



**St. Mary`s University**

**School of Graduate Studies**

**THE IMPACT OF ATM BANKING SERVICE QUALITY ON  
CUSTOMERS' SATISFACTION: IN THE CASE OF COMMERCIAL  
BANK OF ETHIOPIA**

**BY**

**YEMISRACH WONDIMU**

**July, 2019**

**Addis Ababa, Ethiopia**

**THE IMPACT OF AUTOMATIC TELLER MACHINE (ATM) BANKING  
SERVICE QUALITY ON CUSTOMER SATISFACTION: IN THE CASE OF  
COMMERCIAL BANK OF ETHIOPIA A.A**

**A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY, SCHOOL  
OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION**

**BY:**

**YEMISRACH WONDIMU**

**ID NO. SGS/0032/2010A**

**ADVISOR: ZEMENU AYNADIS (Ass. Prof)**

**July, 2019**

**Addis Ababa, Ethiopia**

**St. Mary`s University**  
**School of Graduate Studies**

**THE IMPACT OF AUTOMATIC TELLER MACHINE  
SERVICE QUALITY ON CUSTOMER SATISFACTION IN THE CASE OF  
COMMERCIAL BANK OF ETHIOPIA**

**APPROVED BY BOARD OF EXAMINERS**

---

**Dean, Graduate Studies**

---

**Signature**

---

**Advisor**

---

**Signature**

---

**External Examiner**

---

**Signature**

---

**Internal Examiner**

---

**Signature**

## **DECLARATION**

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Zemenu Aynadis (Ass. Prof). All sources of materials used for the thesis have been duly acknowledged. I, therefore confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

**Declared by:**

**Name        Yemisrach Wondimu**

**Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

## **ENDORSEMENT**

This thesis has been submitted to St. Mary's university, school of Graduate Studies for examination with my approval as a university advisor.

---

Advisor

---

Signature

## Table of Contents

Contents	..Page
Table of Contents .....	vi
Acknowledgments .....	viii
Acronyms .....	ix
List of Tables .....	x
List of Figure .....	xi
Abstract .....	xii
<b>CHAPTER ONE – INTRODUCTION</b>	
1.1 Background of the study .....	1
1.2 Statement of the problem .....	2
1.3 Reaserah quastion .....	4
1.4 Objectives of the study.....	4
1.4.1 General objectives of the study .....	4
1.4.2 Specific objectives of the study.....	4
1.5 Reaserah haypotesis .....	4
1.6 Significance of the study.....	5
1.7 Scope of the study.....	5
1.7.1 Geographical Scope .....	5
1.7.1 Theoretical Scope .....	5
1.7.1 Methodological Scope .....	5
1.8 Delimitation of the study .....	6
1.9 organization of the study.....	6
<b>CHAPTER TWO - REVIEW OF RELATED LITERATURE</b>	
2.1 Theoritical framework .....	7
2.1.1 Customer Satisfaction .....	7
2.1.1.1 Reasons for Customer dissatisfaction .....	9
2.1.1.2 Importance of Customer Satisfaction .....	9
2.1.1.3 Service quality gap.....	9
2.1.1.4 Customer satisfaction and service quality.....	12
2.1.2 Automated Teller Machines (ATM).....	13
2.1.2.1 History of ATM .....	15
2.1.2.2 Benefit of ATM banking service .....	16
2.1.2.3 ATM in Ethiopia.....	19

2.1.2.4 ATM service quality dimensions and customers satisfactions .....	20
2.2 Empirical Review.....	20
2.3 Conceptual frame work .....	22
<b>CHAPTER - THREE - RESEARCH DESIGN AND METHODOLOGY</b>	
3.1 Research Design.....	23
3.2 Research approach .....	23
3.3 Target population .....	24
3.4 sampling techniques and sample size.....	24
3.5 Data collection method .....	25
3.6 Methods of data analysis.....	26
3.7 Validity and reliability .....	26
3.8 Ethical consideration.....	27
<b>CHAPTER - FOUR - DATA PRESENTATION, ANALYSIS AND INTERPRITATION</b>	
4.1 Demographic profile .....	28
4.2 Descriptive statistical analysis .....	31
4.2.1 Reliability of ATM banking service.....	31
4.2.2 Responsiveness of ATM banking service .....	33
4.2.3 Assurance of ATM banking service.....	34
4.2.4 Tangibility of ATM banking service.....	35
4.2.5 Convenience of ATM banking service.....	37
4.2.6 Analysis of Customer satisfaction.....	38
4.3 Normality test .....	40
4.4 Multicollinearity test .....	40
4.5 Linearity test .....	41
4.6 Homoscedasticity Test.....	42
4.7 Correlation analysis .....	42
4.8 Regression Analysis.....	44
4.9 Testes of hypotheses .....	46
4.10 Discussion .....	47
<b>CHAPTER FIVE – SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATION</b>	
5.1 Summary of Finding .....	48
5.2 Conclusion .....	49
5.3 Recommendation .....	50
5.4 Area for further studies .....	50
References.....	51
Appendix.....	55

## **ACKNOWLEDGMENTS**

First and foremost, I would like to give my heartfelt glory to Almighty God Jesus Christ and His mother St Virgin Mary for their unthinkable blessing in my life. Then I would like to express my sincere gratefulness and appreciation to my father, mother and brothers in helping and encouraging me to try to attain better achievement by filling out any requirements from me. Also, I would like to acknowledge the assistant extended to me by my advisor, Zemenu Aynadis (Ass. Prof), as he took me step by step in doing this project.

Also I would like to thank all my friends in CBE, who helped me in distributing and collecting the questionnaire. Last but not least, I would like to express my deep gratitude to the customers who participate in this project during the data collection process.



## ACRONYMS

<b>CBE</b>	-	Commercial Bank of Ethiopia
<b>SERVQUAL</b>	-	Service quality
<b>ATM</b>	-	Automated Teller's Machine
<b>ANOVA</b>	-	Analysis of Variance
<b>SPSS</b>	-	Statistical Package for Social Science
<b>VIF</b>	-	variance inflation factor
<b>E-payment</b>	-	Electronic Payment
<b>E-business</b>	-	Electronic business
<b>E-commerce</b>	-	Electronic Commerce
<b>POS</b>	-	Point of Sale
<b>PIN</b>	-	Personal Identification Number
<b>A.A</b>	-	Addis Ababa

## List of Table

Table 3.1 Cronbach's Alpha.....	26
Table 4.1 Demographic profile of respondents.....	28
Table 4.2 Reliability of ATM banking services.....	31
Table 4.3 Responsiveness of ATM banking services .....	33
Table 4.4 Assuranceof ATM banking services.....	34
Table 4.5 Tangibility of ATM banking services.....	36
Table 4.6 Convenienceof ATM banking services.....	37
Table 4.7 Analysis of Customer satisfaction .....	38
Table 4.8 Tests of Normality .....	40
Table 4.9 Multicollinearity test.....	41
Table 4.10 Correlation Analysis .....	43
Table 4.11 Model Summary .....	44
Table 4.12 ANOVA model .....	45
Table 4.13 Regression Coefficients model analysis .....	45
Table 4.14 Hypotheses Result.....	46

## List of Figure

Figure 2.1 Conceptual frame work of the study .....	22
Figure 4.1 Respondents duration and frequency of ATM usage .....	30
Figure 4.2 Frequencies of the respondents on reliability .....	32
Figure 4.3 Frequencies of the respondents on responsiveness .....	33
Figure 4.4 Frequencies of the respondents on assurance .....	35
Figure 4.5 Frequencies of the respondents on tangibility .....	36
Figure 4.6 Frequencies of the respondents on convenience .....	37
Figure 4.7 Frequencies of the respondents on customer satisfaction.....	39
Figure 4.8 P- plot graph .....	41
Figure 4.8 Scatter plot.....	42

## ***Abstract***

*This paper aims at investigating the impact of Automated Teller Machine (ATM) banking service quality on customer satisfaction in commercial bank of Ethiopia. In order to achieve the objective of this study and answer the research questions the researcher adopted explanatory research design. The data collected were analyzed by using descriptive statistics such as mean and standard deviation. In addition correlation and regression analysis were conducted with the help of Statistical Package for Social Scientist (SPSS) version 22. To investigate the impact, the researcher prepared questionnaire which was distributed to 400 customers of the CBE in four selected branches of each district in Addis Ababa using convenient sampling. It aimed to determine the level of customer's satisfaction on ATM banking service based on service quality dimension (reliability, responsiveness, assurance, tangibility and Convenience). Findings reveal that the higher the ATM service quality, the higher the level of customer satisfaction it provides. The study then concludes that ATM service quality determines customer satisfaction. The study recommended that to increase customer satisfaction, commercial bank of Ethiopia should focus on improving ATM machine service quality.*

**Keywords:** - Reliability, Responsiveness, Assurance, Tangibility, Convenience, and customer satisfaction



# **CHAPTER ONE**

## **1. INTRODUCTION**

### **1.1 Background of the study**

Technology is making a great impact upon service companies in general and the financial services sector. In order to provide efficient and effective services, Banks currently uses latest technology, financial resource and human resources to achieve its predetermined goals and objectives. Among those resources, technology is one of a competitive advantage for the banking industry to ease delivery of the intended service, to make timely decision, exploit resources user friendly, achieve the objectives of the organization as planned and contribute for the enhancement of the overall development. (Wisdom, 2012)

Service is “any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product” (kottler, 2003). Although services were performed by service providers and consumers together, its quality results in perception and value assessment by the customer.

Customer Satisfaction is the ability of a good or service to meet or exceed buyer needs and expectations. They also see quality as determined by the consumer rather than the producer to be a necessary condition for customers’ satisfaction. According to Sokefun (2011), customer satisfaction provides an indication of how successful an organization is at providing products/or services to the market place.

Banks currently uses latest technologies in order to stay on the competitive market. Electronic banking is the delivery of banking products and services to the customer and general public electronically through the use of electronic banking instrument or product like automated teller machine (ATM), mobile, internet (web) and point of sale (POS) terminals among other. The most widely used electronic banking product is automated teller machine (ATM). It enables customers to withdraw cash, transfer funds between accounts & check account balance by using their cards. (Leyuager, 2015)

The evolution of e-banking started from the use of Automatic Teller Machine (ATM) and Finland is the first country in the world to have taken a lead in e-banking. E-banking has been widely used in developed countries and in developing economies; however, the spread of e-banking is much limited. Today, almost all banks are adopting electronic banking as a means of enhancing service quality of banking services. (Worku G, Tilahun A & Tafa M, 2016)

Automated Teller Machine(ATM) is a Computerized machine that permits bank customers to gain access to their accounts with a magnetically encoded plastic card and a code number. It enables the customers to perform several banking operations without the help of a teller, such as to withdraw cash, make transfer, pay bills, check account balance and pin change. (Adeniran, 2014). ATM was invented in the early 1960s by John Shepherd-Barron who was a Scottish national born in India. Automated Teller Machines (ATMs) were the first well known machines to provide electronic access to customers (Sultan Singh, Ms. Komal, 2009). From the banks perspective the main benefits of electronic banking are cost savings, reaching new segments of the population, efficiency, cross selling, third-party integration, and customer satisfaction (Gessese, 2018)

The appearance of ATM service in Ethiopia goes back to the late 2001, when the largest state owned, commercial bank of Ethiopia (CBE) introduced the service for local users with its eight ATMs located in Addis Ababa. Commercial Bank of Ethiopia is government owned bank, established in 1942 and now a days the bank become the leading bank in Ethiopia by introducing modern banking practices. (Gardachew, 2010)

## **1.2 Statement of the problem**

Electronic banking services are becoming the preferred way of making transactions in the developed world due to the fact that they understand the benefits very well through long years of using them. The most widely used electronic banking product is automated teller machine (ATM). ATM gives competitive advantage for banks by reducing operational cost and provides best customer satisfaction. Customers can also access their bank accounts in order to make cash withdrawals, transfer money account to account, check

their account balances as well as pin change services. As Islam (2007), despite the benefits to be derived by customers from the use of ATM, they are also faced for lot of challenges with the use of ATM services. Some of the challenges include machine break downs, unsuitable location, currency quality as well as long waiting hours etc. Adeniran (2014) also noted that ATMs at times can deduct money from the customers' account without actually dispensing money; these, among others, are the bane of these money dispensing machines, this create customer dissatisfaction.

The banking industry in Ethiopia is not developed as compared to the banking industry operated in developed country. Commercial bank of Ethiopia is the first bank to introduce ATM in Ethiopia since 2001. It bank has many years of experience of practicing ATM service to the customers and has spent huge capital of money to design, produce, install and maintain for the ATM banking delivery service.

Even though ATM has a lot of benefit, customers were missed to enjoy with the technological advancement and the bank is faced with complaints from different customer's regarding the ATMs service. Commercial banks of Ethiopia customers complaints due to frequent malfunctioning Automated Teller Machines, network downtime, out of cash ATM machines, power failures, wrong transactions, mismatch balance of customers account shown at ATMs, and delayed in dispute handling for error transactions and lack of awareness on how to operate the machine are potential customer dissatisfaction. Also, there are many customers in the long queues and jamming exists at the banking hall in many branches of CBE for services such as cash withdrawals, even when the amount may be withdrawn from the ATM, checking of account balances, printing of account mini statements, transferring of money (etc.) which could be provided by using the ATM. This means customers are rejecting the ATM banking service and prefer branch tellers.

Therefore, the study will measure ATM service quality provided by the bank, identify the level customer satisfaction, and identify the relationship between customer satisfaction and ATM banking service quality.



### **1.3 Research Question**

- What is the customer satisfaction level in ATM service of Commercial bank of Ethiopia?
- What is the level of ATM service quality provided by commercial bank of Ethiopia?
- What is the relationship between of ATM banking service quality and customer satisfaction?

### **1.4 Objective of the study**

#### **1.4.1 General objectives**

The general objective of the study is to identify the impact of ATM service quality on customers' satisfaction in commercial bank Ethiopian.

