.320
Convenience	.149	6.710
Efficiency	.152	6.582

Source: field survey (2023)

Tolerance is an indicator of how much of the variability of the specified independent variable is not explained by the other independent. If this value is very small (less than 0.10), it indicates that the multiple correlation with other variables is high, suggesting the possibility of multicollinearity.

Accordingly, the above table the tolerance value for all independent variables is greater than 0.1, which implies that there is no multicollinearity problem in connection with tolerance. Variance Inflation Factor (VIF) which calculates the influence of factor should not exceed 10, and should ideally be close to one. As per the above table for all independent variables VIF value is less than 10, which implies there is no multicollinearity problem.

iv. **Homoscedasticity test;**

Scatter plot analysis test; scatter plot graphs the actual values the data against the values predicted by the model. The scatter plot displays the actual values along the X axis, and displays the predicted values along the Y-axis. It also displays a line that illustrates the perfect prediction, where the predicted value exactly matches the actual value.

Figure 4.3 shows the patterns in scatter plots of dependent against the independent variables weather they have linear relation and the assumption have met. From the graph below, the straight line shows the expected linear relationship, and the points scattered around that line show how the actual data diverges from the expected. This analysis tells us at a glance how closely a set of results is correlated with a particular input, and how much variation there is from the ideal model.

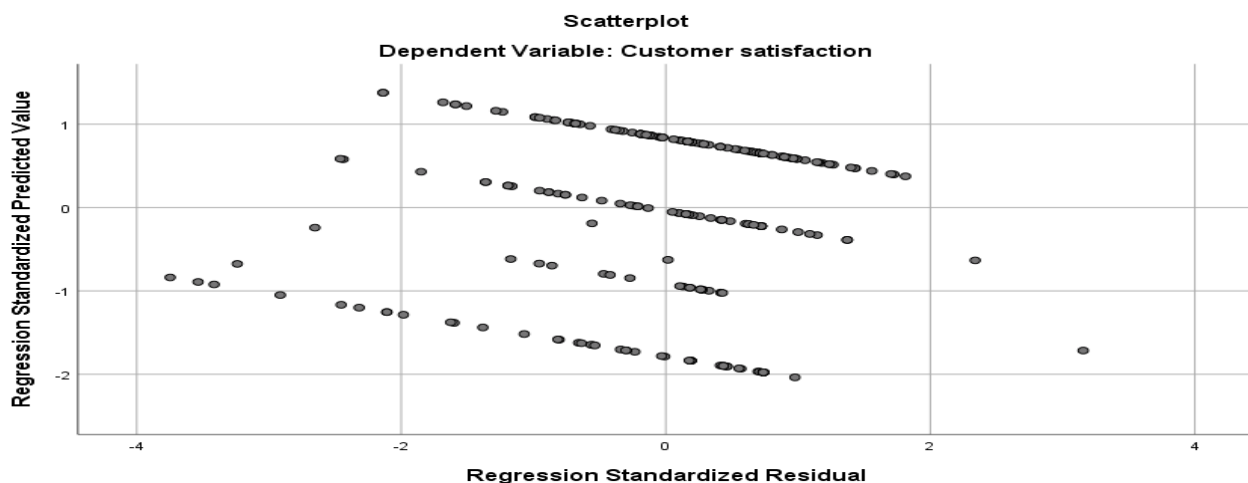


Figure 4.3 Homoscedasticity

4.5.3 Interpreter Analysis of Regression Results

Multiple linear regressions are an inferential statistics analysis technique which helps to know which variables is significant impact on customer satisfaction.

Table 4.12 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.970a	.941	.939	.2902

According to Table 4.12, the independent factors account for 94.1% of the variance in the dependent variable (adjusted R² is 93.9% with an estimated standard deviation of 0.2900). (Customer satisfaction). This shows that the independent variable in the model accounts for 94.1% of the variance in the dependent variable. It also shows that other variables not included in the model can account for the 5.9% of the variance, indicating the need for additional research to find the other factors that affect the level of customer satisfaction.

Table 4.13 ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	351.624	6	58.604	695.969	.000b
	Residual	22.146	263	.084		
	Total	373.770	269			

a. Dependent Variable: Customer satisfaction

b. Predictors: (Constant), Efficiency, Responsiveness, Reliability, Security, Visibility, Convenience

From table 4.13, F-ratio, which explains whether the results of regression model could have occurred by chance, the F value, is 695.969 at 0.000 significant levels which show that the model is good as its value is less than 0.05.

