FACTORS AFFECTING THE INTENTION TO USE MOBILE BANKING SERVICE (CBE-BIRR): CASE STUDY ON COMMERCIAL BANK OF ETHIOPIA

PARTIALFULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MBA (MASTERS OF BUSINESS ADMINISTRATION).

June, 2020 G.C

Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MBA PROGRAM

FACTORS AFFECTING THE INTENTION TO USE MOBILE BANKING SERVICE (CBE-BIRR): CASE STUDY ON COMMERCIAL BANK OF ETHIOPIA

ADDIS ABABA UNIVERSITY, COLLEGE OF BUSINESS AND ECONOMICS, MBA PROGRAM, IN PARTIALFULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MBA (MASTERS OF BUSINESS ADMINISTRATION).

BY: ABEBE ALEMU (GSD/0091/08)

ADVISOR: MESKEREM M. (Ph.D.)

FACTORS AFFECTING THE INTENTION TO USE MOBILE BANKING SERVICE (CBE-BIRR): CASE STUDY ON COMMERCIAL BANK OF ETHIOPIA

By: Abebe Alemu

Approved by Board of Examiners

_____	_____
Advisor	**signature**
_____	_____
Examiner	**Signature**
_____	_____
Examiner	**Signature**

DECLARATION

I declared that; this research thesis is my originalwork. Andall sources of materials used are well acknowledged.

Declared by:

Name: Abebe Alemu

Signature: ----------

Date: ----------

LETTER OF CERTIFICATION

This is to certify that Abebe Alemu has completed his project work titled **"Factors Affecting the Intention to Use Mobile Banking Service (cbe-birr): Case study on Commercial Bank of Ethiopia"**. As I have evaluated, his project is appropriate to be submitted as a partial fulfillment requirement for the Award of Degree in Masters of Business Administration.

ACKNOWLEDGEMENT

Undoubtedly may all praise be to God for blessing me with good health and for giving me the strength, patience guidance to endure and complete this thesis .Then I would like to thank may advisor Dr. Meskerem Mitiku for her unreserved attention to correct my report and giving me constructive idea during the process of this thesis .Finally, I would like to thank my friend Tekalign Tariku.

Table of Contents

List of Tables

List of Figures

LIST OF ACRONYMS AND ABBREVIATIONS

M-Banking Mobile Banking

ICT Information Communication Technology

ATM Automatic Teller Machine

POS Point of Sale terminals

NBE National Bank of Ethiopia

EBSD E-Banking Service Department

NBE National Bank of Ethiopia

SMS Short Message Service

CBE Commercial Bank of Ethiopia

Abstract

The research has been focused to assess factors affecting the intention to use mobile money (CBE Birr) in Commercial bank of Ethiopia, selected Branches in Addis Ababa city was used as a case study area for the study. Literature has reviewed on: service of mobile banking. Mixed research design has been used to realize the study objective. Using Krejcie and Morgan has taken from total population based on multiple stage method used. The data has been collected from both primary and secondary sources of data. The main research instrument used a Likert 5 scale questionnaire to collect primary data. From total Target population selected respondents (246) were sampled for data collection; Reliability and Validity of instrument has been used for test by carrying out a pilot study. The collected data has been processed with the help of computer software package (SPSS version 24.00). The collected data has been analyzed through different statistical techniques: descriptive statistics, inter correlation t-test, ANOVA and multiple regressions. According to the findings of the study there was a significant relationship between demographic information and intention to use mobile money (CBE Birr). The findings revealed that the result further revealed lack of customer awareness, customer lack of confidence with the security aspects Product Image in the Society and Limitation in availability and quality of infrastructure are the other factors affectingIntention to Use CBE-Birr mobile money service in commercial bank of Ethiopia. The study recommends that, to improve the benefits of mobile banking services CBE should strongly work on making the service ease and let the customers know the status for their decision and confidence. CBE should also work to the extent of offering better and reliable security by encryption information to protect their customer's privacy. In order to make simple the service, CBE should be available with voice or other channel to illiterate customers who can't read and write.

