The Effect of Digital Banking Service Quality on Customer Satisfaction: Evidence from the Bank of Abyssinia.

Bonseban Atinafu Hirpa

A Thesis Submitted to the Department of Technology and Innovation Management,

School of Humanities and Social Science

Presented in Partial Fulfillment of the Requirement for the Degree of Master's in Science of Technology and Innovation Management

Office of Graduate Studies
Adama Science and Technology University

June 2023

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Advisor

Birku Reta (PhD)

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Declaration

I hereby declare that this Master Thesis entitled "**The effect of digital banking service quality on customer satisfaction: Evidence from bank of Abyssinia**" is my own work and has not been submitted to any university for a similar purpose. The references used in this proposal are duly recognized by proper citations.

Bonseban Atinafu Hirpa _____ _____

Name of the Student Signature Date

Recommendation

I/we, the major advisor(s) of this thesis, hereby certify that I/we have read the revised version of the thesis entitled "**The effect of digital banking service quality on customer satisfaction: Evidence from bank of Abyssinia**" prepared under my/our guidance by Bonseban Atinafu Hirpa. Submitted in partial fulfillment of the requirements for masters of Science in technology and innovation management. Therefore, I/we recommend the submission of the thesis to the department following the applicable procedure.

Birku Reta (PhD)	_____	_____
Major Advisor/ Supervisor	Signature	Date
_____	_____	_____
Co-Advisor/ Supervisor	Signature	Date

Approval page

I/We, the advisors of entitled "**The effect of digital banking service quality on customer satisfaction: Evidence from bank of Abyssinia**" developed by Bonseban Atinafu, hereby certify that the recommendation and suggestions made by the board of examiners are appropriately incorporated into the final version of the thesis.

Birku Reta (PhD) _____ _____

Major Advisor Signature Date

_____ _____ _____

Co-Advisor Signature Date

We, the undersigned, members of the Board of examiners of the thesis by Bonseban Atinafu have read and evaluated the thesis entitled "**The effect of digital banking service quality on customer satisfaction: Evidence from bank of Abyssinia**" and examined the candidate during open defense. This is, therefore, to certify that the thesis for partial fulfillment of the requirement of the degree of Master of Science in technology and innovation management.

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Final approval and acceptance of the thesis is contingent upon submission of its final copy to the Office of Postgraduate Studies (OPGS) through the Department Graduate Council (DGC) and School Graduate Committee (SGC).

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Office of Postgraduate Studies, Dean Signature Date

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Acknowledgement

First and foremost, praises and thanks to the **God (waaqaa)**, the Almighty, for His showers of blessings throughout my research work to complete the research successfully.

I would like to express my deep and sincere gratitude to my research Advisor, **Dr. Birku Reta(Ph.D)** for giving me the opportunity to do research and providing invaluable guidance throughout this research. It was a great privilege and honor to work and study under his guidance. I am extremely grateful for what he has offered me

I am extremely grateful to **my parents** for their love, prayers, caring and sacrifices for educating and preparing me for my future. Specially, I am very much thankful to my elder brother **Merga Atinafu Hirpa** with his family and my lovely friend **Bontu Abebe Dore** for their love, understanding, prayers and continuing support to complete this research work.

Additionally, thanks goes to my lovely staff management team, **Abdurahaman Aman, Hareg Bekele, Yonas Mekonnen and all of my staff members** for your interest shown to me to complete this thesis successfully. Finally, my thanks go to all the people who have supported me to complete the research work directly or indirectly.

Abstract

In Ethiopia, research on digital banking service is done on customer satisfaction. This study was meant to shed light on this issue by scrutinizing the quality of the digital banking service Specifically, it examines the effect of digital banking the quality of service and relationship of accessibility, reliability, ease of use, time of deliverance, and security on customer satisfaction. The study was conducted by using the Structural Equation Model (SEM). Primary data were collected from 350 customers using a quantitative correlation design. Accordingly, the study shows that four of the independent variables (reliability, time of deliverance, security and service quality) significantly affect customer satisfaction. The findings also revealed that banks need to critically work on customer's awareness creation on how to use the digital banking and create accessibility of digital banking products and services.

Key words: digital banking, Ethiopia, accessibility, reliability, eases of use

CHAPTER ONE

1. INTRODUCTION.

1.1. Background of the study.

A major component of Ethiopia's economic infrastructure is the banking industry which privies financial service to large number of Ethiopian population (national bank of Ethiopia report 2023). As one of the thirty banks in Ethiopia, Bank of Abyssinia is a private fast growing bank. Bank of Abyssinia was established on February15, 1906 and the licensing and supervision of banking business proclamation no.84/1994. The objective of this banks is proved excellent financial services through competent and motivated employees and digital technology in order to maximize value to all stakeholders. This bank has got a growing number of customers and organizational branches. During these increments in the number of customers and the number of branches, different challenges of serving customers and expenses of these branch expansions are raised as challenges. The banks deliver any financial services to a customer through both contacting and contact-less methods. The first choice for decreasing the physical presence of the customer at the branch is optimizing digital technology that is easy and understandable to the customer. So banks are coming to digitization to increase contact-less financial services and deliver all banking services for 24/7 day.

The advantage of these digital transformations is not only for the bank, but also for the customer to keep his time of deliverance and check any type transaction timely. It indicates that the bank is the most significant financial intermediary in the economy as it bridges the gap between surplus and deficit economic agents. The banking industry based on a new format of application of information and communication decreases the gap between customer and banking sectors through the use of digital banking (Devlin, 1995). The financial institution may buy, sell, and preserve overseas forex notes and cash such files and instruments, along with telegraphic transfers, as they're typically hired in worldwide bills or transfers of funds. Lack of getting the right of entry to finance is a massive constraint for nearby businesses. All those sorts of transactions are surpassed without difficulty with no necessity of third-party permission to

authenticate transactions through virtual banking (internet, mobile banking, and automatic teller machines) from the United States to different foreign countries.

Digital banking enables a bank's customers to access banking products and services via an electronic/online platform. Digital banking is a process of digitizing all the banking operations and substituting the bank's physical presence with an everlasting online presence, eliminating a consumer's need to visit a branch. It is the method that allows a user to set up automatic payments for regular utility bills such as electricity, gas, phone, and credit card. The customer no longer has to make a conscious effort of remembering the due dates, but rather one can opt for alerts on upcoming payments and outstanding (Tavaga 2017).

Digital banking services are new, and the development and diffusion of these technologies by financial institutions are expected to result in a more efficient banking system. This technology offers institutions alternative or non-traditional delivery channels through which banking products and services can be delivered to customers more conveniently and economically without diminishing the existing. (Khanand, 2007)

Digital banking permits a person to perform banking paintings across the clock, with 24*7 availability of getting entry to banking functions. One of the largest drawbacks of conventional banking appears to be the overly located significance on paper. Banking has become paperless with the improvement of virtual banking as a service. A person can log into their account at any factor in time to display records. Internet banking has extensively contributed to on-line payments. Digital banking is extending services to faraway areas is apparently a step closer to holistic improvement. With smart phones at inexpensive costs and net get entry to in faraway areas, the agrarian population could make the maximum out of virtual banking services and enabled fund transfers that reduce the risk of counterfeit currency. With the help of digital banking, a person can record and block out of place credit score playing cards at the click of a button. This gain greatly strengthens the privacy and safety available to a bank’s customer. Service quality is defined as "overall excellence or superiority that consumers perceive from a product/service" (Zeithamil, 2015).

Previous studies attempted to identify the dimensions of service quality. For instance, (Grönroos., 1984) proposed two distinct service dimensions: technical and functional quality. Technical quality is what consumers get as a result of an interaction with a service provider. Service quality is examined in the context of core service quality- offerings related to service and products (Gordon, Dougall, and Terrence 2000) In turn, functional quality has to do with how the service quality can be seen as the extent to which a service meets customers' needs and expectations (Lewis, B. and Mitchell,, 1990). Service quality can thus be defined as the difference between customers' expectations of service and the perceived service. Thus, if expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman et al.1985).

The advent of electronic banking in general and internet banking in particular has led to the development of service quality dimensions to measure the extent of customers' satisfaction. Service quality developed by (Zeithamil, 2015) is one of the more widely used instruments for assessing customer satisfaction.