Table 4.14 Coefficient of determination

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.982	.083		-11.829	.000
Reliability	.262	.040	.192	6.570	.000
Responsiveness	.080	.031	.070	2.572	.011
Visibility	.406	.039	.316	10.466	.000
Security	.033	.037	.024	.893	.373
Convenience	.325	.051	.247	6.348	.000
Efficiency	.278	.051	.209	5.438	.000

The causal relation between the independent and dependent variables is displayed in Table 4.14. Customer satisfaction was the dependent variable, while the independent factors were quality service dimensions such as reliability, responsiveness, visibility, security, convenience and efficiency.

Consequently, using unstandardized Beta Coefficient, it is possible to assess the effectiveness of each predictor (an independent factor impacting the dependent variable). The average change in the dependent variable brought on by a unit change in the independent variable is explained by the regression coefficient. The more support an independent variable receives from its highest Beta coefficient value, the more crucial a role it plays in forecasting the dependent variable.

The first independent variable was reliability which had a sig-value of 0.000 and Beta value of 0.262. This suggests that reliability had a significant effect on customer satisfaction at the significance level of 0.05. In other words, the service quality of reliability increased by 0.262 unit so does the customer satisfaction increased by this unit. This study was consistent with Abdul et al (2021) & Alice et al (2016). They confirmed that reliability had a significance effect on customer satisfaction using mobile bank application.

In the same way, the Sig value of responsiveness was 0.011 which greater than the significance level of 0.05. Therefore, one can deduce that responsiveness has a significant effect on the

customer's satisfaction that is deliver mobile banking in the bank. The finding of this study was consistent with Abdul et al (2021) because the researcher approved that responsiveness had a significant effect on customer satisfactions. This study was also consistent with Alice et al (2016). He confirmed in their finding indicates that responsiveness had a positive effect on customer satisfaction.

In the context of visibility of service quality in the bank, the sig-value was 0.000 and its unstandardized beta value 0.406. This implies that the visibility service quality increased by 0.406 units then the customer satisfaction would be increased by this unit. Based on this view, one can inferred that visibility of service quality had a significant effect on customer satisfaction.

The other independent variable of service quality was security. For this reason, the study identified that security had a sig-value of 0.373 and its unstandardized Beta value 0.033. This suggests that the visibility of service quality increased by 0.108 then the customer satisfaction of using mobile banking application was increased by this number. Therefore, the study concluded that security had a significant effect on customer satisfaction at the significance level of 0.05. The finding of this study was consistent with Nwachukwu et al (2022). They confirmed that increase in mobile banking security commands an increase in word of mouth by the customers who tells their friends and relative about how safe it is to use the mobile banking.

Furthermore, the findings are in agreement with popular views in literature. Safitri (2017) found out that security has a positive and significant effect on the customer satisfaction. Also in Maseke (2018) finding proves that a significant relationship between security and customer satisfaction.

The other variable which influences customer satisfaction was convenience. The variable had a sig-value of 0.000 which less than 0.05 significance level. This implies the service convenience increased by 0.323 then the customer satisfaction increased by this unit. Therefore, the study deduced that service convenience had a significant effect on customer satisfaction at the significance level of 0.05. This study was consistent with Alice et al (2016). This implies convenience had a positive significant effect on customer satisfaction in the mobile banking system.

These findings are also in line with that of several authors which include Kaura (2013) who found out from his empirical study that service convenience has a significant impact on customer satisfaction which furthers leads to customer loyalty. Also, Khazaei et al. (2014) discovered that

service convenience has a positive effect on customer satisfaction and behavioral responses while customer satisfaction has a positive effect on word of mouth communication.

The last independent variable of service quality was efficiency. Based on this issue, the sig-value of efficiency was 0.000 and a Beta value of 0.278. This showed that service efficiency has a significant effect on customer satisfaction at the significance level of 0.05. This study was consistent with Mahlet (2020). In her study, one can infer that efficiency had a significant positive effect on customer satisfaction.