#### **1.4.2 Specific objectives**

The specific objective of the study would be –

- ✓ To measure ATM banking service quality based on important service quality dimensions.
- ✓ To identify the level of customer satisfaction of ATM banking service.
- ✓ To examine the relationship of ATM banking service quality and customer satisfaction.

### **1.5 Research hypotheses**

H1:- Reliability of has positive and significant impact on customer satisfaction.

H2:- Responsiveness has positive and significant impact on customer satisfaction.

H3:- Assurance of has positive and significant impact on customer satisfaction.

H4:- Tangibility of has positive and significant impact on customer satisfaction.

H5:- Convenience of has positive and significant impact on customer satisfaction.

## **1.6 Significance of the study**

The outcome of the result of this research provides information for commercial bank of Ethiopia to improve their ATM service delivery and point's area of improvement. The research identify the level of satisfaction of customer which also important to the bank. Furthermore, the study provides facts about the problem and challenges of ATM banking service quality provided by the bank. These direct the bank to improve the weaknesses and problems regarding ATM service quality t, so that customers will be delighted.

Moreover, it might provide information to those who are interested to perform further study in a similar area and might add something on the literature regarding the ATM banking service quality impact on customer satisfaction. Mostly, the study is significant for the researcher to partial fulfillment of the requirement for the award of a Master of Art.

## **1.7 Scope of the study**

### **1.7.1 Geographical scope**

The scope of the study refers how far the research area has explored. The scope of this paper is delimited in commercial bank of Ethiopia, Addis Ababa selected branches. Those are Gezahegne yilma branch, Kazanchis branch, Torhayloch branch and Sidist kilo branch. The reasons for this are Ethiopia is too large for the researcher to travel all over the country.

### **1.7.2 Theoretical scope**

This study is limited to the assessment of ATM banking service and customers' satisfaction. There are many service quality measurements, on this study, the researcher measure the ATM service quality based on only six service quality dimension's which are reliability, tangibility, responsiveness, assurance and convenience.

### **1.7.3 Methodological scope**

The study used explanatory research design and in the course of researching both primary and secondary data was employed. Population of the study were active ATM card users

in Addis Ababa and to achieve the research objectives, a well designed five point likert scale questionnaire, and close ended questionnaires were used to gather data from sample respondents those were selected on convenience sampling technique.

### **1.8 Delimitation of the study**

The research take samples only from commercial bank of Ethiopia and doesn't include other banks that operate in Ethiopia. Plus CBE is currently operating in each of regional states of Ethiopia by headquartering in Addis Ababa. So, because of lack of time and money the study take samples only from Addis Ababa four districts.

### **1.9 Organization of the paper**

The research has five chapters. The first chapter presents includes background to the study, statement of the problem, research question, research hypothesis, objectives of the study, significance of the study, the organization of the study, scope, limitation of the study, and lastly organization of the study. Chapter two dealt with the literature review, which examines the views of other theorists and authors, and review of previous studies on ATM and customer satisfaction. Chapter three outlines the research methods that include study area, sample size and the sample selection as well as methods of data collection. Chapter four contains analysis and presentation of data. The final chapter includes the summary, conclusion and the necessary recommendations of the study.

## **CHAPTER TWO**

### **2. REVIEW OF RELATED LITERATURE**

This section reviews the literature written by different authors and researches conducted by different scholars regarding automatic teller machine banking service quality and its impact on customer's satisfactions.

#### **2.1 Theoretical Review**

##### **2.1.1 Customer Satisfaction**

Customer Satisfaction is to degree at which the product or services rich the standard of the buyer in his or her expectations. It deals with what people called as surprise quotient. This is to extend at which firms give out unexpected technical characteristics or personal service to a customer. This definition talks about the degree at which a firm's performance or it services rich the standard expectation of the customer requirement. Most researchers agree that satisfaction is attitude or evaluation that is formed by the customers by comparing what they expect to receive to their subjective perceptions of the performance of they actually get (Oliver.1980).

Several authors have defined customer satisfaction in different ways. According to Kotler (2000) satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a products perceived performances in relation to his/her expectations. Nguyen T, 2014, define customer satisfaction as customers' happiness or angry on particular products or services during the time when they experience with these products or services in a nutshell

Schiffman (2004) define customer satisfaction as perception of individuals into products and services offered by a firm in comparison with his or her expectations. Agbor (2011), however, provide a definition for customer satisfaction as feeling of pleasure during the process of utilizing products or services of a firm. Other researchers support those definitions previously as they also thought that customer satisfaction is constructed from

cumulate process of process that the customer experiences particular products or services. However, some others find different definition for customer satisfaction as Sureshchander. (2002) imply customer satisfaction as personal responses as they are formulated during post-purchase or post-consumption of people at a certain time. It means that customer satisfaction may be different during the time; the customer may not be satisfied with products or services of firms' right after they purchase them but then, they may be satisfied if utilizing those products or services can make them to be happy.

Enhancing customer satisfaction is the key to become successful in the long run and to standout in a crowd of extreme competition especially in banking sector because competitors are offering here somewhat similar product here. In the competitive banking industry, customer satisfaction is considered as the essence of success. (Sumya, 2016)

## **I. Customer Expectation**

Customers' expectations are views that customers have about the service delivery which customers put it as a reference point and help them to compare and assess the service that they going to deliver from their service providers. Since customers compare the service that they delivered i.e. their perceived performance of the service with their expectation which is their reference point. Therefore in delivering quality service it is very critical for service providers to know customers expectation and improve their performance accordingly. (Belay, 2012)

"Customers' expectation is what the customers wish to receive from the service providers. The diversity of expectation definitions can be concluded that expectation is uncontrollable factors which including past experience, advertising, and customers' perceived performance at the time of purchase, background, attitude and product's image. Furthermore, the influences of customers' expectation are pre-purchase beliefs, word of mouth communications, individual needs, customers' experiences, and other personal attitudes. Different customers have different expectation based on the customers' knowledge of a product or service" (Nabi, 2012).

## **II. Customer Perceived performance**

Perceived quality is an attitude, which is related to satisfaction, and results from a consumption of expectations with perception therefore the more companies understand customer's attitude the more they get the chance to know how customers perceive their service (Parasuraman, 1988).

Perception is an impression or opinion about a service or product this view differs from customers to customers it is very critical factor which determines customer satisfaction. Customer satisfaction is affected by customers' perceptions and expectations of the quality of the products and services. (belachew, 2012)

### **2.1.1.1 Reasons of Customer Dissatisfaction**

Sometimes customers become dissatisfied with many reasons some of which includes the following ([www.qualitygurus.com](http://www.qualitygurus.com)).

- **Not knowing the Expectations:** Customer remains dissatisfied unless the company knows what the customer actually expects out of their product.
- **Not Meeting the Expectations:** Customer may become dissatisfied because the service does not live up to expectations. In addition to that as a result of the rapid improvement in the technology, customer may compare the services provided by a company with those of the competitors, which may lead to dissatisfaction and customers over expectations and their changing needs may lead them for dissatisfaction.

### **2.1.1.2 Importance of Customer satisfaction**

Customer satisfaction is influenced by specific product or service features, perception of quality, customer's emotional responses, their attributions and their perception.

**Product Service Features-** Customers satisfaction with a product or service is influenced by customer evaluation of product or service feature.(Zettmal et al.,1985)

**Customer Emotion-** Customers emotion can also affect their perception of satisfaction with products and services. These emotions can be stable preexisting emotion. (Zettmal et al, 1985)

**Attribution of Service Success or Failure-** Attribution influence perception of satisfaction when they have been surprised by an outcome, (the service is either much better or much worse than expected), customers tend to look for the reasons their assessments of the reasons can influence their satisfaction. (Zettmal et al., 1985)

**Perception of Equity or Fairness-** Customer satisfaction is also influenced by perception of equity and fairness customers ask the service. Have I been treated fairly compared with other customers? Did other customers get better treatment, better prices or better quality service and the like? Notions of fairness are central to customer's perception of satisfaction with products and services. (Zettmal et al., 1985) Organizations take different approaches to identifying customer service standards.

### **2.1.1.3 Service Quality Gap**

Service quality measured by calculating the difference between customer's perceived performance customer expectations (Parasuraman et al., 1988), if customer expectations are greater than their perceived performances of delivered service, service quality is low. When perceived performances greater than expectations then service quality is high.

The model identifies five gaps that may cause customers to experience poor service quality. When the resulted score is positive that means the higher quality of service on the other hand the higher the negative score mean that the lower service quality. There are five major gaps in the service quality concept (Parasuman et al, 1991). The gaps are generally defined as:

**Gap 1-** The gap between customer's expectation and management perception performance: the reason for this gap is when not knowing what consumers expects.

**Gap 2-** The gap between management perception performances and service quality specifications: The reason for this gap is poor management commitment to service quality.

**Gap 3-** The gap between service quality specifications and service delivery: Guidelines for service delivery do not guarantee high-quality service delivery or performance. Also the manner of service influences the perception performance of quality.

**Gap 4-** The gap between service delivery and external communications: External communication with customer about Service delivery can be using Media advertising and other communications these can increase customers' expectations. The reason for the gap is either the firm doesn't provide the promises that are communicated or the service delivered doesn't match with customers' expectation.

**Gap 5-** The gap between expected service and perceived service: This gap depends on size and direction of each of the four gaps associated with the delivery of service quality.

Gaps 1- 4 are within the control of an organization and need to be analyzed to determine the cause and changes to be implemented which can reduce or even eliminate these four gaps emerge from an executive perspective on a service organization's design, marketing and delivery of service. This gap is a function of the other four gaps: that is, Gap 5 = f (gaps 1, 2, 3, 4). (Parasuraman et.al., 1985) seek to measure gap 5 using the SERVQUAL instrument. The gap model is basically customer- oriented. Service quality is realized by the customer after the service has been received and it relates to the difference between expected and perceived quality.

According to the Gaps Model of service quality, when what is delivered matches what is expected, customers find the service acceptable. If the service provided is better than what they expected that is when perceived performance is better than expectation exceptional service materializes. (Parasuraman et.al., 1985)

#### **2.1.1.4 Customer satisfaction and service quality**

Service quality is a significant determinant of customer satisfaction and service quality was the basic factor that affects customer satisfaction. Therefore, high quality service is an increasingly important weapon to survive, the higher service quality was, and the higher customer satisfaction was. If customers like the service quality, their



satisfaction level will improve and banks will be able to maintain stable customer base. (Gebremeskel, 2017)

SERVQUAL is a popular model for measuring service quality in the world. It has been used in many researches. In SERVQUAL model, five dimensions include:

**Tangibility:** - Tangibility refers the appearance of physical facilities, equipment's, and personnel. It indicated that customers choose tangibility factor of service quality in the banking industry "Banks could build customer relationships by delivering added tangible and intangibility elements of the core products". (Zineldin, 2005) This tells us that services will be in a better quality when service providers are equipped with appealing physical facilities and staff.

**Reliability:** - refers to the ability to perform the promised service dependency and accurately. Reliability is a significant factor of product quality in addition to good personal service, staff attitude, knowledge and skills (Walker, 1990). "It is found that service reliability is the service "core" that most customers and managers should use every opportunity to build a "do-it-right-first" attitude" so as to build the necessary first time impression (Berry et al., 1990).

**Responsiveness:** - refers to willingness to help customers and provide them prompt service. Customers are very sensitive to employees' working environment in service organizations. The proper balance between staff skills and customers' expectation resulted in superior service quality towards customers. (Arasli, 2005).

**Assurance:** - is a service quality measurement standard which indicates knowledge, courtesy and ability of employees to inspire trust and confidence at the minds of customers Parasuraman et al., 1988). Assurance has "the strongest impact on customer satisfaction that leads to positive word of mouth outcome" (Arasli, 2005).

**Empathy:**-refers to the provision of caring and individualized attention to customers. Bank customers believed empathy as an essential factor of service quality. "It is suggested that employees' commitment to deliver quality services, skillfully handling

of conflicts and efficient delivery of services will result satisfied customers for long term benefits”. Parasuraman et al., (1988)

Parasuraman et al., (1988) says that in service and retail business, SERVQUAL is a multi-item scale which is developed to assess customer perceptions of service quality but originally it is developed from GAP model. The author also argues that SERVQUAL must be reliably assessed and measured in order to improve services quality. He mentions that SERVQUAL is an important model to identify the gaps between customer expectations of the service and their perceptions of the actual performance of the service. (Ayechelehem, 2014)

### **2.1.2 Automated Teller Machines (ATM)**

The concept of ATM has been quite old and has been developing throughout the world. Undoubtedly, a fair number of theoretical and empirical researches have been made worldwide, because of increase in scale of ATMs and consequently to convert the economy into a cashless one (Pohwa and Saxena, 2011).