1.2. Statement of the Problem

The greater part of the past research works solely discussed service quality effect on client satisfaction individually. Also digital banking innovation technology has been rejected or ignored by most customers. Because of the perceived worries or problems associated with technology-based service delivery systems and the quality of the services as most lack confidence that it can be used to addresses challenges that arise because of down flowing of digital technology to users (Rhett H. 2002,). Many research works are conducted to determine the satisfaction of customers and factors that are linked with the satisfaction of the users as it is easier to access users that have adopted digital banking technology.

The findings of a research in Pakistan by (Saadullah 2017) Khan revealed that the adoption of internet banking is confined to certain aspects only, and the conclusion is the slow adoption of such digital is solely due to security concerns and customer trust in digital banking. This study raises two questions: why it was not done on other digital platforms and why it didn't find a solution to help customers trust it.

Similarly, the research conducted in India by (firdious 2017) on the impact of internet banking service quality on customer satisfaction revealed that based on the variables (efficiency, system availability, fulfillment, privacy, contact, and responsibility) concluded that the internet banking service quality dimensions have a significant impact on the customer satisfaction of internet banking customers. Each of the dimension namely efficiency, system availability, fulfillment, privacy, contact, responsiveness and contact individually contribute 70% to the overall customer satisfaction in internet banking (Firdious, 2017). But, the research failed to account for other most popular digital like ATM and Mobile banking.

As a global context the research that was done at Uppsala University on effect of digital transformation process on banks relationship with customer in the case of large Swedish bank investigated. The relationship between digital banking and customer satisfactions based on direct interview on different bank departments. As a result, researcher summarized the relationship between customer and banks on new technology have got direct relationship with the acceptance of the customers (Robert Ortstad and Binan Sonono, 2017). But one could argue that if the researcher's investigation or data were collected from huge customers, it could have revealed the effects of digital banking technology on customer satisfaction by analysis customer ideas on digital banking technology.

Additionally, there are many research works conducted in Ethiopian banking context. A case in point is a research conducted by (Fikresillassie A. 2017) on effect of digital banking service quality on customer satisfaction in case of Commercial Bank of Ethiopia and his findings of the study is service quality and privacy of digital banking has been significant factor on customer satisfaction.

But most of researches focused on the general E-banking technology that have relationship with customer satisfaction and do not deeply take common use of each digital banking type and compare each of types with different satisfaction variables. In addition to that many researchers used the data that have been stored by the banks or data that had been collected from the internal

employees for analyzing the satisfaction of customers on that digital instead of collect new data from the customer.

In a previous research undertaking, there was a researcher who put down his finding and recommends the banks only on the bank infrastructures and other like periodically control of the ATM network and power supplies. He recommended that providing it with sufficient amount of cash, updating the software on a regular basis in order to avoid interruptions of services, maintaining and cleaning the machines, distributing the machines and devices to unexpanded area, developing the habit of working cooperatively and encouraging customers to use e-banking through reward and tariff discount are the strategies (Befikadu, 2019). But all the above listed factors have not increase the quality of services. In the above past research researcher write down the finding on general digitals, collect data from secondary data or bank employee, current customer filling was does not investigated, and comparative preference between digital types are not estimated.

By taking the above literature Gap the researcher intended to:

- Analyze effect of digital banking service quality on customer satisfaction through six familiarized digital banking variables ordered through structural equation model (SEM).
- Compare the three most common digital banking products based on customer responses that have been subsumed in previous research as general and investigated on bank statement.
- Analyze why customers prefer some digital banking products over others. And put down the respondents' choices as bank value and why they do not identify the bank weakness for future recommendation.
- Recommend the banks to recruit skillful workers who can guide the customers and maintain the competitiveness of the banks as they offer their best services and product in the era of digital banking.

1.3. Objectives of the study.

The main objective of this study is to identify the Effect of digital banking service quality on customer satisfaction Evidence from bank of Abyssinia bank S.C.Adama city.

Specific objective of the study

- ✓ To identify the major service quality that satisfy customer in digital banking technology.
- ✓ To examine the relationship between service quality and customer satisfaction on digital banking.
- ✓ Estimate the extent of customer satisfaction and preferred choice of digital banking services.

1.4. Research questions.

A research question is a specific inquiry which the research seeks to provide a response to. It resides at the core of systematic investigation and it helps an author to clearly define a path for the research process. The research questions of the thesis are:

- ➢ What are the major factors affecting customer satisfaction?
- ➢ What is service quality in digital banking technology operations and how do they affect customer satisfaction?
- ➢ Why do customers prefer some digital banking products over others?

1.5. Significance of the study

The push for a cashless economic system is connecting increasingly customers in the direction of digital banking. Internet banking, m-trade via banks utility or from different monetary institutions, via wallets, ATM offerings, etc. is the special styles of the use of digital banking services. Through higher get right of entry to facts and information, fee discount and more advantageous efficiency, the development of generation all around the global has extensively beautified the operations of business organizations (Uppal, 2008). In different any dangers are arise without purchaser aim offerings with the aid of using pass over use and problems of user knowledge, lack of network and knowledge of operators.

Risk may be described as the "opportunities of economic loss". Mobile theft, PIN theft, non-public information exposures, etc., all are immediately liable for the economic losses any man or women or commercial enterprise entities has to face. Perceived risk (PR) is the "degree of uncertainty" associated with digital banking (Gerrard & Cunningham 2003). The mismatch among customer necessities and expected effects from digital banking technology offers upward push to this type of risk (Nicole, Adrian and Alexander, 2010). The different types of risks related to economic, functional, psychological, social, etc. are also included in PR (Nicole Koenig-Lewis, Adrian Palmer and Alexander Moll, 2010). Other risks arise with the loss of PIN code (Kuisma, 2007) and the loss of mobile devices (Yi-Shun, Hsin-Hui & Pin, 2006). PR has a significant effect on the attitude to adopt the quality of digital banking service. Perceived self-efficacy (PSE) Self-efficacy can be defined as "one's belief or judgments on what customer can do with the skill the customer possess within a particular domain" (Venkatesh and Davis, 2000). Self-efficacy is defined as: "People's judgments of their capabilities to organize and execute courses of action required to attain designed types of performances. It is concerned not with the skills one has, but with the judgments of what one can do with whatever skills one possesses". In the context of internet banking, perceived self-efficacy (PSE) is the perception of one's confidence in having the required knowledge and skills to carry out online banking transactions. It is considered to be an influencing factor in the adoption of DBS. Based on the above interpretation the importance of this observe is to discover the client need, sort of generation, accessibility, degree of education, the great digital generation to the clients without prevalence of risks.

1.6. Scope of the study

The study was conducted on selected branches of Abyssinia bank in Ethiopia in Adama city. The region was selected because of the extensive use of digital banking facilities or products and their close proximity to the researcher. The study involved customer members of different branches included under Adama city and also some employees of Abyssinia bank Adama city or district.

1.7. Organization of the paper

The final paper of the study has been structured into five chapters. Chapter one covers introduction and background of the study, statement of the problem, objectives of the study, research questions, significance of the study, scope and limitations of the study. Chapter two covers the literature review (both theoretical and empirical), the third chapter deals with the study area, data source and data analysis, model specification, variables. This chapter looks at the issues of service quality, customer satisfaction and as well as the demographic variable and how they impact service quality and customer satisfaction. Chapter four will be gives the interpretation of descriptive analysis. Finally, chapter fives includes the conclusions from the analysis of the data and recommendations (Researcher design).

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Theoretical literature review

According to (assimakopoulos et al, 2011) technological innovations are a new technology that comprises changes in production methods that results in a new or improved a product or process whose technical characteristics are significantly deferent from before, hence new opportunities for the company.

Scholars define digital banking in various ways. According to saheli et, al.(2008) digital banking is an electronic connection between banks and customers to prepare, implement and decided financial transaction. As a generic term, abid and Noreen (2012), digital banking refers to using a remote conveyance used by customer to access a bank account, transfer funds and make payments.

Service quality is essential in banking industry to satisfy bank users or customer of the banks, since it ensures high level of customer's satisfaction, making it a key to competitive advantages (almossawi, 2012)

Literature reviews are fundamental to establish the state of the art in any field and detect research gaps. They provide a description, summary, and critical evaluation of these works in relation to the research problem being investigated. This chapter outlines the relevant literature on customer satisfaction and the conceptualization of service quality in the context of banking more specifically digital banking and customer satisfaction (Guy Pare´ a, 2015).