Overall, visibility had more Beta value than the other quality service in the mobile bank application users. This showed that visibility of service quality had a significant effect on customer satisfaction at the significance level of 0.05. Likewise, convenience and efficiency were the 2nd and 3rd influencing factors of customer satisfaction

4.6 Discussion of the Findings

The finding of this study showed that reliability has a significant effect on customer's satisfaction in the banking industry. Therefore, the study was consistent with the finding of previous studies. In this context, Pakurar et al., (2019) confirmed that Reliability of banking industry service influences on customer satisfaction positively

The finding of the study showed that responsiveness had a significant effect on customer's satisfaction. However, the study was inconsistent with previous studies. Misbach et al. (2013) reported that to enhance the customer satisfaction in the service industry, responsiveness was the most crucial attributes and it was one of the significant components for anticipating the customer satisfaction (Vencataya et al., 2019). Fida et al. (2020) conducted a research in the Sultanate of Oman on Islamic banking and found a positive relation between responsiveness and customer satisfaction. Islam et al. (2020) also found that responsiveness positively influences on customer satisfaction.

The study realized that visibility influences the satisfaction of the customers in the mobile bank service. In this regard, the study was consistent with previous studies. In the banking service sector, some elements also added with this visibility dimension impact on customer satisfaction such as the frontline outlook of a bank, different offer for smooth operation, reasonable banking

hour and potential and swift service of banking (Kant & Jaiswal, 2017; Pakurar et al., 2019). (Islam et al., 2020) found a significant relationship between visibility and customer satisfaction.

The findings of this study indicate that security hasn't a significant effect on customer's satisfaction in the mobile banking service. For this case, the study was inconsistent with previous studies. For instance, Safitri (2017) conducted an empirical study on "security and ease of use effects on customers' satisfaction shopping in Tokopedia using the structural equation model (SEM) and found that security has a positive and significant effect on customer satisfaction". Asfour & Haddad (2014) also conducted an empirical study on "the impact of mobile banking on enhancing customers' e-satisfaction of Jordanian banks using simple regression and found that a significant relationship exists between security and e-satisfaction of customers". Maseke (2018) carried out an empirical study on "the impact of mobile banking on customer satisfaction of commercial banks in Namibia, using descriptive statistics; (mean, mode, standard deviation, and frequency), and found a significant relationship between security and customer satisfaction."

The findings of the study indicate that convenience has a significant effect on customers' satisfaction. In this case, the study was supported by previous empirical studies. For instance, Kaura (2013) conducted an empirical study on service convenience, customer satisfaction, and customer loyalty: study of Indian commercial banks using structural equation modeling found that service convenience has a significant impact on customer satisfaction, which further leads to customer loyalty. Also, Khazaei et al. (2014) conducted empirical research on "the effect of service convenience on customer satisfaction and behavioral responses in the bank industry using the structural equation model (SEM) and found that service convenience has a positive effect on customer satisfaction and behavioral responses, while customer satisfaction has a positive effect on word-of-mouth communication." The findings of Dai et al. (2001) also suggest that convenience influences Chinese internet shoppers' levels of satisfaction, which, in turn, influences their loyalty and word-of-mouth intentions".

Chang & Polonsk, (2012) empirical studies confirm that "convenience is an important service attribute that influences consumers' evaluation of service encounters and that behavioral intention is an important outcome of consumer satisfaction". Chang et al. (2010), in their own empirical research "reported that in a Taiwanese fast-food context, convenience influences satisfaction, and that satisfaction, in turn, influences loyalty".

The finding of the study indicates that efficiency has significant effect on customer's satisfaction. The study was in line with Tapas et al (2021). The researcher confirmed that efficiency has a significant effect on customer satisfaction. Dmoor (2005) confirmed that Mobile commerce may help extend the productivity of the working staff by growing the effectiveness of their daily routine. Time-pressured consumers (employees) can use "dead spot "for example: checking account or current transaction

4.7 Hypothesis Testing and Interpretation of Results

Table 4.15: Summary of the overall outcome of the Research Hypotheses

Hypothesis	Result	Reason
H1: Reliability has significant effect on customer's satisfaction	Fail to Reject	$\beta = .262, p < 0.05$
H2: Responsiveness has significant effect on customer's satisfaction	Fail to Reject	$\beta = .080, p < 0.05$
H3: Visibility has significant effect on customer's satisfaction	Fail to Reject	$\beta = .406, p < 0.05$
H4: Security has significant effect on customer's satisfaction	Fail to Accept	$\beta = .033, p > 0.05$
H5: Convenience has significant effect on customer's satisfaction	Fail to Reject	$\beta = .325, p < 0.05$
H6: Efficiency has significant effect on customer's satisfaction	Fail to Accept	$\beta = 0.278, p < 0.05$

Source: survey result (2023)

CHAPTER FIVE

SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of finding, conclusion, and recommendations. After conclusions are made from the major findings, possible recommendations forwarded based on the findings of the study. The study investigating the effect of mobile banking service quality on customer

satisfaction: the case of Abyssinia bank. From 294 total sample size in the study, 270 respondents completed the questionnaires.