Automated Teller Machine (ATM) is a machine where cash withdrawal can be made over the machine without going in to the banking hall. It also sells recharge cards and transfer funds; it can be accessed 24 hours/7 days with account balance enquiry. (Fenuga, 2010)

The ATM is an innovative service delivery mode that offers diversified financial services like cash withdrawal, funds transfer, cash deposits, payment of utility and credit card bills, cheque book requests and other financial enquiries (Khan, 2010). Rose (1999) described ATM as follows: an ATM combines a computer terminal, record keeping system and cash vault in one unit, permitting customers to enter the bank's record keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a specific code into the computer terminal linked to the bank's computerized records 24-hours a day. A customer can access an ATM machine by using an ATM card. An ATM card is a plastic card that allows the bank account holder to do the same things at an ATM as he or she would do at a bank (Woelfel, 1994)

Banks issued international cards (such as Visa, MasterCard etc.) to their customers. Such cards can be used wherever accepted, and payment on the cards can only be done through an ordinary domiciliary account of the cardholder, or any other account that may be permitted. Some of these cards are -

#### **i. Debit Cards**

A debit card (also known as a bank card or cheque card) is a plastic card that provides an alternative payment method to cash when making purchases. Functionally, it can be called an electronic cheque, as the funds are withdrawn directly from either the bank account or from the remaining balance on the card. In some cases, the cards are designed exclusively for use on the internet, and so there is no physical card. Debit cards may also allow for instant withdrawal of cash, acting as the ATM card for withdrawing cash and as a check guarantee card. (Mavri & Ioannou, 2006)

#### **ii. Credit Cards**

A credit card is a small plastic card issued to users as a system of payment. It allows its holder to buy goods and services based on the holder's promise to pay for these goods and services. The issuer of the card creates a revolving account and grants a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance to the user. A credit card is different from a debit card in that it does not withdraw money from the users account after every transaction. The issuer lends money to the consumer to be paid to the merchant. Holders of a valid credit card have the authorization to purchase goods and services up to a predetermined amount, called a credit limit. (Mavri & Ioannou, 2006)

#### **iii. Prepaid card**

Prepaid cards are very different from debit and credit cards. A prepaid card is not linked to a bank checking account or to a credit union share draft account. Instead, you are spending money you placed in the prepaid card account in advance. This is sometimes called “loading money onto the card”. (Mavri & Ioannou, 2006)

### **2.1.2.1 History of ATM**

Most inventions have happened due to sheer necessity and ATM is one of them. The history of ATM is full of interesting facts of which some are known and others unknown. According to the website [www.engineersgarage.com/invention-stories/atm-history](http://www.engineersgarage.com/invention-stories/atm-history), it is believed that the history of ATM started when an Armenian named Luther George Simjian was forced to move to USA in the year 1920, under the account of Armenian Genocide. He owned to his credit the invention of a portrait camera and then he later rolled out the formulated idea of ATM. Confident of his invention, he persuaded Citibank to run his product on a six month trial basis. Soon enough, he was disappointed with the performance and the lack of users and concluded that ATM was a wasteful addition to personal banking. The lack of demand for the ATM finally forced him to take a back seat. During this period it was very clear that the time was not right for this concept to have been accepted generously. Simjian clearly lost out on the success and fame and the same was passed on to two other gentlemen, John Shepherd-Barron and Don Wetzel. John Shepherd-Barron was a Scottish national born in India. After returning empty handed from a bank, Shepherd-Barron was disappointed to have had no option than to wait till the bank opened the next working day. ATM machine gained Shepherd-Barron an ever-lasting recognition in the banking world and paved the way for hi-tech banking techniques, online bank accounts, Personal Identification Number (PIN) and chip security technology. The four-digit internationally accepted standard PIN was also invented by him. Earlier, he had a six -digit Army serial number in his mind but later his wife suggested for a shorter PIN as it would be easy to remember. Finally in 1967, the first ATM that dispensed paper currency round the clock (24 hour basis) was unveiled. The development of ATM has gone through many stages; it started from its baby stage in the late 1930s and then geared up for longer runs in the 1960s, and finally a matured and stable stage that we see today. Undoubtedly, most of the ideas and patents contributed for makeover of the ATM from time to time form the backbone of what was initiated as “holes in the wall”. Today, ATMs hold a strong foothold in the world, offering everyone a better access to their money, be it in any corner of the world. For his excellent and unforgettable contributions to financial technologies, Shepherd-Barron was offered the OBE award in the year 2005. In the year

2010, he took his last breath and left behind his legacy of technological advancements. (Website [www.engineersgarage.com/invention-stories/atm-history](http://www.engineersgarage.com/invention-stories/atm-history))

### **2.1.2.2 Benefit of ATM banking service**

Automatic Teller Machines (ATMs) have been adopted and are still being adopted by banks to offer considerable benefits to both banks and the customers.

#### **A. Benefits of ATM for customers**

##### **Convenient to customers**

ATMs provide convenience to the customers. Now-a-days ATMs are located at convenient places such as within the bank premises (on site ATMs) and away from the bank premises (off site ATMs), such as at the air ports, super markets, fuel filling stations, shopping malls et cetera (etc.). (Tague, 2010)

ATM technologies are easier for the customers to withdraw or deposit money at any particular time and location. Unlike bank branches, they can be accessed irrespective of the time and days of the week. ATMs are also placed in places away from banking halls and nearer to people's work places and residences thus further increasing the convenience to transact. (Daniel, 1999).

The Automated Teller Machine has changed people's lifestyles and how the banking industry. ATM machines enable depositors to withdraw cash at more convenient times and places than during banking hours at branches. In addition, by automating services that were previously completed manually, ATMs reduce the costs of servicing some depositor demands (Olatokun and Igbinedio, 2009).

##### **Speed transaction**

Marshall and Heslop (1988) noted that one of the benefits to be reaped by customers while using ATMs is saving time, this is because there is no need to come to the bank and wait in a queue or filling some information in paper format every time when one wants to transact.

According to Komal (2009) explain in his study that ATM services enhance operations and customer satisfaction in terms of flexibility of time, add value in terms of speedy handling of voluminous transactions which traditional services were unable to handle efficiently and appropriately. The machine can enable customers to deposit and withdraw cash at more convenient time and places than during banking hours at branch. ATMs are automated machines which are faster than human tellers in processing transactions.

### **Save Cost**

The term 'cost' refers to all types of costs from financial costs, time costs, energy costs etc. In all things considered, E- banking can provide a banking activity at the lowest cost possible. ATM transaction is an average of about 6,400 per month compared to 4,300 for human tellers. Furthermore, it saves customers time in service delivery as alternative to queuing in bank halls, customers can invest such time saved into other productive activities. (Ephream, 2016)

### **Safety**

Singh (2009) described ATM as 'Avoid Travelling with money. Tague (2010) observed that a plastic Automatic Teller Machine card linked to bank account makes financial transactions a breeze by eliminating the waste of writing cheques or the dangers of carrying large sums of cash.

## **B. Benefits of ATMs for the Banks**

According to Gabriel, (2015), there are a number of benefits that are accrued to both the bank and the customer as a result of the introduction of this type of technology. The ATMs provide an opportunity for most financial institutions to expand their revenue though the initial costs involved in securing, installing, updating and servicing ATMs to leverage this opportunity can be quite prohibitive. ATMs can reduce the cost of servicing some customer demands for instance the bank will make savings as a result of a reduction in the number of tellers in the bank and reduction in overtime claims made by bank employees working late.

### **ATMs enhance corporate image**

E-banking products help to enhance the image of the organization as a customer focused innovative organization. This was especially true in early days when only the most innovative organizations were implementing this channel. (Shemsu, 2017)

### **ATM enables Banks to Expand Service easier**

The recent trends to the customer favor self-service to manage their financial and the customers increased their banking awareness and the most important electronic channels is the ATM, which is one of the more prevalent electronic channels, and most commonly used by customers where there is a easy to use for diverse banking services ( Zuhair,2012).

### **ATMs Reduce Load on Other Channels**

E-Channels are largely automatic, and it undertake most of the routine activities such as account checking or bill payment may be carried out using these channels. This usually results in load reduction on other delivery channels, such as branches. In some countries, routine branch transactions such as cash / cheque deposit related activities are also being automated, further reducing the workload of branch staff, and enabling the time to be used for providing better quality customer services. (Shemsu, A. 2017)

### **ATM reduced paper work**

ATM has reduced paper work because it does not require a customer to fill cash withdrawal slips or cheques in order to withdraw money. This is supported by William, 2005 findings that application of technology in banking has offered opportunities for the reduction of both paper and people.

### **Cost Reduction**

Gabriel et al, (2015) noted that ATMs reduce the cost of servicing some customer demands for instance the bank will make savings as a result of a reduction in the number of tellers in the bank and reduction in overtime claims made by bank employees working late. Productivity by bank staff is increased in that the ATM takes up some of the

functions that were previously only performed by the banker such as giving out cash, statements, taking cash/cheque deposits and hence the bank staff can now concentrate more in other areas that need improvement and one such area is the cheque sorting and clearing department.

### **ATM Increases Revenues**

Electronic banking, like ATM, internet, mobile banking etc. has changed the traditional retail banking business model in many ways, for example by making it possible for banks to allow the production and delivery of financial services to be separated into different businesses. This means that banks can sell and manage services offered by other banks to increase their revenues. This is an especially attractive possibility for smaller banks with a limited product range (Shah 2009). E-banking has also resulted in increased credit card lending, as it is a sort of transactional loan that is most easily deliverable over the Internet. Electronic bill payment is also on rapid rise, which suggests that electronic bill payment and other related capabilities of e- banking have a real impact on retail banking practices, and rapidly expanded revenue streams (Young et al., 2007).

#### **2.1.2.3 ATM in Ethiopia**

Undeniably the largest state-owned bank, Commercial Bank of Ethiopia, introduced ATM service for local users in 2001 with its fleet of eight ATMs located in Addis Ababa. Moreover, CBE has had Visa membership since November 14, 2005. However, due to lack of appropriate infrastructure it failed to reap the fruit of its membership. Despite, being the pioneer in introducing ATM based payment system and acquired Visa membership. (Settargachew 2017)

Available services on CBE ATMs are: Cash withdrawal, Balance Inquiry, Mini statement, Fund transfer between accounts attached to a single card and PIN (Personal Identification Number) change. Currently, the bank gives debit service only for Visa cards. CBE clients can withdraw up to 10,000 birr in cash per day and can buy goods and services of up to 100,000 birr per day by normal CBE card. Also, the withdrawal amount limit can be increase depends on the customer card. ( [www.cbe.com.et](http://www.cbe.com.et))



Expanding its leadership, CBE has begun accepting MasterCard in addition to Visa debit cards. The first ever electronic banking gateway was signed between Ethiopian Commodity Exchange (ECX) and CBE. The electronic banking system being developed with CBE is designed to give a secure electronic data sharing gateway between clients, banks and ECX, facilitating a smooth transaction. (Gessese, 2018)

#### **2.1.2.4 ATM service quality dimensions and customers satisfactions**

Satisfaction is consumer's fulfillment response. It is judgmental that a product or service feature or the product service features or product or service itself provides a pleasurable level of consumption related fulfillment. (Singh, J. 2009).

Banks are able to serve customers outside the banking hall. ATM is designed to perform the most important function of bank. It is operated by plastic card with its special features. The plastic card is replacing cheque, personal attendance of the customer, banking hour's restrictions and paper based verifications. It is evident that convenience, efficient operation, security and privacy, reliability and responsiveness are not the only characteristics that influence customer satisfaction. (Shemsu, 2017)

Lack private and security of automatic teller machines service, frequent breakdown of machine, and insufficient number of ATM were major contributors of customers' dissatisfaction.

### **2.2 Empirical review**

Many studies have been conducted on ATM service attributes and its effect on customer satisfaction in the banking sector. The study of Lemma Belay, 2016 on the Effect of ATM Service Quality on Customer Satisfaction revealed that unlike assurance, the tangibility, responsiveness, empathy and reliability are positively and significantly related with customer satisfaction. Tangibility, reliability, responsiveness and empathy have positive and significant effect on customer satisfaction; especially customer satisfaction was highly affected by responsiveness.

The study of Hadija Matimbwa, 2018 concludes that all dimensions (convenience, reliability, responsiveness, security, cost and efficient operation) were found to have strong influence on customer satisfaction, except only privacy was found to have a negative relationship with overall customer satisfaction. It is evident that convenience, reliability, efficient operation, security, privacy, cost and responsiveness are not the only dimensions that influence customers' satisfaction, other factors that contribute to customers' satisfaction include trust, value and image of the bank.

Akpan, (2016) this study concludes that service qualities are antecedents to customer satisfaction and the higher the level of service quality, the higher the satisfaction it offers. The study investigated the influence of ATM Service quality on customer satisfaction in the banking sector of Nigeria.

Similarly, Danlami and Mayowa (2014) carried out an empirical investigation of Automated Teller Machine (ATMs) and customer's satisfaction in Nigeria. The study findings reveal that there is a significant relationship between ATM usage and customer satisfaction.

The study of Dr.V. Krishnamoorthy, R.Sruthi, and V.S. Shoniyaa examines the various dimensions of ATM service quality and its impact on customer satisfaction. These are namely Trust, Ease of Use, Appearance, Security, Accuracy, Grievance Handling, Fulfillment and Responsiveness. Among the dimensions, Fulfillment and Responsiveness were regarded as the most important dimensions by the customers and it has a positive impact upon customer satisfaction. In terms of the impact of ATM service quality on customer satisfaction, the findings showed that Security, Accuracy and Ease of use were weak in explaining the variance of customer satisfaction.

The study of Gessese, 2018 assess the factors (dimensions) affecting customers' satisfaction in Automated Teller Machines (ATMs) service of Commercial Bank of Ethiopia. The findings of this study revealed that a positive and significant relationship between reliability, tangibility, Assurance and accessibility with customer satisfaction on CBE's ATM. Despite responsiveness which is positively related but not significant.

## 2.3 Conceptual frame work

The figure below depicts the dependent and independent variables of the research and the relationship among them. The independent variables are service quality dimensions: Tangibility, Responsiveness, Reliability, Assurance and convenience. Customer satisfaction is the dependent variable that the study measure with the independent variables.

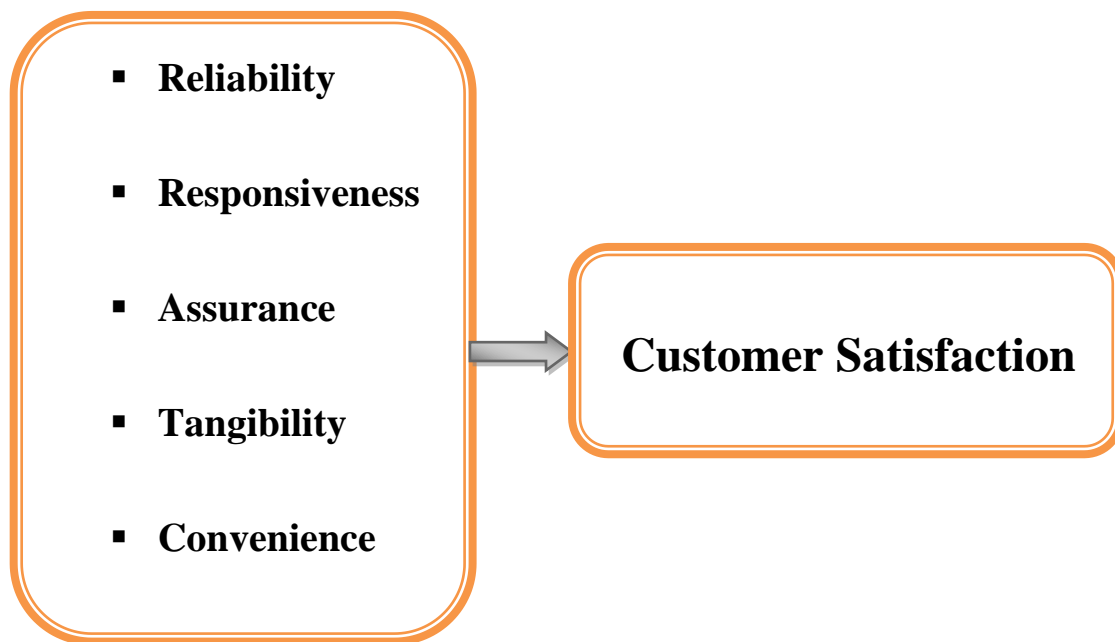


Figure 2.1 Conceptual framework of the study

Source: Parasuraman et al., 1988

## **CHAPTER THREE**

### **3 RESEARCH DESIGN AND METHODOLOGY**

This chapter discusses about the systems and methodologies which have been deployed in doing this research.