***Key Words**: CBE -BIRR Mobile money service, Agent Banking*

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The fast development of information technology, computer networks, internet and Tele communication systems around the world have created a new type of economy, which is called the digital economy (Shah and Clarke, 2009).Electronic banking become common as a channel of banking services because of the quick advancement in information technology (IT) and strong competition of banking market. According to a report by Hoot which is Social Media Management System, globally about 5.11 billion are unique mobile phone users and out of this number closed to 4.4 billion people use the internet, while the number of social media users is put at about 3.5 billion. Mobile banking differs from the payment features available on many of today's smart phones, as it provides a sign-on link to your individual checking or savings accounts by an app you download from your bank's website. Though some European banks offered mobile banking as early as 1999, it took until 2007 for major banks in the U.S. to develop mobile banking apps that actually worked and customers wanted (Janet Morrison, 2018).

In Africa, access to banking services increased from 2006 to 2018, For instance; only 14 percent of the Kenyan population had bank accounts in 2006 when the survey was first carried out. The figure rose to 34.4 percent in 2016. The latest data from the Communications Authority of Kenya shows that as of December 2018, Kenya had 31.6 million active users of mobile money transfer services from a total population of 49.7 million had only 44 banks; 31 are locally owned and 13 are foreign-owned in 2019 (Africa Economic Brief, 2019). According to P. Buys, D. Susmita, S.T. Timothy, and D. Wheeler (2009)in African countries the growth of mobile phone coverage shows strong positive correlation with population density, however, there are other compelling factors that matter as well. Ever since the internet has taken over the world, the banking industry has undergone a major shift. Before the internet was so popular for carrying out banking transactions, people had to go the bank, stand in long queues and then wait for their turns even if they only wanted to check their account balance, withdraw cash or transfer money. But now they no longer

need to visit a bank to carry out different kinds of banking transactions since they can use internet banking or mobile banking facilities.

Mobile banking has simplified the lives of many people and given them the option to send money, receive money, check account balance, pay bills, etc. using their mobile phones and the best part is that banks offer mobile banking services for free. Mobile banking can be defined as the ability to conduct bank transactions via a mobile device, or more broadly to conduct financial transactions via a mobile terminal. Mobile Market in Sub Saharan African countries is highly competitive except in Ethiopia. Ethiopia only has one active mobile network operator Ethio-Telecom. In Tanzania and Uganda Airtel acquired Znatel, in Kenya Safaricom and Airtel jointly acquired, and Yu's asset in the Republic Congo (Ibid, 2018). According to Steafel (2015) the first mobile banking introduced in Africa was M-Pesa in Kenya it launched by Vodafone and provider by Safaricom in March 2007. M-pesa (M represents money and Pesa is Swahili word for Money). In 2008 M-Pesa was launched to Tanzania and after 2015 it expanded to Uganda, South Africa, Democratic Republic of Congo, Romania, Mozambique, Egypt, Albania, India, Ghana and Lesotho. Currently other similar mobile banking services like Mobakish, Orange money and Airtel money provide similar service in different African countries. BelCash and M-Birr are the first mobile banking technology introduced in Ethiopia in 2012. However; different researches have been made in identifying factors affecting the intention to use mobile money. According Hanudin(2013) the intention to use mobile banking is affected by the extent of security and privacy associated with in the context of mobile banking. According to Chianson Yu (2012) financial cost and credibility are two main factors influencing the intention to use mobile money. According to (Shallone2013) perceived usefulness, perceived ease of use, relative advantages, personal innovativeness and social norms have significant effect on user's attitude thus influence the intention toward mobile banking, whilst perceived risks and costs deterred the adoption of the service. The research conducted thus farat different times brought different findings with regard to factors affecting the intension to use mobile money. Therefore, the major concern of the study is intended to identifying factors affecting intension to use CBE birr in case of Commercial Bank of Ethiopia located in Addis Ababa. The study will differentiated from other researches because of its focus was on customer's perception of its ease of use. The understanding of reasons for the rate of mobile banking usage could assist banks to find ways to adjust their marketing techniques and

come up with the right solution to improve their CBE Birr service as well as to increase the rate of mobile banking customer's usage.