In order to identifying and describe the impact issues that exist in banking sector regarding digital banking, the researcher read and used many articles like, diffusion model by (Rogers, E.M, Cudjoe, AmfoAnim, Nyanyofio, 2015), analyses consumers' attitudes towards direct banking (Dale Littler, and A G. Lockett, 1997).The literature review on digital banking have tried to understand the factors affecting actual use, intentional use (al., 2014) and continued intention to use digital banking (Gumussoy, 2016) explain the intention to use digital banking with the TAM and trust. They found that perceived usefulness is the strongest predictor, followed by the trust. (Lin, 2011) examines the effect of innovation attributes (perceived relative advantage, ease of use and compatibility) and knowledge-based trust (perceived competence, benevolence and integrity) on behavioral intention to use and adoption (continue to use) digital banking with using innovation diffusion theory and knowledge based trust.

The study indicated that perceived usefulness, perceived social risk, perceived performance risk and perceived benefit are the significant factors for attitude towards digital banking(Ulun, Nuray, 2012,).While several theoretical models seek to explain the acceptance, adoption and usage of new technologies, the technology acceptance model, developed by (Davis, Perceived

Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology, 1989), is the most widely applied and validated model for various contexts and across a variety of technologies (Viswanath and fredd, 2000). In many studies, antecedent variables have been added to the twin TAM constructs, namely perceived ease of use (PEOU) and perceived usefulness (PU).

They found that trust has a positive effect on both PEOU and PU, and suggested that TAM should be redefined to include trust. They used control variables such as social influence and awareness of services influencing PU, computer self-efficacy, and quality of Internet connection influencing the PEOU, and found that these variables are correlated significantly with PU and PEOU. (JoaquínAldás-Manzano, Carlos Lassala-Navarré Carla Ruiz and Silvia Sanz Blas, 2009) analyze the role of product involvement and found that product involvement plays an important role in increasing PEOU. They found that PU is a major determinant of customer's intentions to use digital banking in Ethiopian banking sector. Perceived ease of use is a significant secondary determinant of customer's intention. However, it is mediated through PU instead of having a direct impact on intention. Perceived web security is also found to be a significant and direct determinant of customer's intention to adopt digital banking. (Ajimon George and G. S. Gireesh Kumar, 2014) incorporated perceived risk to TAM variables and investigated the effect of these variables on customer satisfaction in digital banking. (Timothy Teo, Ursavaş and Bahçekapılı., 2014) investigate the effects of demographic constructs (gender, age, education and income) and subjective norms incorporating with TAM on intention to use digital banking in Ethiopia. (Gumussoy and Koseoglu., 2016) analyze the effects of satisfaction, trust, flow, task-technology fit and service quality on continued intention to use digital banking and the proposed model uses the variable service quality, mainly because the importance of service quality rests on the fact that this is a precondition for ensuring loyalty and for attracting prospective customers.

2.2. Empirical study.

As noted by (Arthur Sweeney and Mark Daniel Morrison, Jan 2004) many innovations have recently modified the way banking activities are carried out owing to novel forms of distribution of financial services. Among such innovations is the use of online services in banking, usually referred to as digital banking technology. Online transaction according to (Chin-Fu Ho, and Wen-Hsiung Wu, 1999) has five functional factors and one technical factor that affect customer satisfaction. Accordingly, these determinants are logistic support, technical characteristics, features of information, presentation of the home page, and product personality (Chin-Fu Ho, and Wen-Hsiung Wu, 1999). Electronic banking or e-banking is the time period that describes all transactions that take place among companies, organizations, and people and their banking institutions. The evolution of the e-banking industry can be traced to the early 1970s when banks began to look at these types of services as an alternative to some of their traditional bank functions. First, such a choice was considered appropriate since it ensures reduced costs as branches were very expensive to set up and maintain. Second, digital banking products and services like ATMs and electronic fund transfers were important element of differentiation used by banks (Driga, 2014)

The use of digital banking has been rejected or ignored by most customers because of the perceived worries or problems associated with technology-based service delivery systems as most lack confidence that it can be used to address challenges that arise. Taking the African continent as well as developing countries into consideration Wungwanitchakorn,(2002) indicated that digital banking is still at its infant stage since only fewer bank customers are accustomed to the use of electronic channels to manage their financial affairs; hence adoption digital banking is low. Additionally, Wungwanitchakorn, (2002) indicated that dissatisfaction with electronic or digital banking is because of the high failure rates of most of the innovative products and services introduced. E-banking is a high-order construct, which consists of several distribution channels. It should be noted that E-banking is a bigger platform than just banking via the Internet. However, the most general type of E-banking in our times is banking via the Internet, in other words, Internet banking. The term E-banking can be described in many ways. In a very simple form, it can mean the provision of information observed by a bank to its customers, via a

computer, television, telephone, or mobile phone (Emeka , Gabriel. Abba, Gideon . Fatokun, 2019).

According to Joel Collier and Carol Bienstock, Feb (2006) service quality model is a basis to conceptualize digital banking service quality. But in Ethiopia, there are a limited number of studies conducted on digital banking Technology. They argued that online customers require information quality and ease of order during the process, order condition, and accuracy in the outcome of online transactions. That is aimed to construct a model to represent linkages between digital banking service quality, customer satisfaction, and customer loyalty. What is more, they assumed a moderate role for customer perceived value between customer satisfaction and service quality.

The results of statistical analysis indicate that the quality of digital banking service affects customer satisfaction positively which leads to customer satisfaction. Also, the results revealed customers with higher perceived value have a higher degree of loyalty. Jannatul Mawa Nupur, (2010) conducted a study focusing on digital banking and customer satisfaction in Bangladesh. The main objective of the study was to measure customer satisfaction with digital banking service delivery. He adopted the SERVQUAL method to collect necessary data. The finding of the research indicated that the measured variables; reliability, ease of use, responsiveness, security, and tangibility have bearings on digital banking customer service.

According to Mary Wolfinbarger, and Mary C Gilly, (2003) the effect of online retailers' digital banking service quality dimensions in several sectors was found to be generally similar across the piece, though the ease of return and experience of security in particular exhibited sector-by-sector differences in performance. According to this theory a 14-item scale which contains four factors was developed: website design (involving some attributes associated with design, rationalization, and product selection), reliability/fulfillment (related to accurate product representation, on-time delivery, and accurate orders), security /privacy (safety and trust), and customer service (willingness to solve problems, willingness to help, and prompt answers to inquiries). According to their scale, the dimensions of security/privacy and reliability/fulfillment

indicated strong validity. In contrast, dimensions of website design and customer service appear less internally consistent and distinct.

Alkhouli, (2017) examined relationships among digital banking service quality, e-customer satisfaction, perceived value, and loyalty empirically. Data were collected from online customers and structural equations. According to (Valarie A., Zeithaml, Parasuraman, and Malhotra, 2002) there are several quality dimensions related to commercial websites: ease of navigation, flexibility, efficiency, site aesthetics, and security. Modelling was applied to test the relationships. The results revealed that e-banking service quality positively influences customer satisfaction, perceived value, and e-loyalty. Furthermore, the findings showed that both e-customer satisfaction and perceived value directly affect e-loyalty.

Chia-Hui Yen and Hsi-Peng Lu., (2008) found that the digital SQ dimensions of efficiency, privacy protection, contact, fulfillment, and responsiveness have statistically significant influences on buyer's dis-confirmation of online auctions which are subsequently positively associated with their satisfaction, which is, in turn, positively associated with loyalty intentions to repurchase a product or reuse a service. L. Yaobin and Zetian Tao, (2007) believe that the serviceability and accessibility of the website, goodwill, network security, and customers' trust liability will all affect the establishment of customers' initial trust in the website, which will directly exert effects on their online purchase motivation.