5.1 Major Findings

The major findings of the study in the preceding chapter are summarized as follows.

With regard the extent reliability of mobile banking service quality, the finding depicted that mobile banking was provided customers with the services exactly as promised and customers care service was readily available to the customers when transaction mistakes occurred in the use of mobile banking system. However, the study identified that there was lack of accurately completed the tasks when customers' needs the service right.

In the context of the extent responsiveness of mobile banking service quality, the finding of the study depicted that mobile banking was provided prompted response when the transaction processes did not well processed in the bank system. In addition, the finding revealed that the customers were known immediately when the transaction was performed well in the service of mobile banking system but there was delay of services by the bank to resolve the mobile banking related problems. This mainly affected the customer satisfaction due to the services not well offered them as they expected.

With regard the extent visibility of mobile banking service quality, the finding showed that the mobile Banking registration process was easy and simple for the customer use in the bank. In addition to this, the use of mobile banking fits well with the way they liked to manage their finances properly but the mobile banking wasn't provides full day services. This indicates when network problems occurred in the bank, the system was sometimes out of work. This results the dissatisfaction of customers the mobile banking services offered by the bank.

In the context of extent security of mobile banking service quality, the finding of the study showed that the mobile banking provides security for transaction data and privacy. Similarly, the finding of the study identified that customers were feel safe when they used mobile banking in the bank. Also the mobile banking was kept accurate record of transaction of the customer's money well. Generally, the service visibility on the customer perspective indicated that they were utilized mobile banking because of reduction of some of the possibilities of identity theft, fraud or hacking.

With regard the extent of convenience of mobile banking service quality, the study identified that the language in mobile banking displays was easy to understand, it wasn't cost to utilize and the system was convenience than conventional (visiting banks). But customers were afraid of using mobile banking while a transaction because of network connectivity issues in the bank.

The last objective of the study was the extent efficiency of mobile banking service quality affecting customer's satisfaction in Abyssinia bank. In this regard, the finding of the study depicted that mobile banking provides complete help function, manage the finances more efficiently and allow transacting among other banks accounts but the transaction process was not too fast.

The correlation result showed that all the six mobile banking service quality dimensions were positively correlated with customer satisfaction. In this case, reliability, responsiveness, visibility, security, convenience and efficiency had a positive associated with customer satisfaction. Likewise, the regression result clearly showed that the five mobile banking service quality such as reliability, visibility, security, convenience and efficiency had a significant effect on customer satisfaction at the significance level of 0.05.

5.2 Conclusions

Based on the study findings; the researcher acknowledged different milestones that mobile banking has managed to change the way banking used to be conducted and therefore concluded that mobile banking is key for the socio-economic development of the Ethiopian community at large. It has brought services closer to the people hence making it easy to transact without delays and restrictions of time limits. Mobile banking has shrunk the challenge of distance and is quickly neutralizing geographical challenges among the banking populace. It has brought in efficiency and security to the customers together with the banking institutions and fraternity as a whole.

Furthermore, the study infers that reliability of mobile banking service quality was found in a good condition in terms of providing promised service for the customers and addressing the problems of transaction in the bank. The study also identified mobile banking provides rapid response and customers were aware when transaction problems face in the bank. In terms of visibility of service, the study realizes that mobile banking service is an easy way to use for the customers with a specific period of time. Security of using a mobile banking service is an important issue which customers freely use service without threatens them. The study also notices that mobile banking service considering customers preference in terms of using the language they can. Likewise, the most of the respondents assured that mobile banking service is vital to easily manage and use their money at any available time.

Moreover, the study concluded that the service quality dimension such as reliability, visibility, security, convenience and efficiency had high correlation positive correlation with customer satisfaction. Likewise, the regression coefficient result indicated that the mobile banking service such as reliability, visibility, security, convenience and efficiency had a significant effect on customer satisfaction. From the five service quality variable mentioned here, service visibility had the highest Beta value than others. So, one can deduced that visibility of mobile banking service quality had the main effect of customer satisfaction in the study area. In addition to this, efficiency and convenience were the 2nd and 3rd influencing factors of customer's satisfaction next to visibility.