1.2 Statement of the Problem

Banks in the world are modifying their strategies to reach customers worldwide more easily and cheaply. Therefore, banks are developing the technologies that will help them deliver banking product and services by the most cost effective channels and one of such channel is adopt Mobile banking (Muche, 2016).Commercial Bank of Ethiopia has been deploying Mobile banking services and large number of ATM and POS machines by investing large amount of money (CBE Annual Report, 2019). The customers are disappointed by services for many reasons like network failure, problems related to the machine (Hardware fault), power interruption, inconvenient location of ATM, awareness gap and related problems that hinder the service quality, so that ICT directly affects how managers decide, how they plan and what products and services are offered in the banking industry. Previous studies in various countries identified the factors that determine the adoption of mobile banking services. For example, studies by Alsheikh and Jamil (2014) in Saudi Arabia, Yu (2012) in Taiwan, Oliver (2012), Ndumba et.al (2014) and Abdullatif (2015) in Kenya, Fall et.al (2015) in Senegal, and Cudjoe et.al (2015) in Ghana have shown that the apathy of the bank consumers towards mobile banking services affected the adoption negatively, while customers belonging to the well-educated, young, relatively well-off and residing mainly in urban areas, etc. adopted the technology.There are also other researchers who conducted researches on adoption of e-banking and its challenge and opportunities in Ethiopian banking industry: Ayana (2012) examined the barriers and drivers of the adoption of electronic banking system in Ethiopia. The study was conducted based on the data gathered from four banks in Ethiopia; three private banks (Dashen bank, Zemen bank and Wegagen bank) and Commercial bank of Ethiopia. A research framework developed based on technology-organization-environment framework and Technology acceptance model guided the study. The study identified perceived ease of use and perceived usefulness as a driver of adopting E-banking system.

Gardachew (2010) has been done on electronic banking in Ethiopia: practices, opportunities and challenges, and it found the rapid growth of technology knocking the front door of every organization, where banks in Ethiopia would never be exceptional. Worku (2015) also studied by

using the technology acceptance model and analyzed the data gathered using descriptive statistics such as frequency, percentage, mean, mode, median and standard deviation. Besides binary logistic regression analysis is conducted to understand the relationship of mobile banking adoption and perceived usefulness, perceived ease of use and perceived risk. The study found out that usefulness and ease of use have positive relationship with the adoption of mobile banking whereas perceived risk has negative relationship with the adoption of mobile banking. Mattewos (2016) and Laekemaryam (2016) found out that usefulness and ease of use to have positive relationship with the mobile banking whereas risk has negative relations with the mobile banking.

Customers are not enjoying with the technological advancement by low level of infrastructural development, lack of suitable legal and regulatory framework, high rates of illiteracy, frequent power interruption and security issues. Moreover, Mobile banking is a new technology in Ethiopia, which needs a lot of effort and resources to be easily adopted by customers (Sira, 2013).In order to improve CBE-Birr service adoption by customers, it is necessary to examine factors affecting their intention by measuring the effect of perceived trust and usefulness on usage of CBE Birr and by evaluating the ease of use and the influence of awareness on usage of CBE Birr. In the study area, there has not yet been detail research works made available to CBE Birr of Commercial Bank of Ethiopia. Therefore, the researcher was motivated to fill Methodological gap, focused area gap and contextual gap.

1.3 Research Questions

A general question of the study was what factors affecting the intention to use mobile money (CBE Birr) in Commercial bank of Ethiopia, Addis Ababa? The specific question that has been asked by the study involves;

- Is there any effect of perceived trust on usage of CBE Birr?
- What is the effect of perceived usefulness on usage of CBE Birr?
- To what extent does the ease of use affect the usage of CBE Birr?
- What are the perceived risks to use CBE birr?
- Is customer awareness about the product affecting the usage of CBE Birr?

1.4 Objective of the study

1.4.1 General objective

The general objective of the research is to assess factors affecting the intention to use mobile money (CBE Birr) in Commercial bank of Ethiopia, Addis Ababa.