#### **3.1 Research design**

The objective of the research is to investigate the impact of ATM banking service quality on customer satisfaction in commercial bank of Ethiopia. Therefore, explanatory type of research design was applied, because it used to evaluate the cause and effect relationship between dependent variable which is customer satisfaction, and independent variable which is ATM banking service quality dimensions.

#### **3.2 Research Approach**

There are three approaches that are used in conducting a given research. These are quantitative, qualitative and mixed research approach. Quantitative research aims at measurement of a phenomenon. It focuses primarily on the construction of quantitative data, and quantitative data is a systematic record that consists of numbers constructed by researcher utilizing the process of measurement and imposing structure (Kent, 2007). Qualitative research aims at finding out how people feel or what they think about a particular subject or institution. And mixed research involves both aspects of quantitative and qualitative researches. The researcher prefers quantitative research approach because the research was quantitative in nature. The study identifies the impact of customer satisfaction on ATM banking service.

### 3.3 Target population

Total population of the study are customer and employee of commercial bank of Ethiopia, and the target populations are customers who are using ATM services of CBE in Addis Ababa and employees who are working in e-banking department. Commercial bank of Ethiopia has 315,574 active ATM customers in Addis Ababa as of June 30, 2018.

### 3.4 Sampling technique and sample size

Stratified sampling was applied because CBE has four districts in Addis Ababa, namely North, South, East and West districts. So the studies divide the samples in to four strata. The researcher selected one branches in each districts which is a total of four branches. Those branches are –Gezahegne yilma branch from south district, Kazanchis branch from east district, Torhayloch branch from west district and Sidist kilo branch from north district. Those branches are purposely selected for the reason that the researcher has got willing and cooperative individuals who can assist in providing the relevant information on ATM banking services. Moreover, the researcher selected commercial bank of Ethiopia for the reason that the researcher is conducting her job in CBE, where she has enough experience, information obtained from personal observation and assuming to have easy access to get the required information.

Yamane (1967) provides a simplified formula to calculate sample sizes. Assuming 95% confidence level and  $e=0.5$ , we get the sample size ( $n$ )

$$n = \frac{N}{1 + N(e)^2}$$

Where,  $N$  is the population size,  $n$  is sample size and  $e$  is the level of precision. This formula will be used for our population.

For our population,  $N = 315,574$  with  $\pm 5\%$  precision, assuming 95% confidence level and, we get the sample size

$$n = \frac{315,574}{1+315,574(.05^2)} = 400$$

The allocation of a sample of size  $n$  to different stratum will do in proportion to their sizes.

$$n_i = n \frac{N_i}{N} \quad i=1, 2, 3.$$

Where  $n$  represents sample size,  $N_i$  represents population size of the  $i^{\text{th}}$  strata and  $N$  represents the population size. In our study,  $N = 315,574$ ;  $n = 400$ . Based on the above assumption the sample from each would be -

1. East	$N_1 = n \frac{N_1}{N}$	$= 400 \frac{53,653}{315,574} = 69$
2. South	$N_2 = n \frac{N_2}{N}$	$= 400 \frac{53,149}{315,574} = 68$
3. North	$N_3 = n \frac{N_3}{N}$	$= 400 \frac{57,215}{315,574} = 74$
4. West	$N_4 = n \frac{N_4}{N}$	$= 400 \frac{148,557}{315,574} = 189$

Individual customers were selected using accidental sampling, non-probability sampling technique.

### 3.5 Data collection method

The type of data that involved in this study are both primary data and secondary data, the primary data were collected via questionnaire from accidentally selected customers when they were entering the bank and also while they were served. Questionnaire was the instrument used for the data collection during the study. The questionnaires were structured in close-ended type and responses to the questions were measured on a five Likert rating scale where: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, and Strongly Disagree = 1. The use of Linker scale is to make easier for respondents to answer question in a simple way from the selected respondent.

Secondary data were gathered from resource such as report of commercial bank of Ethiopia, brochures, e-commerce books, service marketing books, journals, company website and interne etc...

### 3.6 Methods of data analysis

Data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence, to address the initial proposition of a study. The researcher use quantitative data analysis methods. The quantitative data that gathered by the researcher were analyzed by using descriptive statistics such as percentage, frequency, mean, and were interpreted by using tables, and figures. To aid computation a Statistical Package for Social Science (SPSS) version 22 was employed. Correlation analysis and regression were used to analysis and present the data. Pearson's correlation analysis was used to find out whether any relationship exists between the independent and dependent variables. Correlations analysis is the statistical tool that can be used to describe the degree to which one variable is linearly related to another. And regression analysis was used to test the hypotheses.

### 3.7 Validity and Reliability

The validity and reliability of the study were measures and assessed by the instrument called Cornbrash's coefficient alpha. This method assists analysts in removing irrelevant variables. It also helps evaluating the reliability of the measurement by Cronbach Alpha coefficient. Variables which have item total correlation less than 0.7 will be removed.

Table 3.1Cronbach's Alpha

	<b>Cronbach's Alpha</b>	<b>N. of items</b>
Reliability	.734	6
Responsiveness	.783	7
Assurance	.749	4
Tangibility	.801	5
Convenience	.852	2
Customer satisfaction	.795	4

**Source:** Own survey, 2019

After making reliability test, all variables - Reliability, Responsiveness, Assurance, Tangibility convenience and customer satisfaction have the Cronbach's Alpha greater than 0.7, so they are all accepted and the reliability component measurement is qualified.

Moreover, to secure the content validity of the instrument, the researcher referred previous researcher's questionnaires and let different staff of the bank in the work place to review the instrument before distributing to the respondents. And the study were tested, reviewed and commented by the research advisor.

### **3.8 Ethical Considerations**

The study considers ethical issues like, confidentiality & anonymity of respondents, and plagiarism. Data collection was undertaken on the basis of voluntarily participation. Participators respondents were ensured that information obtained will be strictly confidential & only for academic purposes.



## CHAPTER 4

### 4 DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter contains the data presentation and analysis of the research study based on interpretation of the data collected. The researcher distributed a total of 400 questionnaires to the four districts of commercial bank of Ethiopia selected branch and 384 (96%) have been collected and analyzed using the descriptive statistics.

#### 4.1 Demographic profile

This section consists of the analysis of the respondent's personal information such as their gender, age, education qualification, income, and occupation, how long and how frequently they use ATM banking service.

Table 4.1 Demographic profile of respondents

		Frequency	Percent
Gender	MALE	246	64
	FEMALE	138	36
	<b>Total</b>	384	<b>100</b>
Age classification	20-30	204	53
	31-40	88	23
	41-50	61	16
	>50	31	8
	<b>Total</b>	384	<b>100</b>
Education	Grade12 and less	77	20
	Diploma Holder	111	29
	Degree Holder	138	36
	Masters Holder	58	15
	above master's	-	-
	<b>Total</b>	384	<b>100</b>

Occupation	Self employed	138	36
	Government employed	188	47
	NGOs employed	4	1
	Student or other	61	16
	<b>Total</b>	<b>384</b>	<b>100</b>
Income	<2000	69	18
	2000-3999	111	29
	4000-4999	46	12
	5000-9999	123	32
	>10000	35	9
	<b>Total</b>	<b>384</b>	<b>100</b>

**Source:** Own survey, 2019

As table 4.1 shows that, the highest percentage of participants in this study was males. From the total of 384 samples, 64 percent's are male respondents, and the rest 36 percent of the total samples are female respondents. The respondent's age classification, 53% are between 20 – 30 years, 23% of the respondents are between 31 – 40 years, 16% of the respondent are between 41 - 50 years and the rest 8% of the respondents are above 50 years old. 20% of the respondent's education status is 12 completed and less, 29% of the respondents are diploma holders, 36% are degree holders and the rest 15% are master's holders. The majority of the respondents occupation are government employed which is 47% of the total samples, 36% are self-employed, 16% are students and other, and the rest 1% are NGOs employed. Regarding the income, 18% of the respondent's monthly income is less than 2000 birr, 29% of the respondents make 2000-3999 birr per month, 12% of the respondents make 4000-4999 birr per month, 32% make 5000-9999 birr per month and the rest 9% make more than 1000 birr per month.

It is indicated on the above table, the highest users of ATM banking in Ethiopia based on the survey of CBE selected branches are males. The age proportions of the respondents were show that most CBE ATM customers were younger, which found between the ages of 20-30. The customers using ATM banking in the sampled branch were mostly diploma

holder and first degree types of customers with respect to education. Most of the customers using ATM banking were the government employees and middle income.

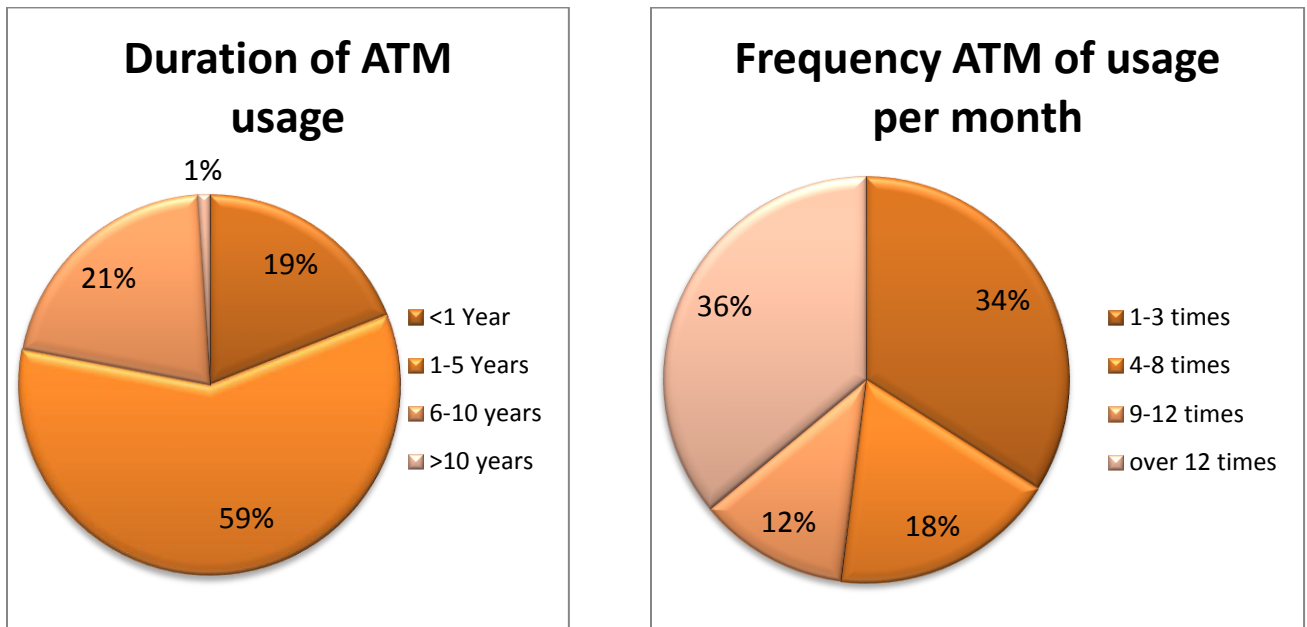


Figure 4.1 Respondents duration and frequency of ATM usage

As per table 4.1, 19% of the total respondents use ATM services for less than one year, the majority 59% use ATM for 1- 5 years, 21% of the total respondents use ATM for 6- 10 years, and the rest 1% of the respondents use ATM services for more than 10 years. The respondents' frequency of ATM usage per month, 34% of the total respondents use ATM services 1- 3 times per month, 18% use ATM service 4-8 times per month, 12% use the service 9- 12 times per month, and the rest 36% of the respondents use ATM banking service over 12 times per month.

It is indicated on the above figure, most of CBE customers use ATM banking service over 12 times and 1-3 times per month. Many of the customer's duration of ATM usage in CBE is 1-5 years with highest percentage. It implies that CBE customers have raise their demand on ATM service recently.

## 4.2 Descriptive statistical analysis

The following sections discuss about the responses of the respondents regarding commercial bank of Ethiopia ATM banking service and their degree of satisfaction on the service by using descriptive statistics. Respondents' responses were identified based on the service quality dimension that includes: - Reliability, Responsiveness, Assurance, Tangibility and convenience of ATM service on satisfaction of customers.