Al-Hawari, M. and Ward, T. (2006), 2008) identified Privacy, Fulfillment, System availability and Efficiency as the variables of e-banking service quality. They aimed to examine causal linkages among dimensions of e-banking service quality, customer satisfaction, perceived value and loyalty. The results showed that the dimensions of e-banking service quality affect customer satisfaction and perceived value. In addition, the result indicated that e-customer satisfaction and perceived value influence loyalty. Taking the bank as an example, it is possible to prove the positive effects exerted by e-banking service quality on customers' satisfaction while these effects increase the bank's benefits.

Hamid Rezasaedi, and AlieslamiradMiladlajevardi, (2016) measured e-banking service quality using two groups: Internet purchasers and Internet non-purchasers. They found out that reliability was the most important dimension for Internet purchasers even when compared to access, ease of use, personalization, security, and credibility. Internet non-purchasers, in contrast, consider security as their most critical concern. Customers actually evaluate a website's reliability based on whether it provided them with reliable information and safe transactions.

Chia- Hui Yen, and Hsi- PengLu, march, (2008) identified some variables such as efficiency, system availability, privacy, and fulfillment as the dimensions of e-banking service quality. Then they examined the linkages among the dimensions of e-banking service quality, customer satisfaction, and loyalty. The results revealed that the dimensions of e-banking service quality directly influence customer satisfaction. Subsequently, customer satisfaction positively affected loyalty.

According to Gwo- Guang Lee, and Hsiu- Fen Lin, (2005) service quality is an important factor in determining the customers' perceived e-banking service quality and it has significant and positive impacts on the quality of customers' perceived e-banking service. Norizan Mohd Kassim and Nor Asiah Abdullah, (2010) examined the relationships among e-banking service quality dimensions, customer satisfaction, and trust. The results indicated a direct effect of service quality on customer satisfaction. Further, the results showed customer satisfaction positively influences e-trust. Furthermore, Eleanor T. Loiacono and Richard T. Watson, (2002) developed the SERQUAL to scale service quality. They point out that e-banking service quality includes dimensions including information adaptability, trust, design, visual requirement, flow, business process, interaction, response time, intuition, creativity, overall communication, and irreplaceability.

2.3. Conceptual framework

The ideas and maps guiding the understanding and future research are conducted under this conceptual framework on the effect of the quality of digital banking service on customer satisfaction. Customer satisfaction in digital banking is defined as a person's feeling of pleasure or disappointment which resulted from comparing a product's perceived performance or outcome against his/ her expectations (Kotler and Keller, 2006). The perceived value of Customer has been defined as "the difference between the prospective customer's evaluation of all the benefits and all the costs of an offering and the perceived alternatives"

According to the definition by Jones and Jones, T.O. and Sasser, W.E., (2014), imperfection of customer service deliverance in this discussion are a number of beliefs widely held by managers of the digital banking and service companies would have studying. High-quality products and associated services designed to meet customer needs will create high levels of customer satisfaction. This high level of satisfaction will lead to greatly increased +customer loyalty. And increased customer loyalty is the single most important driver of long-term financial performance. Separate research has validated these beliefs. (See "Zero Defections: Quality Comes to Services," by (Reichheld and Sasser, 1990).

The concept of consumer satisfaction occupies a central position in marketing thought and practice. Satisfaction is a major outcome of marketing activity and serves to link processes culminating in purchase and consumption with post purchase phenomena such as attitude change, repeat purchase, and brand loyalty. The centrality of the concept is reflected by its inclusion in the marketing concept that profits are generated through the satisfaction of consumer needs and wants. The relationship between expectation, perceived service quality and customers satisfaction have been investigated in a number of researches (Parasuraman, Valarie A. Zeithaml and Leonard, 1988). They found that, there is very strong relationship between quality of service and customer satisfaction. Increase in service quality of the banks can satisfy and develop attitudinal loyalty which ultimately retains valued customer. The higher level of perceived service quality results in increased customer satisfaction. When perceived service quality is less than expected service quality customer will be dissatisfied (K Jain and Gupta, 2004).

Depending on the above concept the research would be conducted and analyzed to determine service quality of digital banking technology innovation in overall digital that delivered to customers.

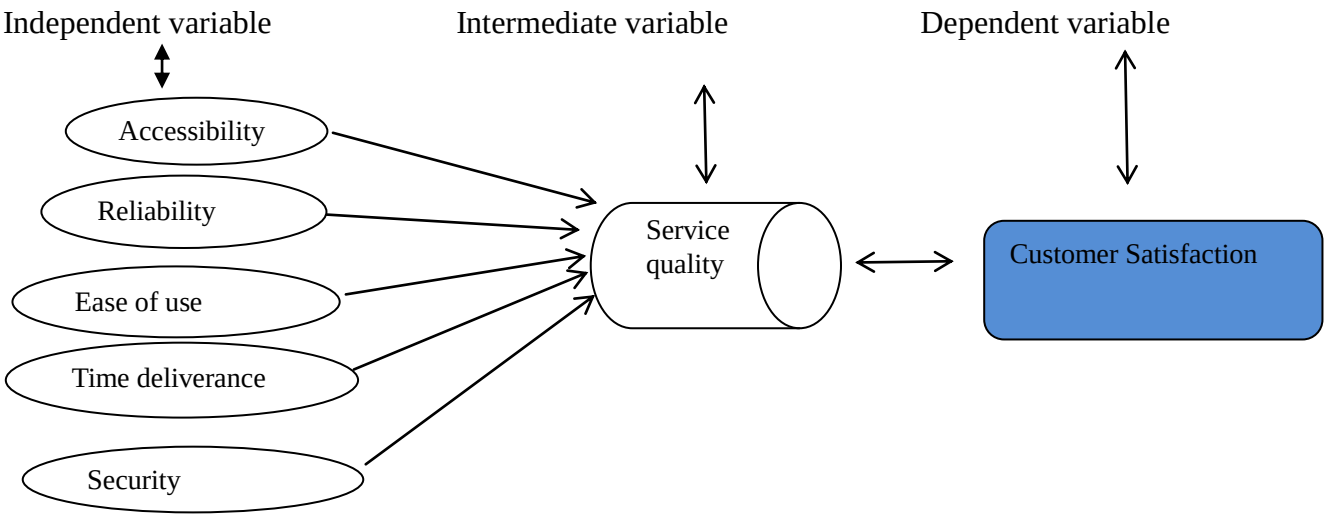

Figure 1 Study's Conceptual framework (researcher diagram)

2.4. Major factors effecting customer satisfaction.

Customer satisfaction is a term frequently used in marketing. It is a measure of how products and services supplied by a company meet or surpass customer expectations. This customer satisfaction is affected by the six most common factors.

Accessibility:

Accessibility is the concept of whether a product or service can be used by everyone however they encounter it. Is described because the quantities to which a check and its constituent object set allow the check-taker to illustrate his or her information of the goal construct (Kettler, Ryan J. Elliott, Stephen N. Beddow, and Peter A., 2009). The standards of accessibility theory (Beddow, in press) advocate the dimension of success entails that a multiplicity of interactions among check-taker traits and capabilities of the check itself.

Reliability:

Customer reliability can definitely make contributions in the direction of this vital factor of the banks as its miles effective tool for developing rehash offers from the clients. Moreover, those dependable clients can fill in as effective additives with inside the marketing and marketing tool once they elude their financial institution to more individuals. Along those strains those modern-day clients make contributions in the direction of increasing their man or woman financial institution's consumer base and piece of the general industry. The economic base of any financial institution is the major hurdle to this marvel. It realizes consumer dependability and impels a long-haul courting among the 2 sides (Khan, 2014,)

Ease of use:

Ease of use is defined as the degree to which individuals perceive how easy it is to use the technology and PU refers to the extent to which individuals believe how useful the technology would be. This result is supported by the Technology Acceptance Model (TAM) developed by

(Davis, Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology, 1989).The use of mobile technologies for pedagogical experiences is growing in visibility which opens the users' minds to the possibility of a radically new paradigm and encourages the abandoned constraints of habitual ways of thinking, learning, communicating, designing and reacting.

Time deliverance:

The time detail of the charge of innovation adoption can be described as said with the aid of Rogers in phrases of "the choice process", "innovative", and "charge of adoption". Time is one key issue with inside the diffusion process. Time size is likewise an essential issue with inside the Innovative of adopter categories. Rogers described innovative as "the diploma to which a man or woman or different unit of adoption is relatively earlier in adopting new thoughts than the alternative participants of a system".