5.3 Recommendations

Based on the major findings and conclusions made in the preceding chapter, the following points were the way forward to address the problems associated with the service quality of mobile bank users in Abyssinia bank.

Recommendations for Ethio-Telecom

Reflecting the findings, the study recommended that since a number of respondents thought that Mobile Banking is not fully accessed anytime and anywhere due to network availability in some parts of the country, it will be important for the banking sector in liaison with the mobile service providers to ensure that network coverage is all over the branch of the bank in order to comfortably serve all corners of the branch of the bank in the mobile banking. In the same way, the study revealed that the mobile banking wasn't completed a task accurately. To address this problem, the

bank keep work collaborates with the Ethiopian telecommunication sector to enhance the network connectivity system of the bank seriously.

Recommendation for the Bank

Furthermore, the finding of the study also identified that the bank wasn't quickly resolves mobile banking related problems. To address this problem, the bank manager recruited right professional at the right position. This helps to reduce the complaints raise from the respondents in particular and enhance the customer satisfactions in the long run.

The response of the respondents also showed that employees were afraid using mobile banking while a transaction because of the network connectivity. To solve the problem, the bank officers try to create consistence awareness about the advantage of mobile banking. At the same time, the network problem was created tension about the customer to effectively utilize the mobile banking application. Therefore, the bank officers especially the information communication technology works on the network system together with the Ethiopian telecommunication enterprise. This helps to the transaction process becomes fast and enhance the customer satisfaction about the service they use in the mobile banking system.

Recommendation for Future Researchers

Future researcher can be carried out the effect of mobile banking service on customer satisfaction a comparative perspective between different private banks. This makes to know which bank are effective in offering quality mobile bank service in order to enhance the satisfaction of the customer. In addition to this, future researcher can be carried out the effect of mobile banking service on the bank profitability by using different econometric model. This makes to get accurate result from the respondents how the bank profitable as a result of using mobile banking service. Moreover, future researcher can be conducted the effect of mobile banking service on customer satisfaction through incorporating additional variables which wasn't undertaken in this study.

Reference

- Abiy, Z., Alemayehu, W., Daniel, T., Melese, G., & Yilma, S. (2009). Introduction to Research Methods: Preparatory Module for Addis Ababa University Graduate Programs. Graduate studies and research office. Addis Ababa
- Addisu, T, T & Tadele, W, B. (2018). The Effect of Quality Service on Satisfaction of Interest Free Banking User: The Case of Awash International Bank S.c in Diredawa Town. International Journal of Science and Research (IJSR) ISSN: 2319-7064
- Archana, S. (2011). Mobile banking as technology adoption and challenges.
- Assefa. (2013) the impact of e-banking on customer satisfaction in two private banks in Gondar city
- Asfour, H. K. & Haddad, S. I. (2014). The impact of mobile banking on enhancing customers' satisfaction: An empirical study on commercial banks in Jordan. International Business Research, 7(10), 145-169.
- Ataur, M & Amin. (2007). Effect of Mobile Banking On Customers Satisfaction in Commercial Banks in Anambra State, International Journal of Innovative Social Sciences & Humanities Research 8(1):101-109,
- Bala, T., Jahan, I., Al Amin, M., Tanin, M. H., Islam, M. F., Rahman, M. M., & Khatun, T. (2021). Service quality and customer satisfaction of mobile banking during covid-19 lockdown; evidence from rural area of bangladesh. *open Journal of Business and Management*, 9(5), 2329-2357.
- Benamati, J. S. (2007). Trust and distrust in online banking: Their role in developing countries. Information Technology for Development, 13(2), 161-175.
- Booz & Hamilton (1997). Distribution of Broadband Services, for cable TV final Report Brussels, 24 February 1997
- Chang, K. C., Chen, M. C., Hsu, C. L. & Kuo, N. T. (2010). The effect of service convenience on post purchasing behaviours. Industrial Management & Data Systems. 110(9), 1420-1443.
- Cracknell, D. (2004). Electronic banking for the poor—panacea, potential and Pitfalls small Enterprise Development, 15(4), 8-24.
- Dahlberg, T & Mallat, N. (2002). Mobile Payment Service Development-Managerial Implication of Customer Value Perceptions.[Online]. pp 649-657