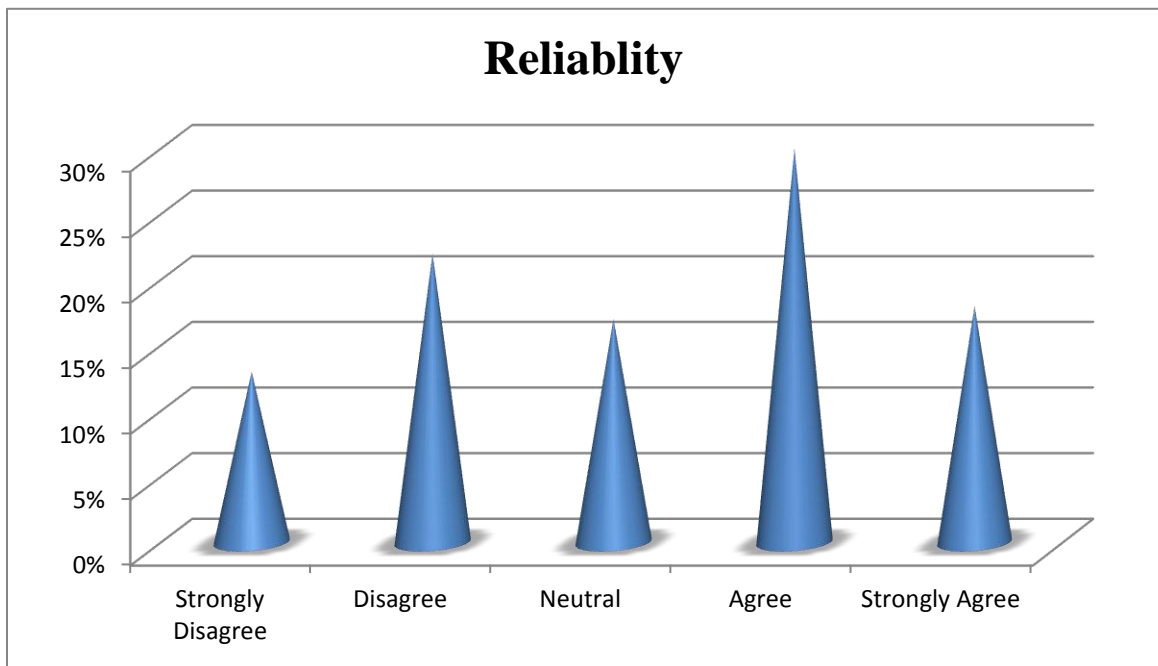
### 4.2.1 Reliability of ATM banking service

Reliability involves the ability of the organization to perform the promised ATM banking service dependably and accurately. To examine the reliability of ATM banking service, six items were analyzed through mean and standard deviation using statistical software package SPSS. The figure below presents the analyzed result.

**Table 4.2 Descriptive Statistics of Reliability**

	Mean	Std. Deviation
The bank provides its Electronic based service at the time it promised to do so.	3.51	1.317
When I have a problem, the bank shows a sincere interest in solving it.	3.85	1.044
Daily cash withdrawal limit of the CBE cards are sufficient.	3.29	1.253
Cash is available in the ATMs at any time.	2.65	1.285
The bank insists on error free records.	2.98	1.234
ATM banking provides power backup and data recovery system to avoid interrupted transaction in case of electronic power failure.	3.12	1.281

**Source:** Own survey, 2010



**Figure 4.2 Frequencies of the respondents on reliability**

As the above table 4.1 shows that, majority of the respondents on agreed on the bank provides the promised electronic service with the mean value of 3.51 and std. dev. 1.317. The respondent also agreed on the problem solving interest of commercial bank of Ethiopia with the mean value of 3.85 and std. dev 1.004. Similarly the respondents agreed on the sufficiency or adequacy of daily cash withdrawal limit of CBE with the mean value of 3.29 and std. dev 1.153. The respondents disagree on the availability of cash any time in the ATM machine with the mean value of 2.65 and std.dev 1.285. Similarly the respondents disagree on the error free record of CBE with the mean value of 2.98 and std. dev.1.234. On the other hand respondents agreed on the bank provide power backup and data recovery system to avoid interrupted transaction with the mean value of 3.12 and std. dev. 1.281.

In general, the research had revealed that greater numbers of the respondents (48%) provide their agreement to the reliability of CBE services as compared to (35 %) disagreement.

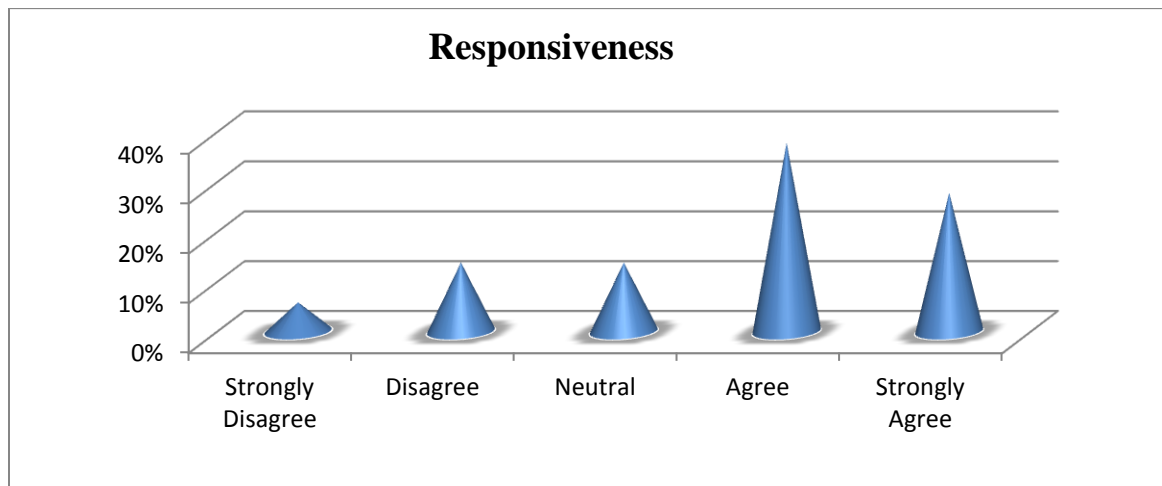
#### 4.2.2 Responsiveness of ATM baking service

Responsiveness concerns the willingness or readiness of CBE employees to help customers and provide ATM banking services. The researcher provides seven variables to measure the responsiveness of ATM banking service. The figure below presents the analyzed result-

**Table 4.3 Responsiveness Descriptive Statistics**

	Mean	Std. Deviation
The banks make an effort to understand the customer's needs.	3.95	.995
Bank employees are never too busy to respond to my ATM case problem.	3.41	1.291
The bank provides timely help desk service and online help facility for ATM service customer.	3.89	1.049
There is a quick process to have CBE cards.	3.77	1.233
There is quick response to get help if there is a problem with the card.	3.59	1.211
The bank customer service always answers my calls.	3.45	1.015
The bank is always willing to assist you in operating electronic banking system.	4.05	1.063

Source: Own survey, 2019



**Figure 4.3 Frequencies of the respondents on responsiveness**

As per the above table 4.3, shows that, most of the respondents agreed on the seven responsiveness items. The respondents agreed on bank making an effort to understand the customer's needs with the mean value of 3.95 and std.dev .995. Similarly the respondents agreed on the employee's response in ATM case problems with the mean value of 3.14 and std. dev 1.291. Again respondents agreed on the timely help desk service and online help facility for ATM service with the mean value of 3.89 and std. dev. 1.049. Additionally respondents agreed on the quick process of having CBE cards (mean 3.77 &std. dev 1.211) and quick response to get help if there is a problem with the card (mean 3.59 and std. dev 1.015). The respondents agreed on the customer service always answers calls with the mean value of 3.45 and std. dev. 1.015. Similarly, the respondents strongly agreed on the bank willingness to assist electronic banking services with the mean value of 4.05 and std. dev. 1.063.

This descriptive analysis indicates that most respondents agreed on the bank willingness to support customers in ATM banking service and being responsive for customer's requests.

### 4.2.3 Assurance of ATM banking service

Regarding the assurance of CBE ATM banking service, four items were given to the respondents on the questioner and the degree of agreement and disagreement stated as follows on the figures-

**Table 4.4 Assurance Descriptive Statistics**

	Mean	Std. Deviation
I feel secured and safe in any ATM transactions with the bank.	3.17	1.530
Bank staffs have the adequate knowledge to answer my questions about ATM banking services.	3.94	1.086
The bank ATMs machines are functional anytime.	2.20	1.378
Customer can access ATM service at anytime and anywhere.	3.84	1.094

Source: Own survey, 2019

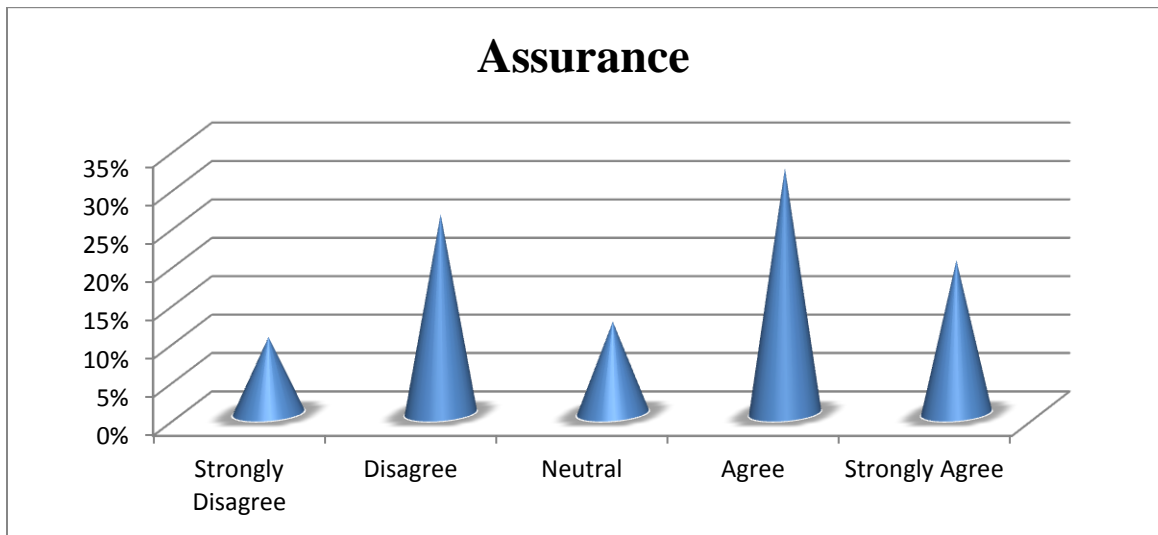


Figure 4.4 Frequencies of respondents on assurance

As it is shown on the above descriptive statistics table, the respondents agreed on that they felt secure of ATM transaction with the mean value of 3.17 and std. dev 1.530. The respondents also agree on the staff sufficient knowledge about ATM service with the mean value of 3.94 and std. dev. 1.086. Similarly the respondents disagree on the ATMs machines functionality anytime (mean 3.20 and std. dev 1.378) and the access of ATM service in any time agreed by the respondent with the mean value of 3.84 and std. dev 1.094.

As it can be seen in the above table and/or diagram, majority of the respondents (52%) agreed on the assurance dimensions of ATM service quality, 36% of the respondents disagree on the assurance dimensions especially on the functionality and accessibility of commercial bank of Ethiopia ATM machines.

#### 4.2.4 Tangibility of ATM banking service

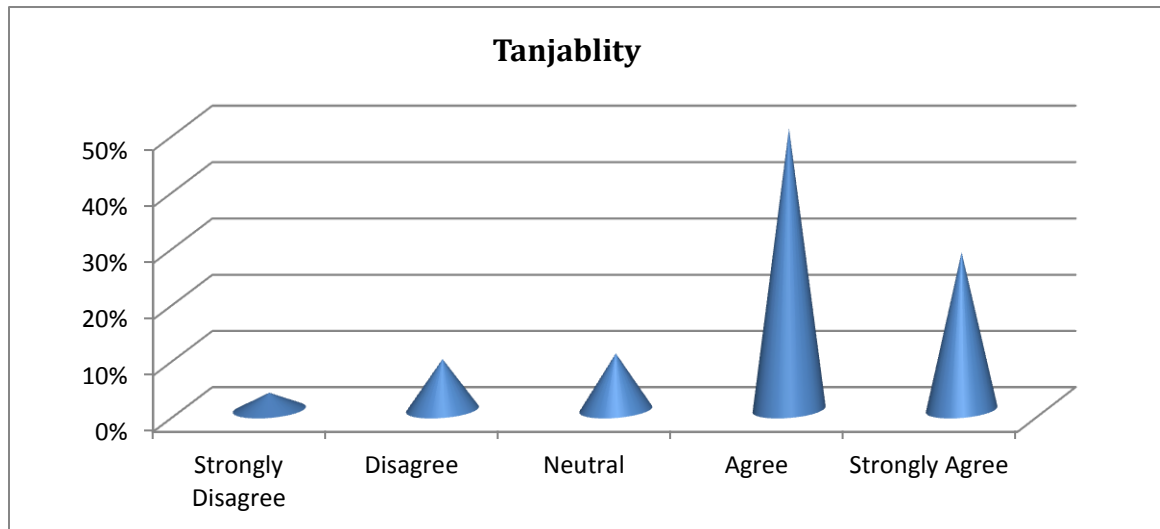
Tangibility includes physical evidences of the service such as appearance of physical facilities, equipment's, personnel, etc. Questioner also developed to evaluate the equipment and tools, physical future, materials, currency note quality and the attractiveness of the card design. The following figure's and table shows the level of agreements and disagreements of respondents.



**Table 4.5 Tangibility Descriptive Statistics**

	Mean	Std. Deviation
The bank has modern looking equipment and tools.	3.85	.964
The ATM physical futures are visually nice.	4.04	.837
Materials associated with ATM service are visually appealed at the bank.	3.55	1.073
The currency notes received from ATM is of good quality.	3.93	1.099
The card design is attractive and easy to hold.	4.12	.942

Source: Own survey, 2019



**Figure 4.5 Frequencies of the respondents on tangibility**

As stated in the above figure and table, respondents agreed on the bank owns modern looking equipment (mean 3.85 and std. dev .964), and strongly agreed on the attractiveness of ATM physical future (mean 4.04 and std. dev .837). In the same way, the respondents agreed on the delivering material of ATM service (mean 3.55 and std. dev 1.073) and the quality of the currency note (mean 3.93 and std. dev 1.099). Likewise, respondent's strongly agreed on the easiness and attractiveness of card design with the mean value of 4.12 and std. dev .942.