Security:

Banks secure your transactions and personal information online using encryption software that converts the information into code that only your bank can read. Rogers stated that: "interpersonal networks often allow them to overcome the social-psychological barriers of selective exposure, selective perception, and selective retention".

Service quality: Based on the study by Auka et.al(2013), service quality is one of the critical success factors that influence the competitiveness of a service organization. A bank can differentiate itself from competitors by providing quality service. Otherwise, customers will not hold or purchase service products from the bank. If the bank ensures the service quality, then the customer will be loyal to the bank in undertaking the required service. Customers feel secure when they obtain quality service. The banking sector in Ethiopia is supposed to know how digital service quality affects customer satisfaction, in order to improve their digitization strategies and processes.

CHAPTER THREE

3. Methodology

3.1. Research design

According to Naresh, et.al (2094), research design is a framework or draft for conducting a given research project. It provides details of the necessary procedures for gaining the information needed to structure and to solve this research problem. This study used a descriptive research design. The reason for using descriptive research is because it aimed shedding light on current issues or problems through a process of data collection that enables them to describe the situation more completely than was possible without employing this method. To put it simply, it is describe various aspects of the phenomenon. Moreover, descriptive research study helps to study large number of people, merely explain what people say they think and do. The use of this design is to enable the researcher determine and explain the characteristics of the variables (John W. Creswell, 2003).

3.2. Source of data.

Both primary data and secondary data were used in this study. The primary data and secondary data were collected from primary source and secondary sources.

Primary data: The sources of number one facts are normally selected and tailored specially to satisfy the needs or necessities of precise studies. Also, before selecting facts series source, matters just like the intention of the studies and goal population have been identified. Were gather the data with the aid of using the usage of number one facts with the aid of using interview, Surveys & Questionnaires, observation and attention institution with the aid of using contacting customer, staffs and different organization which have private lawful capacity. Additionally researcher put together my studies with the aid of using collecting secondary data series. **Secondary data**: the data gathered with the aid of using a party now no longer associated with the studies examine how ever gathered those data for a few different purpose and at different time in the past. If the researcher makes use of those facts then those become secondary facts for the modern users.

3.3 Data collection methods.

The common data collection instruments in research was questionnaires. In this research the researcher used questionnaires to collect data from respondents to measure appropriate customer filling. The questionnaire is consists of issues related to the personal information of the respondent and to identify which services are used by the respondents. Since the category of the customer is from different educational qualification and because it is important to clarify about the service types, data collector with banking back ground has been used to administer the questionnaires.

3.4. Sample design and sample size.

Purposive sampling technique has been used to collect data from customer of Abyssinia bank located in Adama town and few employees of those banks who have user of digital banking technology. This study focused on the variable service quality and its characteristics that have got effect on customer satisfaction, so a descriptive study was conducted. The scope of this study was specifically limited into Abyssinia bank S.C only. Also 86,016 total users of internet, mobile banking and automated teller machine (ATM) are selected from different branches located in Adama town and total user data are collected from bank statement. Sample designs are calculated by (Yamane, 2016)formula as the following.

$n=N/1+N(e)^2$ Where n, Sample size

N, Total population

e, Level of perception

Based on this formula sample size calculated as:

$n=86,016/1+86,016(0.05)^2$

$=86,016/1+86,016*.0025$

$=86,016/1+215.04$

$=86,016/216.04$

$=398.14$

$n=N/1+N(e)\ 2 \approx 398$ customers

3.5 Data analysis techniques.

The data generated on research questions were collected, and analyzed using descriptive statistics. Items that have effect on customer satisfaction, accessibility, reliability, ease of use, time deliverance, security and service quality of use of digital banking technologies were structured to elicit the respondents' responses based on Liker rating scale of Strongly Agreed (SA), Agreed (A), Neutral(N) Disagreed (D) and Strongly Disagreed (SA). Cronbach Alpha statistical instrument was used to establish the reliability of the instrument section by section and the coefficient of all variables are analyzed for significance of each variable by structural equation model (SEM) through STATA at 0.05 level of significance. Additionally, the specific methods of data analysis has been involved is tabulation and cross tabulation, frequency, percentages, and computation of descriptive statistics by using STATA for summarizing the research result on simple structural equation model.

3.6. Specifying structural equation model

The specifying the structural model by assigning relationships from one construct to another based on the proposed structural model are presented and discussed below:

$$\mathbf{Y = A + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6} \text{ ..... } \mathbf{(3.1)}$$

Where, Y is predicted score of the linear and the term Y is the composite of linear combination of the six predictors, X_1, X_2, X_3, X_4, X_5 and X_6. The value of X_1, X_2, X_3, X_4, X_5, X_6 are the represent of variables **accessibility, reliability, ease of use, time deliverance, security and service quality** respectively and A is constant term of the result of structural equation model analysis where B_1 to B_6 is the coefficient of the models and A is the constant of the equation result of the diagrams.

3.7 Research hypothesis.

On the basis of objective variables such hypothesized on the objectives are framed.

H1: Digital banking service quality does significantly affect customer satisfaction.

H2: Accessibility does significantly affect customer satisfaction.

H3: Ease of use does significantly affect customer satisfaction.

H4: Time of deliverance does significantly affect customer satisfaction.

H5: Security does significantly affect customer satisfaction.

H6: Reliability does significantly affect customer satisfaction.

3.8. Ethical consideration.

In a nature or through a life time human being does not have parallel level of life, education, religion, norms and duties. By considering the above life characters the researcher protect the rights of research participants. The respondents were never mention about their ethnicity, politics and religion view points and their private concerns. Because, these all things are their personal information that they were not want to explode. Confidentiality was the researchers concern and duties to keep the respondents safe under psychological discipline. Generally, the researcher collect data from only voluntary respondents without digging the security of respondents.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

In this chapter, the data collected from the sampled customers is analyzed by using different statistical tools based on data analysis method. The findings of the study discussed in the later section of this chapter.

4.2. Descriptive Analysis for Demographic Data

The demographics factors used in this research are gender, age, marital status, education level, monthly income, and types of service they used the banks services. A total of 398 questionnaires were given to the respondents, 385 responses were received but only 350 questionnaires were use-able for analysis yielding 87.9% response rate. The study concentrated on users of digital banking to analyze the effects of service quality on customer satisfaction on the use of digital banking among these customers.

4.2.1 E-banking users with gender

From table 1 below, the sample consisted of 350 participants, from the participants who completed the gender information, thus, 79 respondents are female respondents and 271 respondents are male. Thus 79 female respondents, 41, 17, and 21 female respondents currently use ATM, IB and MB respectively. As the result below the male respondents are 148, 51, and 72 respondents are current use of ATM, IB, and MB respectively.

This majority of respondents are male and the majority of respondents are currently use ATM than other two digital banking.

	current use			
	ATM	IB	MB	Total
Female	41	17	21	79
Male	148	51	72	271
Total	189	68	93	350

Table 1 E-banking user with gender

4.2.2 E-banking users by age

Digital banking technologies have advanced more rapidly in our country. These adaptations of digital technology are differing from age to age. As the below graph shows: 141 out of 350 populations are digital banking user between the age of 15-24 whose ages under youngest period. During this period 40% of total respondents are between the ages of 15-24. Where the remaining 60% of respondents are 65, 80, 41, 21, and 2 in number between the age of 25-34, 35-44, 45-54, 55-64, and above 65 age respectively.

	current use			
	ATM	IB	MB	Total
15-24	79	28	34	141
25-34	35	16	14	65
35-44	43	14	23	80
45-54	20	8	13	41
55-64	12	2	7	21
65+	0	0	2	2
Total	189	68	93	350

Table 2 . E-banking users by age

4.2.3 E-banking users across marital status.

As the table below result shows the largest status group from all respondents was married (193 out of 350) and also the largest group of married status was use ATM than other E-banking user(103 out of 193). Second, the largest number of users was unmarried (136 out of 350) next to married respondents. Where small number of respondents is separated (15 out of 350) and (6 out of 350) was separated and widowed respondents respectively.

This implies that most of E-banking users might start using digital banking from ATM before progressing to mobile banking and internet banking.

	current use			
	ATM	IB	MB	Total
married	103	47	43	193
separated	10	1	4	15
unmarried	73	19	44	136
widowed	3	1	2	6
Total	189	68	93	350

Table 3 E-banking users across marital status.