- Dai, H., Salam, A. F. & King, R. (2008). Determinants and influences of service convenience in electronic mediated environment (eme): An empirical study of Chinese consumers. In: Americas Conference on Information Systems. Retrieved 25 March. 2009, from <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1154&context=icis2008>.
- Darlington, N, Jennifer,G,O & Bekwele, D.L.(2022). Mobile Banking Service Quality and Customer Satisfaction of Deposit Money Banks in Port Harcourt. International Academic Journal of Management and Marketing ISSN: 2384-5849. Volume 7, Number 1 Pages 134-155.
- Dasgupta, S., R. Paul & S. Fuloria, (2011). “Factors affecting behavioral intentions towards mobile banking usage: Empirical evidence from India
- Davidson, N & Tellez, C (2010). Factors affecting Mobile Banking services–An Empirical Study Volume1, Issue2, Dec 2016
- Dmoor, H. (2005). Service Marketing (4th ed.). Dar Wael.
- East. (1997)
- Farris, B & Pfeifer, R. (2010). Effect of Mobile Banking On Customers Satisfaction In Commercial Banks In Anambra State, International Journal of Innovative Social Sciences & Humanities Research 8(1):101-109,
- Fida, B. A., Ahmed, U., Al-Balushi, Y., & Singh, D. (2020). Impact of Service Quality on Customer Loyalty and Customer Satisfaction in Islamic Banks in the Sultanate of Oman. Sage Open, 10, 1-10. <https://doi.org/10.1177%2F2158244020919517>
- Herzberg, A. (2003). Payments and banking with Mobile Personal Devices, Communications of the ACM, Vol. 46. No. 5.
- InfoDEV. (2006). Micro-payments and their application to mobile networks .Retrieved on 20th September 2008 from <http://infodev.org> at 10:00 am.
- Islam, R., Ahmed, S., Rahman, M., & Al Asheq, A. (2020). Determinants of Service Quality and Its Effect on Customer Satisfaction and Loyalty: An Empirical Study of Private Banking Sector. The TQM Journal . <https://doi.org/10.1108/TQM-05-2020-0119>

- Ivatury, G. (2006). Mobile phone banking and low-income customers: Evidence from South Africa. Washington, DC: Consultative group to Assist the poor (CGAP) and the United Nations Foundation.
- Khalfanet al (2006) on „Factors influencing the adoption of internet banking in Oman.
- Kahandawa, W. (2014). Conducted an empirical study on "impact of mobile banking services on customer satisfaction: and the study.
- Khan.A.G; Lima, R. P & Mahmud, M, S. (2018). Understanding the Service Quality and Customer Satisfaction of Mobile Banking in Bangladesh: Using a Structural Equation Model. *Global Business Review*
- Khazaei, A., Manjiri, A., Samiey, E. & Najafi, H. (2014). The effect of service convenience on customer satisfaction and behavioral responses in bank industry. *International Journal of Basic Sciences & Applied Research*, 3(1), 16-23.
- Karjaluoto, H. (2002). Selection criteria for a mode of bill payment: Empirical investigation among Finnish bank customers. *International Journal of Retail & Distribution Management*, 30(6), 331-339
- Kaura, V. (2013). Service convenience, customer satisfaction, and customer loyalty: Study of Indian commercial bank. *Journal of Global Marketing*, 26(1), 18-27
- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*. New Age International.
- Laukkanen, T. A. (2005). Consumer value creation in mobile banking services', *Int. J. Mobile Communications*, Vol. 3
- Ling, R. (2004). *The mobile connection: The cell phone's impact on society*. . San Fransisco: Morgan Kaufmann.
- Mahlet,L,A.(2020). The impact of mobile banking service quality on customer's satisfaction (the case of commercial bank of Ethiopia in selected branch)

Maseke, B. F. (2018). The impact of mobile banking on customer satisfaction: Commercial banks of Namibia (keetmanshoop). *Journal of Internet Banking and Commerce*, 23(2), 1-18.