1.4.2 Specific Objectives

The study has the following specific objectives;

- To measure the effect of perceived trust on usage of CBE Birr.
- To identify the effect of perceived usefulness on usage of CBE Birr.
- To evaluate the association of Ease of use with usage of CBE Birr.
- To determine the influence of awareness on usage of CBE Birr.
- To assess how perceived risk affects the intention to use CBE birr.

1.5. Significance of the Study

The significance of the study is to understand simple method of using Mobile banking services from the CBE Birr user's perspectives and it is significant for the Employees of Commercial Bank of Ethiopia because, frequently audit the awareness of their customers and procedures to make sure that they are effectively providing mobile banking service. Also the study has identified factors affecting the intention to use mobile money and make some recommendation for the Bank. The paper also serves as a reference material for future researches in this area. Also, it provides knowledge and measures to improve the quality of Mobile banking service specifically at Commercial Bank of Ethiopia.

1.6. Scope or Delimitation of the Study

The study has theoretical, methodological, and geographical delimitation's. Theoretically the study has delimited to UTAUT theories constructs with Customer expectancy, Social factors and Transaction cost that affect the intention to use mobile money service. Methodologically, the targeted populations of the study are the customers of Commercial Bank of Ethiopia selected through Multiple Stage sampling method. Geographical scope of the study limited at Commercial Bank of Ethiopia North, South, East and West Addis Ababa Districts.

1.7 Limitation of the study

Lack of well-organized data may be the first limitation of the study. Lack of previously conducted researches in case of study was another limitation of the study. Respondents may become reluctant to fill questionnaires particularly open ended Questions because of lack of time and willingness.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

Under this Chapter, the study is going to give comprehensive understanding about factors affecting the intention to use mobile money referring theoretical, conceptual and empirical literature review that obtain from various sources in relation to the research questions.

2.2 Theoretical Reviews

2.2.1 Definitions of Mobile Banking

According to James Chen (2019) Mobile banking is the act of making financial transactions on a mobile device (cell phone, tablet, etc.). Mobile Banking is financial transactions that are based on wireless handsets Mobile banking differs from mobile payments, which involve the use of a mobile device to pay for goods or services at the point of sale or remotely to the use of a debit or credit card (Venable Financial Services, 2008). Mobile banking is a subset of electronic banking in which customers access a range of banking products, such variety of savings and credit instruments, via electronic channels (Porteous, 2006). According to Rosenberg, J. (2010), the earliest mobile banking services were offered over SMS, a service known as SMS banking. With the introduction of smart phones with WAP support enabling the use of the mobile web in 1999, the first European banks started to offer mobile banking on this platform to their customers. Mobile banking has until recently most often been performed via SMS or the mobile web. Apple's initial success with iPhone and the rapid growth of phones based on Google's Android have led to increasing use of special client programs, called apps, downloaded to the mobile device.

2.2.2Evolution of Mobile Banking

In the mid 1990's, almost immediately after embracing the Internet as a channel for banking services, banks started and telecommunications companies started to work together towards the development of an online banking service based on mobile telephony. Projects were developed aimed at enhancing the screen and the keyboard of the mobile phone trying to convert it into a usable, portable and foldable pocket cash point device (Warren, 1995).Mobile banking was first introduced in the late 90s-early 2000s when the Internet began to gain popularity. A few select

large banks like Wachovia and Wells Fargo started to offer simple services on their bank websites such as viewing checking account balances and finding the nearest ATM, yet they did not offer interactive services (Feig, 2007).the use of Internet banking by providing access to the bank at any time, have a great impact on the bank services to Customer. Therefore, those customers were able to review the status of your bank account, carry out other transactions such as deposit accounts, and pay bills from home or office easily. Major restrictions of this model electronic banking are computer and internet access. Therefore, mobile banking has been introduced as a model of e-banking provides customers who need only a mobile phone. The reasons for the superiority of this approach to banking with internet banking are no restrictions in space, using the minimum facilities and another reason is the great growth of mobile phone use among users. This way has provided the development of mobile banking (PoorniCk,2010).Mobile banking beginning in the late 1990 has experienced five distinct stages: The first stage, mobile banking will be summarized in simple banking operations, especially pays bills and send SMS from the bank to the customers and vice versa. The second stage is to add some of the accounts of depositors and related services to mobile banking services. In the third stage, were used banking services via mobile network, other media such as the Internet and telephone, this phase was completed with this phase was completed with the emergence of intelligent mobile phones. The fourth step is to continue, development has been made as of JP Phone and Android, and this progress has led to the providing of services such as mobile Internet access and connection to the operating systems of bank. In the fifth stage, this is starting; technologies have been used such as radio frequency identification chips for mobile payments, and Banking Network Connection to Visa Card and MasterCard systems. Qualitative and quantitative development of these technologies can be connected to make chips for mobile devices such as mobile phone, watches, TV and IPad even connected sunglasses (Farnood, 2009).