4.2.4 E-banking users across level of education.

From table 4 below, there were 251 participants; many respondents had degree level education which comprised of a 71.71% response rate while fewer respondents fell in the master's degree education Category with 13.14%. Meanwhile 9.14% were participants with diploma level, and 6.0% was for those participants with High school (secondary education).

	current use			
	ATM	IB	MB	Total
Degree	129	55	67	251
Diploma	18	4	10	32
high school	11	4	6	21
Masters	31	5	10	46
Total	189	68	93	350

Table 4 E-banking across level of education.

4.2.5 E-banking users by income group.

Depending on the result of respondents average monthly income of respondents have deference from respondent to respondents. Such deference are listed as the below table result. From 350 respondents 217 of respondents have less than 2000(two thousand) monthly income, 81 respondents have 2001-10000(two thousand one to ten thousand) monthly income and the left 52 of respondents are respondents that have greater than 10000(ten thousand) monthly income.

The ratio of respondent income per month is 62:23:15 respectively.

	current use			
	ATM	IB	MB	Total
10000<	121	42	54	217
2001-10000	43	12	26	81
<2000	25	14	13	52
Total	189	68	93	350

Table 5 E-banking users by income group.

4.2.6 Comparative analysis of digital banking products.

Based on the research objective there are analyzed results of digital banking products such as automatic teller machine (ATM), mobile banking (MB) and internet banking (IB). From the above result of table 4.6 the majority of respondents use ATM than MB and IB. On the second hand less percentage of customers uses mobile banking less than automatic teller machine. Where minimum amount of respondents are currently use internet banking less than both of two other product (automatic teller machine and mobile banking). Generally, the comparative analysis on digital banking products respondents are automatic teller machine (ATM), mobile banking and internet respectively. This result shows the degree of customer satisfaction on each type of digital banking. These types of results shows that is the weakness of banks on that give a concept of digital functions on their knowledge of customer as he/she access any type of transactions on individual smart phone or personal computers without any physical presence.

4.2.7 Length of digital banking usage in a year with E- banking user.

The duration of digital banking users for each respondent is different based of starting period of time. Based on that as the below table shows the majority of respondents used digital banking technology for five years, whereas the other 118 respondents are used for ten years and 76 respondents are use above ten years. Also few amount of user are use less than one year. Totally, the number of users per year is for five year, ten year, above ten year and less than one year from highest to lowest respectively.

	current use			
length of BD usage	ATM	IB	MB	Total
1 to 5	73	20	44	137
10+	40	18	18	76
5 to 10	64	24	30	118
less than 1	12	6	1	19
Total	189	68	93	350

Table 6 Length of digital banking with E-banking users

4.2.8. E-banking users with frequency of digital banking usage

Banks can craft more meaningful interactions with customer by giving excellent operational services through digital banking. The frequency of customer transact by this digital banking varies from customer to customer. Based on investigated questionnaires customer can use daily, weekly, monthly, and more than monthly in the percentage of 36.57%(128 respondents), 35.71%(125 respondents), 11.43%(40 respondents) and 16.29%(57 respondents) respectively.

	current use			
frequency of DB usage	ATM	IB	MB	Total
Daily	80	19	29	128
Weekly	64	33	28	125
Monthly	21	8	11	40
More than monthly	24	8	25	57
Total	189	68	93	350

Table 7 E-banking users with frequency of digital banking usage.

4.2.9 Digital banking services for customer with E-banking users.

In daily digital activity customer use digital banking for different purpose. Such purposes are, for balance enquiry, for paying different payment, and enquiry statement for different investment purposes. Based on the following table of questionnaire responded by customer, the majority of customer use digital banking only for transact payments. Secondary, customer use digital banking for balance enquiry, and lastly customer use for statement enquiry.

	current use			
DB service for	ATM	IB	MB	Total
for balance	63	25	35	123
for payment	103	38	47	188
print statement	10	4	5	19
Total	189	68	93	350

Table 8 Digital banking service for with E-banking user

4.2.10 Time that customer visit branch to get bank service with E-banking user.

Customers now prefer to complete everyday transactions on smart phones and banking apps, or there comes to a branch. According to table 9 below many of respondents (117 out of 350) have been visiting the branch for transact the daily transaction for 4 to 8 times; 111 of them have been visiting the branch for about 9 to 12 times, 40 have been visit for the period of greater than 12 times, and 61 have been visit the branch for about 1 to 3 times where smallest amount (21) visit the branch for only less than 1 times.

Based on this; the research analysis the data that customer visits the branch in the below given intervals per month.

branch visit	current use			
	ATM	IB	MB	Total
1 to 3	35	13	13	61
4 to 8	54	29	34	117
9 to 12	64	19	28	111
greater than 12	20	6	14	40
less than 1	16	1	4	21
Total	189	68	93	350

Table 9 Frequency of branch visit with E-banking user

4.2.11 E-banking user with the cause of customer use digital banking than other bank services.

The reason of digital banking used by customers is varies from customer to customer. The researcher has investigated reason for differences through questionnaire and summarize as the below table 10. The findings as presented in table 10 indicate that 155 respondents was use E-banking technology for individual security. Also 97 respondents was access E-banking because of reliability, Were 65 and 33 respondents use because of less risky and fairness of the services respectively.

cause of use frequently	current use			
	ATM	IB	MB	Total
Fair service charge	19	5	9	33
Highly secured	86	29	40	155
More Timing	36	15	14	65
More reliable	48	19	30	97
Total	189	68	93	350

Table 10 E-banking users with cause of use of frequency

4.2.12 System fails per a month by digital banking type.

The degree of satisfaction of customers in the banking sector increases when using digital banking services. The main cornerstone of this service quality are that banking system and decreasing service quality of banking systems are direct related with system failure of bank system are listed as the below table per month. From the table11 below 32.6%, 30%, 22.5%, and 14.9% of total respondents are challenged by system fail per month greater than 12times, 9 to 12times, 4 to 8times and 1 to 3 respectively.

Frequency of failure	current use			
	ATM	IB	MB	Total
1 to 3	26	10	16	52
4 to 8	40	17	22	79
9 to 12	62	18	25	105
greater than 12	61	23	30	114
Total	189	68	93	350

Table 11 Failure of digital banking per a month by digital banking type

4.2.13. Avoidance of digital banking failure method by E-banking users.

In the use of digital banking system most often failures happen in digital transaction and have their own methods of avoiding these failures. The researcher collect the data that customers need to avoid them on the transaction as the following result. From the table below respondent was put down his individual recommendations for resolving the system failure.

From the largest to smallest 106, 96, 85, and 63 respondents have been give response solution of system failure by changing or upgrading network linkage, approve employee skill, increase customer understandable and system installation respectively.

Avoidance strategy of failure	current use			
	ATM	IB	MB	Total
network linkage	56	17	33	106
customer understandable	46	19	20	85
employee skill	48	19	29	96
Installation	39	13	11	63
Total	189	68	93	350

Table 12 Respondent expectation to avoid failure method with E-banking users

4.3. Regression Result and Implications

In this section the statistical method used in finance, investing, and other disciplines that attempt to determine the strength and character of the relationship between one dependent variable and other independent variables are analyzed by structural equation model (SEM).

4.3.1. Cronbach's Alpha Test of Reliability

According to (Lee J. Cronbach and Richard J. Shavelson, 2004),Cronbach's alpha is perhaps the most common estimate of internal consistency of items in a scale. Alpha measures the extent to which item responses (answers to survey questions) correlate with each other. Reliability refers to the consistency and dependability of a measuring instrument; using it repeatedly should give us the same or similar results every time.

Test scale = mean(unstandardized items)

Item	Obs	Sign	item-test correlation	item-test Correlation	item-rest covariance	average inter-item alpha
Accessibility	350	+	0.6351	0.4608	.2932211	0.7419
Reliability	350	+	0.6810	0.5313	.2832531	0.7266
Ease of use	350	+	0.5851	0.4100	.3101107	0.7517
Time deliverance	350	+	0.6799	0.5317	.2842464	0.7266
Security	350	+	0.6441	0.4852	.2940055	0.7363
Service quality	350	+	0.6591	0.5040	.2897649	0.7324
Cus. Satisfaction	350	+	0.6286	0.4690	.2992904	0.7397
Test scale					**0.293**	**0.765**

Cronbach alpha value is above 0.7 and suggests an awesome degree of reliability for a variable. In the table above, we are able to see that all the variables are at a value above 0.7. This suggests that the extent of reliability of variables in phrases of the value of alpha is cronbach met the standards. In the table above can determine that everyone value of every variable is above 0.7 it illustrates that everyone variables have met the standards and meet the factors of reliability.