- Maurer, B. (2008). Retail electronic payments systems for value transfers in the developing world. California: University of California Press.
- Minjoon, S. (2016). Effect of Mobile Banking On Customers Satisfaction in Commercial Banks In Anambra State, International Journal of Innovative Social Sciences & Humanities Research 8(1):101-109,
- Mwendwa, A. M., Makokha, E. N., & Namusonge, G. S. (2016). Effect of mobile banking on customer satisfaction in selected banks in Trans-Nzoia County. *International Journal of Recent Research in Commerce Economics and Management*, 3(4), 12-22.
- Niveen M. Al-Sayyed, Taghrid S. Suifan & Afnan R. Alawneh. (2015). Exploring the Effect of Perceived Service Quality on Customers Satisfaction: A Study of Banking Sector in Jordan. *Journal of Management Research*, Vol. 7, No. 1
- Nxumalo, N. C. (2017). *An assessment of service quality and customer satisfaction at eThekweni Municipality: Water and Sanitation Unit* (Doctoral dissertation).
- Pakurar, M., Haddad, H., Nagy, J., Popp, J., & Oláh, J. (2019). The Service Quality Dimensions That Affect Customer Satisfaction in the Jordanian Banking Sector. *Sustainability*, 11, Article No. 1113. <https://doi.org/10.3390/su11041113>
- Parasuraman, A., Zeithaml, V. & Berry, L. (2002). Service Quality Delivery through web sites: A critical review of extant knowledge, *Journal of the Academy of marketing Science*, fall 2002; vol. 30. No. 4 pp 362-375.
- Porteous, D. (2006). The enabling environment for mobile banking in Africa. London: DFID.
- Porteous, D. (2007). Just how transformational is m-banking? Pretoria: FinMark Trust.
- Qureshi T. (2008). Customer acceptance of online banking in developing economies. *Journal of internet banking and commerce* 13(1):1-9
- Ramya N. (2019). service quality and dimensions EPRA International Journal of Research & Development p 38-41
- Ravichandran, K., Prabhakaran, S & Kumar, A. S. (2010). Application of Servqual Model on Measuring Service Quality: A Bayesian Approach. *Enterprise Risk Management*, 1 (1), pp. 145-169.
- Romario, G. (2018). The impact of mobile banking on customer satisfaction : commercial bank of Namibia, vol, 23 no.2

- Rosenbaum, M., Corus, C., Ostrom, A., Anderson, L., Fisk, R., Gallan, A., ... & Williams, J. (2011). Conceptualisation and aspirations of transformative service research. *Journal of Research for Consumers*.
- Safitri, Y. H. (2017). Security and ease of use effect on customers' satisfaction shopping in Tokopedia. *Journal of Resources Development and Management*, 33, 20-29. : <https://pdfs.semanticscholar.org/1820/8161180bcb0817ebf495d133722a368f09e0.pdf>
- Santhiyavalli, G. (2011). Customer's Perception of Service Quality of State Bank of India-A Factor Analysis. *International Journal of Management & Business Studies*, 1(3), 78-84.<http://www.ijmbs.com/13/gsanthivalli.pdf>
- Saunders, M., Lewis, P & Thornhill, A. (2009). *Research Methods for Business Students*. Financial Times /PrenticeHall, Englewood Cliff.
- Scornavacca, E. A. (2004). 'M-banking services in Japan: a strategic perspective', *Int. J. Mobile Communications*, Vol. 2, No. 1, pp.51–66.
- Shaikh, K. (2015). Mobile Banking Adoption: A Literature Review. *Telematics and Informatics*, 32, 129-142.
- Sintayehu,Z & Sapana,C. (2022). The Effect of Electronic Banking Service On Customer Satisfaction: Evidence From Commercial Banks Of Ethiopia Operating In Hawassa City Administration. *Journal of Positive School Psychology*, <http://journalppw.com>, Vol. 6, No. 8, 3228-3246
- Souza. (2002) on the comparative performance of public and private sector banks in the decade of the 1990s
- Sunil, K, M &Durga, P, S. (2013). "Mobile Banking Adoption and Benefits towards Customers Service
- Timothy, 2012. Electronic banking service and customer satisfaction in the Nigerian banking industry T. Alabar – *international journal of business management* (Vol. 2)
- Tiwari, R & Buse, S. (2007). *The mobile commerce prospects: a strategic analysis of opportunities in the banking sector*, hamburg university press.
- Vaughan, P. (2007). Early lessons from the deployment of M-PESA, Vodafone's own mobile transactions service. In D. Coyle (Ed.), *The transformational potential of m-transactions* (Vol. 6, pp. 6-9). London: Vodafone Group.