According to Porteous (2006) described the various models of mobile banking globally, particularly in Africa, and identified which models, and enablers were needed to broaden access to financial services. Growth of mobile banking globally had been slower than expected, with critical mass only being achieved in parts of Asia.

In Ethiopia, there is one Government bank (Commercial Bank of Ethiopia) and 16 private commercial banks currently operating in Ethiopia. All of them are provided mobile banking services for their customers. CBE Birr provided by Commercial Bank of Ethiopia, Awash Mobile Wallet by Awash Bank, Amole by Dashen Bank, HelloCash by Cooperative Bank of Oromia, Hibir by United Bank, Oro Cash by Oromia International Bank, AdIB by Addis International Bank, Berhan Mobile by Berhan Bank, and etc (Tilahun D., 2018).

Commercial Bank of Ethiopia (CBE) officially launched its mobile money service (CBE birr) on December 11, 2017 after successfully testing its functionality for six months. CBE birr is a mobile based banking where by the bank selects trains and authorizes agents to provide banking service on behalf of the bank through a mobile phone (CBE annual Report, 2019). After the implementation of mobile banking in Ethiopia, mobile banking users have seen some growth but in terms of transaction and active involvement still has way to go as compared to a majority of customer who prefer banking in traditional way (CBE, performance review 2018/19).

2.2.3. Factors affecting Intention to Use Mobile banking

Many studies pertaining to consumer behavior towards mobile payment services have built on the Technology Acceptance Model (TAM) (Davis, 1989), postulating that consumers' intention to adopt technology is influenced by perceived usefulness and perceived ease of use. As the literature evolves, this model has been extended. Authors such as Venkatesh (2000) and Hung et al. (2003) suggest that subjective social norm is a determinant of users' intention to use mobile banking. Several years later, Nysveen et al. (2005) combine the TAM and the Theory of Planned Behavior (TPB) (Ajzen,1991) with non-utilitarian motives to posit that that intention to use mobile services is explained by consumer perceptions of multi-attributes, i.e. expressiveness, enjoyment, usefulness, ease of use, social influence and control. Some researchers highlight the roles of trust and security in predicting such intention (Cao, 2011).Perceived Usefulness: Perceived usefulness denotes the degree to which consumers believe that using a system would help them to perform jobs or duties better (Davis, 1989). Linking this to the domain of mobile Banking, consumers develop favorable attitude and intention towards such services because it has relative advantage compared to other methods such as cash, and card payments (Arvidsson, 2014). Various studies based on the TAM confirm the positive relationship between perceived usefulness and intentions

to use mobile banking. Perceived Ease of Use: Davis (1989) suggests that, despite performance benefits (i.e. perceived usefulness), consumers may not adopt use mobile services which require a great deal of effort in using. Hence he posits that perceived ease of use, indicating the effort or difficulty consumers derived through the use a particular mobile service, exerts direct influence on intention to use mobile service. As such, if consumers perceive that mobile payment services are easy to use, they are likely to use such services. Empirical evidence has converted into the prominent role of perceived ease of use in determining consumers' intentions to use mobile payment services (Cheong & Park, 2004). Perceived Enjoyment: While perceived usefulness and perceived ease of use indicate extrinsic motivations, perceived enjoyment mentions intrinsic motivation which refers to doing something because it is inherently interesting or enjoyable (Ryan &Deci, 2000). Intrinsic motivation is a major factor influencing intention to use technologies in the integrated model developed by Venkatesh et al. (2002). Perceived Trust: Gefen et al. (2003) argue that trust enhances predictive power of the TAM. Perceived trust is defined as a belief that a particular technological solution is secure and trustworthy or not (Dahlberg et al., 2003). Generally, consumers' trust in actors such as service providers, banks and payment service positively affects their intentions to use mobile service and subsequent behaviors (Arvidsson, 2014).