4.3.2. Descriptive Statistics Analysis

This type of analysis helps to know the overall mean and standard deviation of each variable Used in the study

Variable	Obs	Mean	Std. Dev.	Min	Max
Accessibility	350	2.719	1.014	1	5
Reliability	350	2.712	.961	1	5
Ease of use	350	2.737	.956	1.33	5
Time deliverance	350	2.612	.951	1	5
Security	350	2.798	.952	1.33	5
Service quality	350	2.731	.954	1	5
Customer satisfaction	350	2.58	.934	1	5

4.3.3. Structural equation model Analysis.

On the basis of objective variables such hypothesized on the objectives six alternative hypothesis are formed.

H1: Accessibility does significantly affect customer satisfaction.

H2: Reliability does significantly affect customer satisfaction.

H3: Ease of use does significantly affect customer satisfaction.

H4: Time of deliverance does significantly affect customer satisfaction.

H5: Security does significantly affect customer satisfaction.

H6: service quality does significantly affect customer satisfaction.

Structural equation model Number of observation = 350 Estimation method

OIM

	Coef.	Std.Err.	Z	P>value
Structural				
Service quality				
Accessibility	0.045	0.048	0.930	0.353
Reliability	0.149	0.052	2.870	0.004
Ease of use	0.026	0.049	0.530	0.599
Time deliverance	0.283	0.053	5.350	0.000
Security	0.220	0.052	4.260	0.000
_cons	0.782	0.186	4.200	0.000
Customer satisfaction				
Service quality	0.306	0.050	6.170	0.000
_cons		0.144	12.120	0.000
	1.743			
var(e.service quality)	0.648	0.049		
var(e.customer satisfaction)	0.785	0.059		

LR test of model vs. saturated: chi2(5) = 56.29, Prob> chi2 = 0.0000

4.3.4. Structural correlation test

According to (Kline, 1998) correlation matrix is described as ``a hard and fast of correlation coefficients between a number of variables. A correlation matrix is a table of rows and columns that indicates the volume of correlation among variables. All the numbers in the cells of a correlation matrix constitute pair wise correlation coefficient values of the column and row variables. The correlation matrix treats all variables at the equal foundation in which case any evaluation can be defined as interdependence evaluation.

Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) accessibility	**1.000**						
(2) Reliability	0.383	**1.000**					
(3) Ease of use	0.318	0.291	**1.000**				
(4) Time deliverance	0.279	0.369	0.271	**1.000**			
(5) Security	0.269	0.326	0.226	0.428	**1.000**		
(6) Service quality	0.251	0.351	0.210	0.451	0.407	**1.000**	
(7) Customer satisfaction	0.326	0.350	0.326	0.279	0.259	0.313	**1.000**

4.3.5. Specifying Structural model test

Once the measurement model is developed and tested for its validity, the next stage of SEM analysis involves specifying the structural model by assigning relationships from one construct to another based on the proposed structural model which are presented and discussed below.

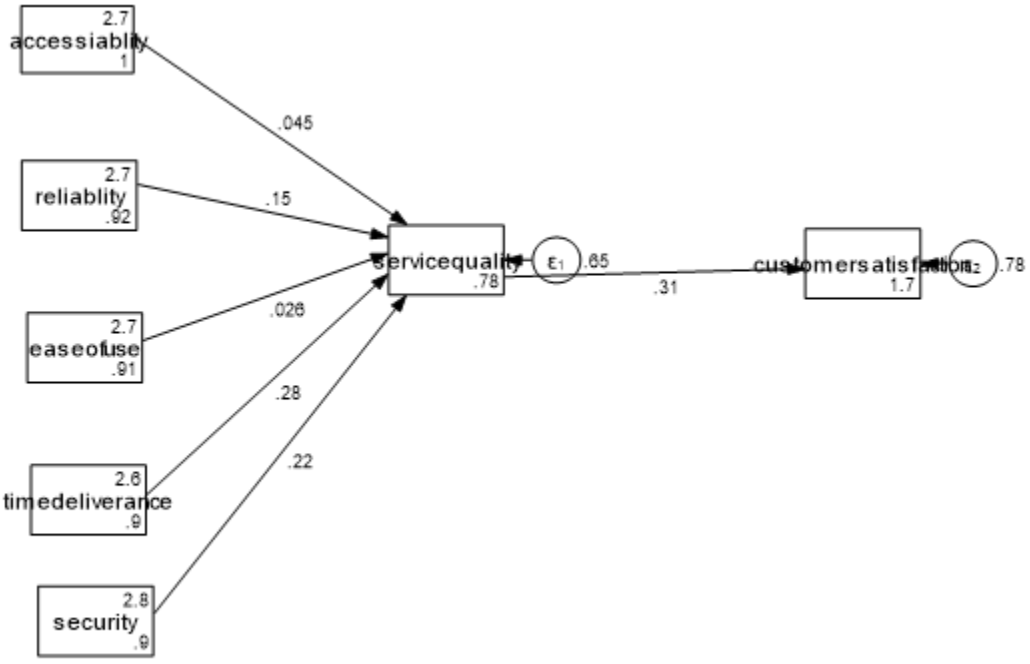

Figure 2 Validity test result model

4.3.6 Decisions of structural Equation Model Result on Hypothesis Testing.

In this segment the researcher attempted to split the options speculation in to every dimension of digital banking decision.

Alternative	Hypothesis	Decision
H1	Accessibility does significantly affect customer satisfaction.	Not accepted
H2	Reliability does significantly affect customer satisfaction.	Accepted
H3	Ease of use does significantly affect customer satisfaction.	Not accepted
H4	Time deliverance does significantly affect customer satisfaction.	Accepted
H5	Security does significantly affect customer satisfaction.	Accepted
H6	Service quality does significantly affect customer satisfaction.	Accepted

4.4. Discussion of structural equation models.

From the structural analysis of the study, there are different results of analysis for each variable. Such values are investigated for positive, significance and acceptance of each variables of the research. So the results of each variable are summarized in the following table:

Table 13 Summary of direct effect results of the structural model

Hypothesis	Hypothesis path	Path coefficient	P-value	Decision
H1	Accessibility-customer satisfaction	0.045	.353	○
H2	Reliability- customer satisfaction	0.15	.004	✓
H3	Ease of use- customer satisfaction	0.026	.599	○
H4	Time - customer satisfaction	0.28	.000	✓
H5	Security- customer satisfaction	0.22	.000	✓
H6	Service quality- customer satisfaction	0.31	.000	✓

Accordingly, the above table implies that accessibility, reliability, ease of use, time of deliverance, security, and service quality are positively correlated to customer satisfaction by .045, .15, .026, .28, .22 and .31 respectively. In other words, the p-value of the variable is calculated for the decision or significance of the variables. Thus, the p-values of accessibility, reliability and ease of use are .353, .004, and .599 where the left three variables are highly significant by .000. As a result, four independent variables (reliability, time, security and service quality have significant effect on customer satisfaction.

From the researcher result 67 percent (%) of the researcher hypothesis are clear and accepted for this research. To identify the problems that related with digital technology researcher put the coefficient of each variables and also the values of p (p- value) to examining the significance of

the variables. From this equations all variables are positively affect customer satisfaction. Based on this statement, thus, the hypothesis is written as service quality impacts on customer satisfaction. Service quality and customer satisfaction are correlate positively and this more satisfied customer with a service provider. The result form the structural analysis implies significant positive relationship between service quality and customer satisfaction in bank of Abyssinia. This is the evidence from coefficient value of service quality is positive 0.31. Throughout this positive result service quality affect customer satisfaction by 0.31 where customer satisfaction increase by one.