As it is shown in the figure above, tangibility of services had agreement by 78% of respondents and only few of them (12%) had disagreed with service empathy in the bank.

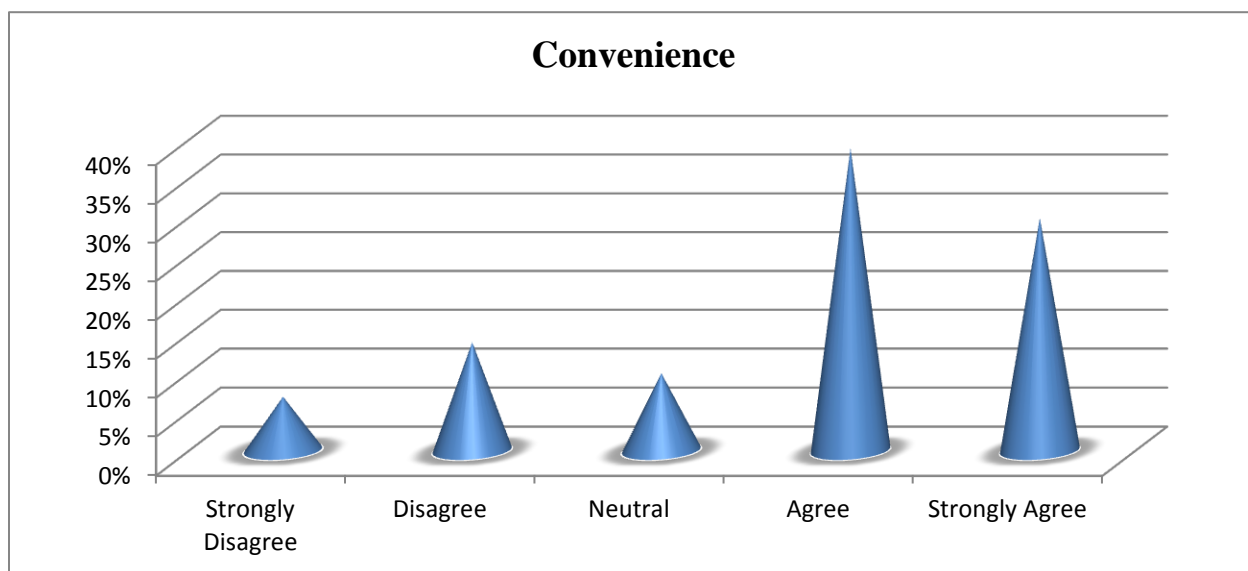
#### 4.2.5 Convenience of ATM banking service

Convenience aspect like the accessibility, distance, and user interface of CBE ATMs are analyzed as follows-

**Table 4.6 Convenience Descriptive Statistics**

	Mean	Std. Deviation
I can access ATM any ware in the city in reasonable distance	3.56	1.366
The ATM user interface is simple and easy to understand	3.87	1.063

Source: Own survey, 2019



**Figure 4.6 Frequencies of the respondents on convenience**

On the accessibility of ATM at reasonable distance, respondents agreed with the mean value of 3.56 std. dev 1.366. Similarly they agreed on the simplicity and easiness of ATM user interface having a mean value of 3.87 and std. dev 1.063.

In general, the research had revealed that greater numbers of the respondents (69%) provide their agreement to the convenience of CBE ATM services as compared to (21 %) disagreement.

### 4.2.6 Analysis of Customer satisfaction

Customer satisfaction was analyzed with the descriptive statics (frequency distribution) also categorized and ranges from strongly disagree, disagree, neutral, agree and strongly agree.

**Table 4.7 Customer satisfaction descriptive Statistics**

	<b>My bank ATM service meets my expectations.</b>	<b>I recommend my family and relatives to use CBE ATMs.</b>	<b>I always consider CBE ATMs as my first choice.</b>	<b>I am satisfied with the overall ATM service of commercial bank of Ethiopia</b>
<b>Strongly Disagree</b>	11%	2%	3%	16%
<b>Disagree</b>	37%	27%	29%	20%
<b>Neutral</b>	6%	5%	10%	4%
<b>Agree</b>	22%	32%	26%	40%
<b>Strongly agree</b>	24%	33%	32%	20%
<b>Mean</b>	3.12	3.67	3.56	3.28
<b>Std. Deviation</b>	1.412	1.246	1.283	1.410

**Source:** Own survey, 2019

As table 4.8 shows, the majority of the respondents strongly agreed on choosing CBE ATMs as a right choice having a mean value of 3.56 and std. dev 1.283. In the same way respondents agreed that, they recommend their relatives to use ATM with the mean value of 3.67 and std. dev 1.246. For the question whether the bank ATM service meets customer expectations, the majority of the respondents disagreed with the mean value of 3.12 and std. dev 1.412. The response of respondents on overall satisfaction of ATM service shows that, 40% agreement, 20% strong agreement, 20% disagreement, 16% strong disagreement and 4 % of the participant remain neutral.



**Figure 4.7 Frequencies of the respondents on customer satisfaction**

The above figure 4.6 shows that the overall customer satisfaction agreement and disagreement of the participant. 27% of the respondents are strongly agreed 30% of the respondents are agree , 9% chose to remain neutral, 26% of the participant are disagree and 8% is strongly disagree.

Even if the highest percentage (57%) of the respondents are satisfied by the ATM banking service provided by CBE, 34% of the respondents dissatisfied and strongly dissatisfied, from these the bank needs to work more to change the result and highly satisfies its customers.

### 4.3 Normality test

<b>Table 4.8 Tests of Normality</b>						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Reliability	.069	384	.000	.981	384	.000
Responsiveness	.064	384	.000	.969	384	.000
Assurance	.091	384	.000	.974	384	.000
Tangibility	.099	384	.000	.958	384	.000
Convenience	.164	384	.000	.920	384	.000
a. Lilliefors Significance Correction						

Source: Own survey, 2019

The above table presents the results from two well-known tests of normality, namely the Kolmogorov-Smirnov Test and the Shapiro-Wilk Test. Shapiro- Wilk Test is more appropriate for small sample sizes (< 50 samples) but can also handle sample sizes as large as 2000. For this reason, we will use the Shapiro-Wilk test as our numerical means of assessing normality. If  $p < 0.05$ , reject the  $H_0$  because the test is significant. In our study result  $p < 0.05$  due to these we reject  $H_0$  and accept  $H_A$ .

### 4.4 Multicollinearity test

Multicollinearity is viewed here as an interdependency condition. It is defined in terms of a lack of independence, or of the presence of interdependence – signified by high inter correlations within a set of variables, and under this view can exist quite apart from the nature, or even the existence of a dependency relationship between X and a dependent variable Y. Multicollinearity is not important to the statistician for its own sake. Its significance, as contrasted with its definition, comes from the effect of interdependence in X on the dependency relationship whose parameters are desired. Multicollinearity constitutes a threat - and often a very serious threat - both to the proper specification and to the effective estimation of the type of structural relationships commonly sought through the use of regression techniques.

**Table 4.9 Multicollinearity Test**

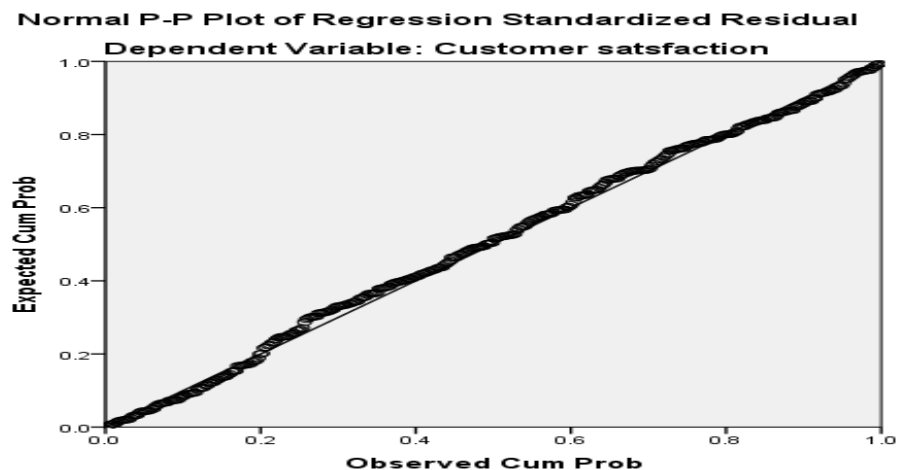
	Co linearity Statistics	
	Tolerance	VIF
Reliability	0.458	2.183
Responsiveness	0.529	1.890
assurance	0.516	1.939
Tangibility	0.904	1.106
Convenience	0.944	1.059

Source: Own survey, 2019

If tolerance is more than 0.2 and variance inflation factor (VIF) less than 10 there is no Multicollinearity problem. According to Kutner, (2004) 10 have been proposed as a cut point value for checking the VIF for the research result.

So the result of the above table 4.9 results show tolerance greater than 0.2 and VIF less than 10 and it is no colinearity problem.

#### 4.5 Linearity Test



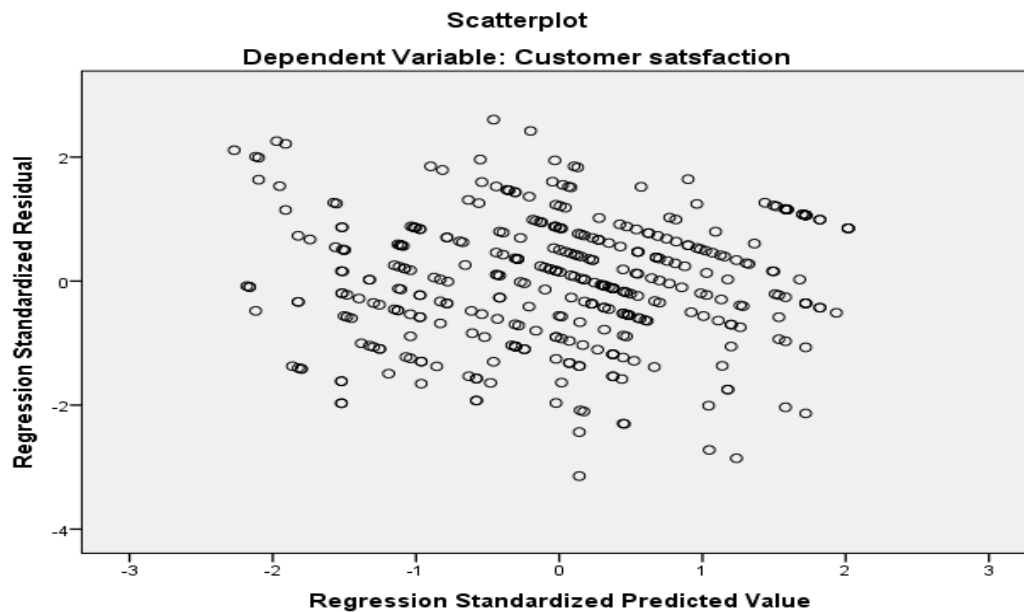
Source: Survey result, 2019

Figure 4.8 P-Plot graphs

If the little circles will follow the normality line, the data is normally distributed.

## 4.6 Homoscedasticity Test

The next assumption to check is homoscedasticity. Ideally, you will get a plot that looks something like the plot below. The data looks like you shot it out of a shotgun, there are points equally distributed above and below zero on the X axis, and to the left and right of zero on the Y axis.



**Source:** survey result, 2019

Figure 4.9 scatter plot

## 4.7 Correlation analysis

Correlation Analysis is a measure of association between two continuous variables. Correlation measures both the size and direction of relationships between two variables. The squared correlation is the measure of the strength of the association. There are no hard and fast rules for describing correlation strength; hesitatingly offer these guidelines:

- $0 < |r| < .3$  is weak correlation,.
- $< |r| < .7$  is moderate correlation and
- $|r| > 0.7$  is strong correlation.

**Table 4.10 Correlation Analysis**

		<b>Reliability</b>	<b>Responsiveness</b>	<b>assurance</b>	<b>Tangibility</b>	<b>Convenience</b>	<b>Customer satisfaction</b>
<b>Reliability</b>	Pearson Correlation	1	.626**	.441**	.552**	.314	.449**
	Sig. (2-tailed)		.000	.000	.000	.085	.000
	N		384	384	384	384	384
<b>Responsiveness</b>	Pearson Correlation		1	.576**	.572**	.011	.524**
	Sig. (2-tailed)			.000	.000	.833	.000
	N			384	384	384	384
<b>Assurance</b>	Pearson Correlation			1	.585**	.098	.399**
	Sig. (2-tailed)				.000	.054	.000
	N				384	384	384
<b>Tangibility</b>	Pearson Correlation				1	.005	.493**
	Sig. (2-tailed)					.915	.000
	N					384	384
<b>Convenience</b>	Pearson Correlation					1	.362
	Sig. (2-tailed)						.027
	N						384
<b>Customer satisfaction</b>	Pearson Correlation						1
	Sig. (2-tailed)						
	N						384

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Source:** Own survey, 2019

As shown in the above table 4.10, the magnitude of the relationship ranges from a low of 0.362, between convenience and customer satisfaction, to a high of 0.524, between responsiveness and customer satisfaction.

From the result, we can see that responsiveness is highly correlated to customer satisfaction (0.524) followed by tangibility (0.493), reliability (0.449), and assurance (0.399) and Convenience (0.362). So, responsiveness, tangibility, assurance, convenience



and reliability can be best predictor of the outcome variable which is customer satisfaction. The results of Pearson correlation coefficient indicate that positive relationship exists between the service quality dimensions and customer satisfaction.

#### 4.8 Regression Analysis

Regression analysis is a statistical process for estimating the relationships among a dependent variable and several independent variables. A regression analysis helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. After examining the correlation between service quality dimensions and customer satisfaction, regression analysis was conducted using customer satisfaction as the dependent variable and ATM service quality dimensions as independent variables. In this study regression analysis is used to identify the impact of service quality dimensions on customer satisfaction.