2.2.4 .Unified Theory and Use of Technology Model (UTAUT)

The UTAUT model which aims to explain technology acceptance, is based on eight technology acceptance theories or models. In particular, the UTAUT draws on the Motivational Model, the Theory of Planned Behavior (TPB), the combined TAM and TPB, the model of Personal Computer Utilization, the Innovation Diffusion Theory and the Social Cognitive Theory (Venkatesh et al. 2003). At the core, the UTAUT model uses intention as a predictor of the technology use behavior. The included predictors of intention are based on the components the eight technology adoption models reviewed. In the UTAUT model, performance expectancy, effort expectancy, and social factors have direct effects on intention, which along with facilitating conditions have direct effects on use behavior. The effects of interactions of each of performance expectancy, effort expectancy and social factors with each of age and gender; interactions of experience with each of effort expectancy and social factors; and an interaction of voluntariness of use and social factors on intention are also included. Finally, there are effects of interactions of age and facilitating conditions and experience and facilitating conditions on use behavior (Venkatesh

et al. 2003).The UTAUT Model needed to be modified before it would be applied. Zhou et al. (2010) indicates that the four mediating factors in Vankatesh's original UTAUT Model that is gender, experience, voluntariness and age cannot be applied as they are, in different cultural context. As (Ticherner et al. 1970) indicates the higher the social-economic status of user, the faster the adoption of a technology. In Africa however most users have a low economic status and such factors may not be relevant to analyzing their uptake of a technology.

2.3. Empirical Review of the Study

Based on the objectives and main findings of each research works under consideration, the review tries to make a link between the theoretical and empirical reviews in light of the underlying themes towards the provision of mobile banking services. Mobile banking offers customers the privilege of performing many banking activities, such as account balance inquiry and bill payment, anytime and anywhere (Tam and Oliveira 2016). Moreover, mobile banking services provided by banks are usually safe, secure, and usually free of charge in most advanced countries (Shaikh and Karjaluoto 2015). The advantages of mobile banking are not limited to bank customers (Baabdullah et al. 2019). The diffusion of any technological innovation involves two distinct stages of initial adoption and post-adoption (Zhou 2011), and application-based mobile banking is no exception (Mohammadi 2015). The mobile banking initial adoption has received much attention from academia (Shaikh and Karjaluoto 2015). Prior literature has provided evidence that task-technology fit, perceived ease of use, initial trust, perceived usefulness, and effort expectancy are among key determinates of an individual's decision in adoption and further use a mobile banking service (Baptista and Oliveira 2015;Gu et al. 2009;Laukkanen 2016;Lin 2011;Oliveira et al. 2014;Zhou et al. 2010).