Chapter Five

5. Finding, Conclusion and Recommendation

Finding

Based on the data analysis and interpretation, the major significant findings are: all variables of the investigation (accessibility, reliability, ease of use, time of deliverance, security and service quality) have a positive influence on customer satisfaction in the banking sector. Also the significance of relationship between variables and customer satisfaction are analyzed for acceptance of the hypothesis. That analysis shows that four hypotheses (service quality, reliability, time of deliverance and security) significantly affect customer satisfaction. They have been recorded under accepted hypothesis. In a situation wherein the two (accessibility and ease of use) do not significantly affect customer satisfaction they are recorded under the unaccepted hypothesis.

Conclusion

The study provides an understanding of the effects of digital banking service quality on customer satisfaction in Ethiopia by incorporating six construct variables with customer satisfaction, accessibility, and reliability, ease of use, time deliverance, security and service quality.
In order to carry out the study, structural equation model (SEM) analysis has been used for both the independent and dependent factors. The results the study revealed reliability, time of deliverance, security and service quality are the most significant variables affecting digital banking service quality pertaining to customer satisfaction. The results also confirmed that there existed a reasonable correlation between the independent variables (accessibility, reliability, ease of use, time deliverance, security and service quality) and the dependent variable. Meanwhile with customer satisfaction there was a positive correlation in effecting digital banking service quality on customer satisfaction.

Regarding demographic factors, the findings revealed that, customers with age ranging from 15-24 were the majority among the users of digital banking services as 36.57% of 350 respondents use the service daily and 53.71% of the users use digital banking for transferring funds(for

payment) only. As the analyzed data shows the majority of digital banking users or 62% users have more than 10,000 monthly incomes from different income sources.

Recommendation

Based on the estimated finding of the research the researcher has forwarded the following recommendations:

- The bank should make awareness raising activities for customers on the use of digital services such as internet banking, mobile and ATM (automatic teller machine) before selling those types of products to the customers. The benefit of awareness raising activities for the customers regarding digital banking services is that the knowledge of the service will be readily available to the customers. Because the chance of malicious emails attachments may happen with bank products and services in the form of surprise awards by the name of bank for malware customers' data.

- Banks should give attention to the four significant variables of customer satisfaction such accessibility, reliability, time of deliverance, and security of the customers to increase customer satisfactions.

- According to the research finding, majority of respondents are challenged by system failure 12times per a month. So researcher recommend a bank to upgrade system availability as user needed.

- Lastly, the researcher would like to recommend that customers themselves should investigate and learn the purpose, aim and importance of digital banking technology from a bank or other online sources to access easily any digital banking technologies for their individual advantage.

Limitation of the study

The study investigated the relationship between digital banking service quality and customer satisfaction in Ethiopia. The study was successfully implemented with sound result that may have important implication for policy making, theory and practices. However, study of this nature could have been successfully conducted without any challenges which may affect the generalization of findings of the study. In the process of conducting this study certain limitations are highlighted below:

The first limitation of the study is the research was conducted only depending on the most common three digital banking products and the research questionnaires were prepared for those three digital banking products and services.

The second limitation of the study is the research data are collected from users of digital banking technology. This research would have provided better results if it included all users of this products and also non users of digital banking technologies and investigate why he/she does not use digital banking technology.

Thirdly, researcher was done the research on single bank. But if the future bank do on the other remaining banks and non-bank financial institutions the effect of service quality on customer satisfaction is clearer than this research.

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Appendex.

ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY
SCHOOL OF HUMANITIES AND SOCIAL SCIENCE
DEPARTMENT OF TECHNOLOGY AND INNOVATION

Dear Madam/Sir,

I am Mr. Bonseban Atinafu Hirpa, a postgraduate student at Adama Science and Technology University in Adama, Oromia. Luckily, for the time being, I am on a study leave to pursue my post graduate studies for the Master's degree at Adama science and technology university; school of humanity and social science, department of technology and innovation management.

My thesis aims to investigate **the effect of digital banking service quality on customer satisfaction: Evidence from bank of Abyssinia.** It is highly anticipated that the analysis of this questionnaire will contribute significantly to my research, aiming to improve Digital banking services in Ethiopia. The purpose of this thesis is to identify analysis and justify effect of digital banking technology service quality on customer satisfaction based on respondent's characteristics and technology that customer use.

This questionnaire has been cautiously designed for maximum gadgets to be turned around as a way to allow you to finish the questionnaire in much less than 15 minutes. Your responses may be anonymous and exclusive and used handiest for the reason of this study. You can withdraw from this process at any time for any or no reason; however I might wholly admire your help. If you've got finished this questionnaire before, please prevent and thanks once more on your co-operation.

Finally, by completing this questionnaire you will be one of those who assisted me in completing my thesis and I value this very highly and acknowledge your generosity.

Yours Faithfully,

BonsebanAtinafuHirpa
Master's Degree Student
Humanity and Social Science School

Section A

Tick **write mark** on the best of fits your feeling to the question.

1. Gender : Male ☐ Female ☐
2. Age group: 15-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-64 ☐ 65+ ☐
3. Marital status Single ☐ married ☐ separated ☐ widowed ☐
4. Education level: High school ☐
   Diploma (10^{+3}) ☐
   University degree ☐
   Master's degree ☐
5. Income level: ≤ 2000 ☐ 2001-10000 ☐ Above 10000 ☐
6. Which digital banking service you are currently use?
   ☐ ATM
   ☐ Mobile banking
   ☐ Internet banking
7. Length of digital banking usage: Less than 1 year ☐
   1 to 5 years ☐
   6 to 10 years ☐
   11+ years ☐
8. Frequency of digital banking usage: Daily ☐
   Weekly ☐
   Monthly ☐
   Less often ☐
9. Digital banking and financial service:
   Check balance ☐
   Payment ☐
   Print statement ☐
10. How frequently do you visit your bank branch per month?

    Less than 1 ☐ 1 to 3 times ☐ 4 to 8 times ☐ 9 to 12 times ☐ over 12 ☐
11. Why you use frequently digital banking among the others banking services?

☐ Fair service
☐ Highly secured
☐ Less risky
☐ More reliable

12. How often it fail to work and unable to get services in a month?

Less than 1 ☐ 1 to 3 times ☐ 4 to 8 times ☐ 9 to 12 times ☐ over 12 ☐

13. What do you like to avoid digital banking system failure?

☐ To change installation system
☐ To solve network linkage
☐ To increase internal employee skill
☐ To increase customer understandably from operator

Section B

The purpose of these questions is to know your opinion about the digital banking service quality on bank of Abyssinia. So please put a mark in the box which reflects your concern:

1- Strongly disagree 2-disagree 3-neutral 4-agree 5-strongly agree

Based on accessibility	**1**	**2**	**3**	**4**	**5**
14. Digital banking technology of BOA is provider operating 24 hours					
15. It is simple to touch the bank in which ever necessary					
16. I can login my account any in which with inside the global the usage of digital banking					

Based on Reliability	**1**	**2**	**3**	**4**	**5**
17. The use of Digital banking is more reliable					
18. Is there the use of digital banking do away with paper and create immediately achievement even as decreasing processing costs.					
19. Are you agree to increase lifetime value of customers by cross-selling through contextual marketing by digital banking?					

Based on ease of use	**1**	**2**	**3**	**4**	**5**
20. Digital banking is not complicated to use.					
21. The working of digital banking is more clear					
22. Digital banking does minimize a lot of effort of customers					

Based on Time deliverance	**1**	**2**	**3**	**4**	**5**
23. The use of digital banking is very fast					
24. May bank offers all the digital services I need timely					
25. May bank offers time receipt when I transact					

Based on security/privacy	**1**	**2**	**3**	**4**	**5**
26. Pin of digital banking are more secured					
27. Digital banking service provides security over my transaction					
28. I feel safe when I use digital banking of Abyssinia bank					

Based on Service quality	**1**	**2**	**3**	**4**	**5**
29. The service I receive from digital banking is excellent.					
30. Digital banking has effected positively on service quality of the bank					
31. Bank of Abyssinia provides digital banking service quality more than I expect					

Based on customer satisfaction	**1**	**2**	**3**	**4**	**5**
32. My expectations before the use of digital banking have been meet with this current experience					
33. I find the digital banking instruction quite pleasant.					
34. Am satisfied the service delivery of transaction via digital banking					