- Vencataya, L., Pudaruth, S., Juwaheer, R.T.D., Dirpal, G. and Sumodhee, N.M.Z. (2019).
Assessing the Impact of Service Quality Dimensions on Customer Satisfaction in
Commercial Banks of Mauritius. *Studies in Business and Economics*, 14, 259-270.
<https://doi.org/10.2478/sbe-2019-0020>
- Yang (2005) carried out a study “Exploring factors affecting the adoption of mobile banking in
Singapore.

Appendix I

Questionnaire

St. Marry University
School of graduate study

Department of MBA

Dear Respondents, This questionnaire is designed specifically to carry out a research on the effect of m-banking on customer's satisfaction the case of Abyssinia bank in Ethiopia. The purpose of this study is to find the mobile banking service dimensions that affect the level of customer satisfaction in Abyssinia Bank of Ethiopia, as partial fulfillment of the requirements for the degree in Masters of business administration. Here I kindly request you to attempt all the items in the questionnaire. Whatever information is provided will be treated with utmost confidentiality for an academic purpose. There is no need to write your name.

I thank you in advance

If you have any question with regard to the questionnaire please contact me using the above mentioned address.

Redet Teklu

Tell: 0925171432

Email Redikonjo649@gmail.com

Please indicate the following by ticking (x) on the spaces in front of the response options

Part I

Background Information

Date

1. Gender

☐ Male

☐ Female

2. Age (years)

☐ Less than 18

☐ 19-30

☐ 31-40

☐ 41-50

☐ General Instruction:

Above 50

3. Marital Status

☐ Married

☐ Unmarried

4. What is your nationality?

5. What is your current monthly income?

☐ Under 5000

☐ 15,000-25,000

☐ 25,000-35000

☐ Above 35,000

☐ cannot share

☐ Not Applicable

6. What is your level of academic qualification?

☐ PHD

☐ Masters

☐ Bachelor degree

☐ Diploma

☐ High school

7. What is your occupation?

☐ Self-employed

☐ Unemployed

☐ Public Sector

☐ Private Sector

☐ NGO employee

☐ if other, please specify

Part II

Customer Feelings about Mobile Banking

1. Please put right mark (✓) for response of your feeling about the question provided.

Dimension	S/ N	Statement of Evaluation	Rating Scale				
			Strongly Disagree	Disagre e	Neutra l	Agree	Strongl y Agree
			1	2	3	4	5

Reliability	1	Mobile banking provides customers with the services exactly as promised.					
	2	Mobile banking completes a task accurately.					
	3	If there are transactional mistakes, customer care service is readily available to the customers.					
Responsiveness	1	Mobile banking provides prompt response if the transactions are not well processed.					
	2	The bank quickly resolves mobile banking related problems.					
	3	The customers know immediately when the transaction is performed.					
Visibility	1	The mobile Banking registration process is easy and simple.					
	2	Using mobile banking fits well with the way I like to manage my finances.					
	3	Mobile banking provides full day service					
Security	1	Mobile banking provides security for transaction data and privacy.					
	2	I feel safe when using mobile banking					
	3	Mobile banking keeps accurate record of transaction.					

	4	I do not use mobile banking because of possibilities of identity theft, fraud or hacking.					
Convenience	1	The language in mobile banking displays is easy to understand.					
	2	I am afraid of using mobile banking while a transaction because of the network connectivity					
	3	Use of mobile banking service is costly.					
	4	Mobile banking is convenience than conventional (visiting banking					
Efficiency	1	Mobile banking provides complete help function.					
	2	Transaction process is fast.					
	3	Mobile banking allows me to manage my finances more efficiently.					
	4	Mobile banking allows transacting among other banks accounts					

6

Part III: Customer satisfaction in Mobile Banking Service

Please indicate your level of satisfaction about the mobile bank serviced offered by Abyssinia Bank.

Note: Very dissatisfied (1), dissatisfied (2), quite satisfied (3) Satisfied (4) and Very high satisfied (5).

No		Liker Scale				
		1	2	3	4	5
1	Do you think that you get a good customer service in Bank of Abyssinia (According to mobile banking)					
2	Staff can describe step and guide to use and condition to use clearly?					
3	In general, I am satisfied with the mobile banking service provided by the bank.					

Thank you for your Valuable Contribution!!