<b>Table 4.11 Model Summary</b>				
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.590 <sup>a</sup>	.348	.340	.696713998
a. Predictors: (Constant), Reliability, Convenience, assurance, Tangibility, Responsiveness				
b. Dependent Variable: Customer satisfaction				

**Source:** Own survey, 2019

The computed adjusted coefficient of determination (R Square = 0. 348) shows that 34.8% of the observed variance in the total satisfaction were jointly explained by the independent variable, while 65.2 % unexplained variance could be attributed to other service quality dimensions outside the regression model other than the independent variable.

**Table 4.12 ANOVA model**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 <b>Regression</b>	98.004	5	19.601	40.380	.000 <sup>b</sup>
<b>Residual</b>	183.485	378	.485		
<b>Total</b>	281.490	383			

a. Dependent Variable: Customer satisfaction

b. Predictors: (Constant), Reliability, Convenience, assurance, Tangibility, Responsiveness

**Source:** Own survey, 2019

The ANOVA table here below shows that there is a relationship between customer satisfaction and independent variables as the result of significant value or P value is less than 0.05. In terms of F-statistics (40.38) at a significant level of 0.000, which means there is a relationship between service quality dimensions (reliability, responsiveness, assurance, tangibility and convenience) and customer satisfaction. It indicates that the model and the data are well fit in explaining customer satisfaction.

**Table 4.13 Regression Coefficients model analysis**

Model	Un standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.159	.262		.605	.546
Reliability	.108	.059	.103	1.826	.046
Responsiveness	.348	.069	.302	5.014	.000
Assurance	.224	.056	.123	3.424	.032
Tangibility	.293	.067	.251	4.379	.000
Convenience	.101	.043	.100	2.367	.018

a. Dependent Variable: Customer satisfaction

**Source:** Own survey, 2019

The model coefficient as table 4.13 reports the coefficients for Reliability, Responsiveness, Assurance, Tangibility and Convenience along with the significance value. The model Coefficients are used in the construction of regression equation. From the following table, the researcher found the following estimated regression-

Customer satisfaction= 0.159+0.108 (reliability) + 0.348 (responsiveness) + 0.224 (assurance) + 0.293 (tangibility) +0.101 (convenience). The equation is the calculated contribution for the tested elements to customer satisfaction.

#### 4.9 Testes of hypothesis

The standardized beta coefficients in Table 4.13 implied that the independent variables have strong impact on customer's satisfaction. Here, 100% change in reliability leads to 10.3% corresponding change in the level of customer's satisfaction, 100% change in responsiveness leads to 30.2% change in customer's satisfaction level, 100% change in assurance leads to 12.3% change in customer's satisfaction level. Tangibility and convenience leads to 25.1%, and 10% change in customer's satisfaction level respectively.

**Table 4.14 Hypotheses Result**

		$\beta$	<b>P</b>	<b>Accepted/Rejected</b>
H1:	Reliability of has positive and significant impact on customer satisfaction.	.103	p=0.046<0.05	Accepted
H2:	Responsiveness has positive and significant impact on customer satisfaction.	.302	p=0.000<0.05	Accepted
H3:	Assurance of has positive and significant impact on customer satisfaction.	.123	p=0.032<0.05	Accepted
H4:	Tangibility of has positive and significant impact on customer satisfaction.	.251	p=0.000<0.05	Accepted
H5:	Convenience of has positive and significant impact on customer satisfaction.	.100	p=0.018<0.05	Accepted

## 4.10 Discussion

The result from analysis indicated that, the ATM banking service has influenced customer satisfaction positively. According to the result, Reliability, Responsiveness, Tangibility, Assurance and Convenience is customer satisfaction on CBE's ATM the finding on those mention factors are discussed as follows-

Reliability has positive value of beta  $\beta=.103$  and significant at P value .046, which indicate when reliability of the ATM service increases the satisfaction of ATM users also increase. This supports the existence of a positive relationship between reliability of ATMs and the customer's satisfaction.

Likewise the  $\beta$  coefficient shows a positive relationship for responsiveness with customer Satisfaction of ATM users because it has a significant P value of .000 and show a positive B coefficient i.e.  $B=.302$ .

Assurance has positive value of beta  $\beta=.123$  and significant at P value .032. Which indicate by the fact that when Assurance of the ATM service increases the satisfaction of ATM users also increase. This result supports the existence of a positive relationship between Assurance of ATMs and the customer's satisfaction.

The relationship between tangibility of ATM and satisfaction is significant at P value .002 and Beta= 0.251. Reliability of ATM has significant relationship with customer satisfaction is accepted at the P value 0.000 significance level.

The last dimension for this study convenience is significantly and positive influence on customer satisfaction on ATM service because of  $\beta=.100$  and  $P=.018$ , it shows that when convenience of ATM for the service increases satisfaction on ATM service also increases.

In general, customer satisfaction has influenced by the five service quality dimensions, which are Tangibles, Reliability, Responsiveness, Assurance and Convenience, dimensions of ATM service quality positively.

## **CHAPTER FIVE**

### **5. SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATION**

#### **5.1 Summary of Finding**

The survey results have given valuable information regarding where improvements are necessary to improve the ATM services quality of. The major findings of the study are as follows-

- ✓ Based on the descriptive analysis it can be concluded that the majority of current ATM banking users are male and youth aged between 20 up to 30 and 31 up to 40, educational level the respondents were predominantly degree and diploma holders, occupationally, government employees are the majority users, students are not active participants in using ATM service, middle income customers are majority of ATM users.
- ✓ Most of ATM users are satisfied on convenient location of ATMs, being responsive for customer's requests & tangibility of ATM service provided by CBE.
- ✓ According to ANOVA test there is a relationship between service quality dimensions (reliability, responsiveness, assurance, tangibility and convenience) and customer satisfaction having significant value or P value is less than 0.05, F-statistics (40.38) at a significant point.
- ✓ According to correlation analysis there is positive relationship exists between the automated teller machine service quality dimensions (reliability, responsiveness, assurance, tangibility and convenience) and customer satisfaction.

## 5.2 Conclusion

The primary purpose of this study is to investigate the impact of ATM banking service quality on customer satisfaction of Commercial Bank of Ethiopia in four different branches, i.e. Sidist kilo branch, Gezahgne yilma branch, Torhayloch branch and Kazanchis branch. Stratified sampling was used to come up with the appropriate sample size of customers. Convenience sampling technique is used to gather primary information from customer. The study was conducted by distributing questioners to 400 customers from which 384 (96%) have been collected and analyzed. The overall satisfaction level of customers was measured using a point likert scale range from strongly dissatisfied (1) to strongly satisfied (5).

ATM is a banking instrument that used to withdraw cash, make deposits or transfer funds between accounts by using ATM card and a personal identification number. The study investigates the level of CBE customer's satisfaction on ATM banking service based on the most popular six service quality dimension which are- reliability, responsiveness, assurance, convenience and tangibility.

The correlation analysis result shows that the magnitude of the relationship ranges from a low of 0.362, between convenience and customer satisfaction, to a high of 0.524, between responsiveness and customer satisfaction. Independent variables (reliability, responsiveness, assurance, and tangibility) have moderate correlation with customer satisfaction, whereas, convenience have weak correlation with customer satisfaction. The results of Pearson correlation coefficient indicate that positive relationship exists between the service quality dimensions and customer satisfaction.

From the result of hypotheses testing, the five hypotheses that stated that ATM service quality dimension have significant effect on customer satisfaction. Also from the result of the descriptive analysis which measures customer satisfaction with ATM service qualities of Tangibility, Reliability, Responsiveness, Assurance and Convenience, respondents expressed satisfaction with the above ATM service qualities. This study concludes that service qualities are qualifications to customer satisfaction and the higher the level of service quality, the higher the satisfaction its offers.

### **5.3 Recommendations**

Recommendations are forwarded based the findings and conclusions made so that it can help the bank to satisfy commercial bank of Ethiopia ATM users. Therefore, I would like to forward my recommendation based on the findings.

- According to the demographic analysis, the majority of the respondents were male's customers. So, the bank should encourage female customers to use ATM banking service.
- The bank should attempt to maintain consistent ATM service quality by assessing all the service quality dimensions regularly.
- The bank should increase ability to provide accurate and trustworthy ATM services to customers.
- The bank should make sure cash is available in the every ATMs machines at any time.
- The bank should focus more on the functionality of the ATM machines every day aligned with deploying it everywhere near to the customer.
- The bank should continue responding quickly for customer question regarding the ATM service.
- The bank should develop confidence of customer and increase customer satisfaction with error free ATM banking service.

### **5.4 Area for further studies**

CBE should carry out similar and regular researches on its ATM banking services quality so as to learn what are the needs and wants of its customers. Six dimensions were examined in this study. Future studies should attempt to draw profiles based on characteristics other than these dimensions and to be more comprehensive that incorporate outside of Addis Ababa.

## **References**

- Adeniran, L.M. (2014). An empirical study of automated teller machine (ATM) and user satisfaction in Nigeria: a study of united bank for Africa in Sokoto metropolis. International journal of management technology
- Adelowo, S. (2010). Challenges of automated teller machine (ATM) usage and fraud occurrences in Nigeria: a case study of selected banks in mina metropolis.
- Arasli, H. (2005). A comparison of service quality in the banking industry: Some evidence from Turkish and Greek- International Journal of Banking,
- Agbor, J. M. (2011). The Relationship between Customer Satisfaction and Service Quality: a study of three Service sectors in Umea. Umea School of Business
- Akpan, S. (2016).The influence of ATM service quality on customer satisfaction in the banking sector of Nigeria.
- Belachew, F (2012). Assessment of Service Quality and customer Satisfaction with Broad Band Internet Services of EthioTelecom. Unpublished Master's Thesis, Addis Ababa University
- Belay, A. (2012) Service Quality and Customer Satisfaction (The Case Cooperative Bank of Oromia).Unpublished Master's Thesis, Addis Ababa University.
- Danial, E. (1999).Provision of electronic banking in the UK and republic of Ireland: International journal of Bank marking.
- Dr, V. Krishnamoorthy, R.Sruthi, V.S. ShoniyaaKwashie, W (2016), the impact of e banking service delivery to customer of Ghana commercial banks limited.
- Ephream O, (2016). Assessments of ATM banking and customer's satisfaction in Ethiopian banks case of PSS member banks. Unpublished Master's St. Mary's university
- Farris, Paul W.; Neil T. Bendle; Phillip E. Pfeifer; David J. Reibstein (2010).Marketing Metrics: The Definitive Guide to Measuring Marketing Performance.
- Fenuga, O.J, (2010). "The effect of electronic payment on customer service delivery",
- Gebremeskel, H. (2017) Assessment of service quality and its impact on customer satisfaction: The case of oromiya insurance s.c.
- Gessese, H. (2018). Impact of ATM service quality on customer satisfaction in commercial bank of Ethiopia A.A.



- Gabriel, A., (2015). Assessing the Impact of the ATM in Delivering Service in the Banking Industry. A case of GCB Bank Ltd. European Journal of Business and Management.
- Gujarati, DN 2004, *Basic Econometrics*, 4th edn, McGraw Hill, Boston
- Hadija, M.(2018). Automated Teller Machine and Customer Satisfaction In Tanzania: A Case of CRDB Bank In Iringa.
- Islam, R. (2007). Customer satisfaction of ATM Service: A case study of HSBC ATM.
- Khan, A. M., (2010). An Empirical Study of ATM Service Quality and Customer Satisfaction in Pakistani Bank. European journal of social sciences.
- Komal, S.S. (2009). Impact of ATM on customer satisfaction (A comparative study of SBI, ICICI & HDFC bank). Business intelligence journal, 2 (2): August, 276- 87
- Kotler, p. (2000). Marketing management, 6th edition
- Kutner, Nachtsheim and Neter (2004). Applied Linear Regression Models, 4th edition, Mc Graw-Hill Irwin.
- Lemma, B. (2016). The Effect of ATM Service Quality on Customer Satisfaction: Evidences from Customers of Ethiopian Commercial Banks in Debreworkos.
- Leyuager, T. (2015). The impact of e banking service quality on customer service and performance.
- Marshall, J., and Heslop, L. (1988). Technology acceptance in Canadian retail banking. International Journal of Bank Marketing,
- Nabi. N., (2012). Customer Expectations of Service Quality: A Study on Private Banks of Bangladesh. World Review of Business Research,
- Nguyen Thi Trung Tam, (2014) The Analysis of Customer Satisfaction about ATM Service of BIDV in Ha Giang Province Vietnam
- Levin and rubin (1998) Essential research methods for social works. Ward worth Publication Corporation.
- Olatokun, W.M., & Igbinedoin, L.J. (2009). The Adoption of Automated Teller Machines in Nigeria: An Application of the theory of Diffusion of Innovation' Issues in Informing Science and Information Technology .
- Oliver, R.L. (1980). Response Determinants in Satisfaction Judgment. Journal of Consumer Research, 14 (March)..

- Parasuraman, A ZethmalV and Berry (1988). A conceptual model of service quality and its implication for future research. Journal of marketing
- Pahwa, M.S., Saxena, K., (2011). Analytical study of customer satisfaction at ICICI Bank with special reference to ATMs. 3rd International Conference on Information and Financial Engineering IPEDR, IACSIT Press, Singapore
- Rubin Allen and Babbie Earl (2010) Essential research methods for social works. Ward worth Publication Corporation.
- Tague, A. (2010). What are the Benefits of ATM cards?( <http://www.ebow.com/members/dsangela11374.html>).
- Rose, P. S., (1999). Commercial Bank Management, (4th Ed.), Irwin/McGraw-Hill, Boston, USA.
- Settearagachew, H. (2017). Assessing the Automated Teller Machine (ATM) service quality of Commercial Bank of Ethiopia (CBE) in A.A.
- Shemsu, A. (2017) Assessment of ATM service and customers' satisfaction in case of selected switched member commercial Banks in Addis Ababa city
- Shah, M (2009). E-Banking Management: Issues, Solution, and Strategies. Information Science Reference, Hershey, New York.
- Singh, J. (2009). Understanding the structure of consumers' satisfaction evaluations of service delivery. Journal of the Academy of Marketing Science,
- Sumya, A. (2016). Measuring the Level of Customer Satisfaction on ATM services of ADC Centre, The City Bank Limited.
- Schiffman, L. G. and LazarKanuk, L. (2004) Consumer Behaviour. 8th edition. New Jersey Pearson Education Inc, Upper Saddle River Titus
- Wisdom, K. (2012). The Impact Electronic Banking on Service Delivery to Customers of Ghana Commercial Bank Limited, Unpublished Master's Thesis.
- Worku, G.,Tilahun, A.,Tafa, MA. (2016). The Impact of Electronic Banking on Customers' Satisfaction in Ethiopian Banking Industry (The Case of Customers of Dashen and Wogagen Banks in Gondar City)
- Woelfel, C.J., (1994). The Dictionary of Banking. Illinois, NY: Probus Publishing.
- [www.cbe.com.et](http://www.cbe.com.et) [accessed on May 2. 2019]
- [www.qualitygurus.com](http://www.qualitygurus.com), [accessed on March 20. 2019]

[www.engineersgarage.com/invention-stories/atm-history](http://www.engineersgarage.com/invention-stories/atm-history). [Accessed: May 18, 2019].

Yamane, T. (1967). Statistics, an Introductory Analysis, (2nd ed.), New York: Harper and Row.

Young, (2007). How the Internet Affects Output and Performance at Community Banks. Journal of Banking and Finance,

Zeithaml, V.A., Parasuraman, A. and Berry, L.L (1985). Problems and Strategies in Services Marketing. Journal of Marketing.

Zineldin, M. (2005). Quality and customer relationship management (CRM) as competitive strategy in the Swedish banking industry, The TQM Magazine.

Zuhair, A. (2012). Expansion of the Customers in the Using of ATMs Case Study on the Jordanian Commercial Banks. International Journal of Economy.

## **Appendix**

**St. Mary's University**

**School of Graduate Studies**

**Questioner to be filled by respondent**

**Dear Respondent,**

First of all, I like to express my sincere appreciation for agreeing to cooperate in filling out this questioner. I am a graduate student at St Mary's University. I am undertaking a survey on **the impact of ATM service quality on customer service in the case of commercial bank of Ethiopia** , in partial fulfillment of the requirement for the award of a Master of Art (MA) in General Management.

I, therefore request for your kind assistance in completing the attached questionnaire to the best of your knowledge. The information you give will be treated with strict confidence and is only will be used for academic purposes. I would like to express my gratitude for your time, honest and prompt responses.

**Thank you.**

For further information please contact the student researcher.

Telephone **+251912708724**

Email **yemi.mw@gmail.com**.

### **General Instructions**

- No need of writing your name.
- For questions that demand your opinion, please try to honestly describe your responses on the space provided.

## Part I: Demographic Details

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

### 1. Gender

Male ☐

Female ☐

### 2. Age

Below 20 ☐

20 to 30 years ☐

41 to 50 years ☐

31 to 40 years ☐

above 50 years ☐

### 3. Educational level

Grade 12 and below ☐

Diploma holder ☐

First degree holder ☐

Master's Degree ☐

Above Master's Degree ☐

### 4. Occupation

- Self employed ☐

- Government employee ☐

-NGOs employee ☐

If students and other specify\_\_\_\_\_

### 5. Monthly Income

Less than Birr 2,000 ☐

Birr 4,000 to Birr 4,999 ☐

Above Birr 10,000 ☐

Birr 2,000 to Br 3,999 ☐

Birr 5,000 to Br 9,999 ☐

### 6. How long you are using CBE ATM Card?

Less than 1 year ☐

6 – 10 years ☐

1 – 5 years ☐

above 10 years ☐

### 7. How frequently do you use ATM service per month?

1-3 times ☐

4-8 times ☐

9-12 ☐

Over 12 times ☐

## Part II: Service Dimensions

This section asks your opinion of the delivery of ATM services of commercial bank of Ethiopia. Please indicate by ticking (✓) your choices from the options that range from strongly agree to strongly disagree.

1. Reliability		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
R 1	The bank provides its Electronic based service at the time it promised to do so.					
R 2	When I have a problem, the bank shows a sincere interest in solving it.					
R 3	Daily cash withdrawal limit of the CBE cards are sufficient.					
R 4	Cash is available in the ATMs at any time.					
R 5	The bank insists on error free records.					
R 6	ATM banking provides power backup and data recovery system to avoid interrupted transaction in case of electronic power failure.					
2. Responsiveness						
RE 1	The banks make an effort to understand the customer needs.					
RE 2	Bank employees are never too busy to respond to my ATM case problem.					
RE 3	The bank provides timely help desk service and online help facility for ATM service customer.					
RE 4	There is a quick process to have CBE cards.					
RE 5	There is quick response to get help if there is a problem with the card.					
RE 6	The bank customer service always answers my calls.					
RE 7	The bank is always willing to assist you in operating electronic banking system.					

<b>3. Assurance</b>		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
A 1	I feel secured and safe in any ATM transactions with the bank.					
A 2	Bank staffs have the adequate knowledge to answer my questions about ATM banking services.					
A 3	The bank ATMs machines are functional anytime.					
A 4	Customer can access ATM service at anytime and anywhere.					
<b>4. Tangibility</b>						
T 1	The bank has modern looking equipment and tools.					
T 2	The ATM physical futures are visually nice.					
T 3	Materials associated with ATM service are visually appealed at the bank.					
T 4	The currency notes received from ATM is of good quality.					
T 5	The card design is attractive and easy to hold.					
<b>5. Convenience</b>						
C 1	I can access ATM any ware in the city in reasonable distance.					
C 2	The ATM user interface is simple and easy to understand.					
<b>6. Customer satisfaction</b>						
CS 1	I am satisfied with the overall ATM service of commercial bank of Ethiopia.					
CS 2	I always consider CBE ATMs as my first choice.					
CS 3	I recommend my family and relatives to use CBE ATMs.					
CS 4	My bank ATM service meets my expectations.					

**THANK YOU**

# አባሪ

## ቅድስተማርያምዩንቨርሲቲ

### የድህረምረቃፕሮግራም

### መጠይቅ

#### ውድተሳታፊዎች

እኔ ቅድስተ ማርያም ዩኒቨርሲቲ የሁለተኛ ዲግሪ አጠቃላይ ማኔጅመንት የሁለተኛ አመት ተማሪ ስሆን የመመረቂያ ጽሁፌን በኢትዮጵያንግድ ባንክ የኤቲኤም አገልግሎት ትራት በደንበኞች እርካታላይያለዉንተፅኖ(the impact of ATM banking service quality on customer satisfaction in the case of commercial bank of Ethiopia ) ላይ ጥናት በማካሄድ ላይ ነኝ፡፡

ስለዚህ ከታች ተዘረዘሩት መጠይቆች ባለዎ የእውቀት ደረጃ በመሙላት እንዲተባበሩኝ እየጠየኩ የሚሰጡት መረጃ ለጥናቴ አገልግሎት ብቻ የሚውሉ ይሆናሉ፡፡ የመጨረሻም ሪፖርት ግልባጭ በጠየቁ ጊዜ ይመለስልዎታል፡፡ ለጊዜዎ, ለታማኝነት እና ለፈጣን ምላሽዎ ያለኝን ልባዊ ምስጋና መግለጽ እፈልጋለሁ፡፡

**አመሰግናለሁ.**

#### አጠቃላይመመሪያዎች

- ስምዎንመፃፍኢያስፈልግም.
- ማብራሪያ ለሚያስፈልጋቸው ጥያቄዎች እባክዎ በተሰጡት ክፍት ቦታዎች በማብራራት በትክክል የሚሰማዎትን በግልፅኝነት ሃሳቦንዬ ግለፁ ፡፡



## ክፍል 1: ስለራስ መጠይቅ

እባክዎም ላሽዎን ፊት ለፊት ባሉት ክፍቶች በታዎች (✓) ላይም ልክት በማድረግ ያመልክቱ

1. ፆታ:

ወንድ

☐

ሴት

☐

2. ዕድሜ:

ከ 20 በታች

☐

ከ 20 እስከ 30 ዓመት

☐

ከ 31 እስከ 40 አመታት

☐

ከ 40 እስከ 50 አመታት

☐

ከ 50 ዓመት በላይ

☐

3. የትምህርት ደረጃ:

12 ኛ ክፍል እና በታች

☐

ሁለተኛ ዲግሪ

☐

ዲፕሎማ

☐

የመጀመሪያ ዲግሪ

☐

ሁለተኛ ዲግሪ በላይ

☐

4. የስራ ሁኔታ

የግል ተቀጣሪ

☐

የመንግሥት ተቀጣሪ

☐

የNGO ተቀጣሪ

☐

ሌላ.....

5. ወርሃዊ ገቢ:

ከ 2,000 ብር በታች

☐

ከ ብር 2,000 እስከ 3,999

☐

ከ ብር 4,000 እስከ 4,999

☐

ከ ብር 5,000 እስከ 9,999

☐

ከ 10,000 በላይ

☐

6. ለምን ያህል ጊዜ የኢትዮጵያን ግድባን ክፍሎች ለምሳሌ ግለሰብ ተጠቅመዋል

ከ 1 አመት በታች

☐

ከ 1 - 5 አመት

☐

ከ 6 - 10 አመት

☐

ከ 10 አመት በላይ

☐

7. በወር ለምን ያህል ጊዜ የኢትዮጵያን ግድባን ክፍሎች ለምሳሌ ግለሰብ ተጠቅመዋል

ከ 1 - 3 ጊዜ

☐

ከ 9 - 12 ጊዜ

☐

ከ 4 - 8 ጊዜ

☐

ከ 12 ጊዜ በላይ

☐

**ክፍል 2 :** ከዚህ በታች የኢትዮጵያ ንግድ ባንክ የኤቲኤም አገልግሎት በተመለከተ የተዘረዘሩ አረፍ ተነገሮች ምን ያህል እንደሚሰማሙበት ከቀረቡት አማራጮች ውስጥ ይህን (✓) ምልክት በመጠቀም ያሳውቁ::

<b>1. ስለተአማኒነት</b>		በጣምአልሰማም	አልሰማምም	ገለልተኛ	እስሰማለሁ	በጣምእስማማለሁ
R 1	ባንኩየኤሌክትሮኒክስባንክአገልግሎቶችንበሰአቱእናቃልበገባዉመሰረትያከናዉናል					
R 2	ችግርበሚያጋጥመኝጊዜባንኩችግሮችንለመፍታትያላሳለሰጥረትያረጋል					
R 3	በቀንበኤቲኤምወጪማድረግየሚቻለዉየገንዘብመጠንበቂነዉ					
R 4	ሁሌምበሁሉምየኤቲኤምማሽኖችዉስጥበቂጥሬገንዘብአለ					
R 5	ባንኩከስተትየጸዳየኤቲኤምአገልግሎትንይሰጣል					
R 6	ባንኩየኤሌክትሪክኃይልመቆራረጥበሚያጋጥመዉጊዜ የ power backupእና data recovery systemአለዉ					
<b>2. ስለምላሽሰጭነት</b>						
RE 1	ባንኩየደንበኞችንፍላጎትለመረዳትጥረትያረጋል					
RE 2	የባንኩሰራተኞችየኤቲኤምችግርየደረሰበትንደንበኝበፍጥነትያስተናግዳሉ					
RE 3	ባንኩኤቲኤምደንበኞችንለረዱየሚችሉአቅርቦቶችአሉት					
RE 4	ባንኩየኤቲኤምካርድለደንበኞችለመስጠትፈጣንነዉ					
RE 5	የኤቲኤምካርድላይችግርሲያጋጠመኝፈጣንምላሽአገኛለዉ					
RE 6	ሁሌምየደንበኞችአገልግሎትስልክይነሳል					
RE 7	ባንኩሁሌምየኤሌክትሮኒክስባንክአገልግሎቶችንእንድጠቀምይረዳኛል /ያበረታታኛል					
<b>3. ስለተረጋጋጭነት</b>						
A 1	የኢትዮጵያንግድባንክየኤቲኤምአገልግሎትበምጠቀምበትጊዜደህንነትይሰማኛል					
A 2	የኢትዮጵያንግድባንክሰራተኞችስለኤቲኤምአገልግሎቶችበቂእዉቀትአላቸዉ					
A 3	የባንኩ የኤቲኤም ሁልም በስራ ላይ ናቸዉ					
A 4	ደንበኞችበማንኛዉምሰአትእናበታየኤቲኤምአገልግሎትማግኝትይችላሉ					

4. ስለተጨባጭነት		በጣም አልሰማም	አልሰማም	ገለልተኛ	እስማማለሁ	በጣም እስማማለሁ
T 1	ባንኩ ለአይን ማራኪ የሆኑ እቃዎች አሉት					
T 2	የኤቲኤም ማሸናፊት ለአይን ይማርካሉ					
T 3	ለኤቲኤም አገልግሎት የሚወሉ መሳሪያዎች በሙሉ በባንኩ ይገኛሉ					
T 4	ከኤቲኤም የሚወጣው ጥሬ ገንዘብ ጥራቱን የጠበቀ ነው					
T 5	የኢትዮጵያን ግድባን ከኤቲኤም ካርዶች ለአይን የሚሰጡ ናቸው					
7. ስለምቻት						
C 1	የኤቲኤም አገልግሎት በሁሉም ቦታ አቅራቢ መጠቀም እችላለሁ					
C 2	ኤቲኤም ቀላል እና ለመረዳት አስቸጋሪ አይደለም					
5. ስለደንበኞች እርካታ						
CS 1	የኢትዮጵያን ግድባን ከበሚሰጠኝ የኤቲኤም አገልግሎት እረክቻለሁ					
CS 2	ሁሌም የኢትዮጵያን ግድባን ከየኤቲኤም የመጀመሪያ ምርጣጬ ነው					
CS 3	ለቤተሰቦቼ እና ለዘመዶቼ የኢትዮጵያን ግድባን ከየኤቲኤም አገልግሎት ተጠቃሚ እንዲሆኑ እመክራለሁ					
CS 4	የኢትዮጵያን ግድባን ከየኤቲኤም አገልግሎት ጥራት እንደምጠበቀው አግኝቻለሁ					

አ መሰ ግ ና ለ ሁ