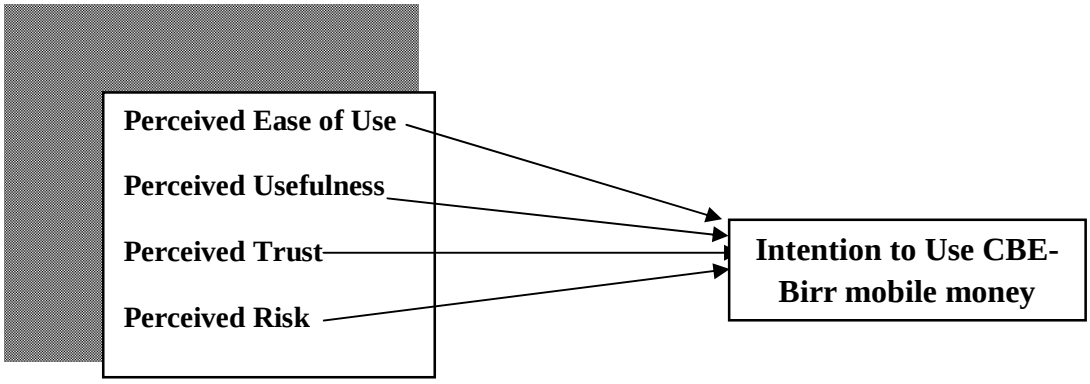
Mosoti and Mwaura. (2014) conducted study to investigate on the factors influencing slow adoption of agent banking services by customers as a financial inclusion tool by commercial banks in Kenya. The study has found that costs charged due to use of Agent Banking services were high this is because they were much higher compared to normal bank charges such as ATM charges. Transport is also an issue for those areas where there is no wide network coverage, trustworthiness, security of transacting, infrastructure challenges such as system and power failure and liquidity concern were some of the challenges that contributed to the slow adoption of Agent Banking. Afewerk (2015) also studded on "assessment of agency banking innovation in Ethiopia: barriers and derivers". The author used a quantitative research approach sent out to respondents which is

from the selected four banks. The finding of the study revealed that the main factors influencing the adoption of agent banking in Ethiopia are the prospects of cost reduction, availing services beyond restriction of space and time through established third party with the application of technology. The benefits were also classified as Perceived Ease of Use and Perceived Usefulness. In the conclusion The study recommended banks to consider technology based competition focusing on customer base expansion, cost reduction, awareness creation, credibility, security, ease of use, and availability to exploit the benefit of agency banking while the government should support banking sector by facilitating sufficient ICT infrastructure development and issue workable legal frameworks to ease the adoption of agency banking system.

2.4. Conceptual Framework of the Study

The conceptual framework indicates the vital process, which is useful to illustrate the track of the study. The study demonstrates the relationship between the independent variables (Perceived Ease of Use, Perceived Usefulness, Perceived Trust and Perceived Risk.) and Intention to Use CBE-Birr mobile money service.

Figure 2.1: conceptual frame work of the study



Source: Researcher own work (2020).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this chapter is to analyze the research problem systematically (following scientific procedures). It may be understood as a science of studying how research is done scientifically. This chapter included research approaches, research design, data type and source, sample size and technique, data collection method, method of data analysis, and data validity and reliability.

3.2 Research Approach

The research approach in this study is quantitative in nature which involves the use of primary and secondary data. In order to achieve the study objectives, the researcher have used a quantitative research approach by using a primary data source. Quantitative approach uses statistical methods in describing patterns of intention and generalizing findings from samples to population of interest, and employs strategies of inquiry such as experiments and surveys (Creswell 2012).

3.3. Research Design

In order to answer the statement of the problem and meet the research objectives, the design of the study was both descriptive and explanatory type. Descriptive research studies are those studies that are concerned with describing the characteristics of a particular individual, or of a group. The main characteristic of this method is that the researcher has no control over the variables; he/she can only report what has happened or what is happening (Kothari, 2004). Descriptive design is a technique used to organize and summarize a set of data in concise way helps to identify the general features and trends in a set of data and extracting useful information and also it is very important in conveying the final results of a study.

3.4. Target Population

The research has been conducted at Commercial Bank of Ethiopia, North, South, West and East Addis Ababa Districts. The target population of the study comprised customers of Commercial

Bank of Ethiopia in Addis Ababa who are currently using mobile banking services. The number of Mobile Banking users of Commercial Bank of Ethiopia, in Addis Ababa is more than 1,053,932 as at Feb 2020 (M). Because it's difficult to study the entire population from the districts of the organization, it is important to select a sample.

3.5. Sampling Size and Techniques

3.5.1 Sample size

Since it is impossible to administer and conduct study for all populations in the entire Bank, so a sample will be necessary. According to Kerlinger, (2003), a sample in a survey should represent at least 30% of the target population.

Sekeran (1990) defines a sample as a portion of the population that has attributes as the entire population. Because it's difficult to study the entire population of the organization, it is important to select a sample from the total populations.

The researcher has adopted a statistical formula to determine sample size developed by Daniel (1999) as cited by Nating Winn Rush (2006), the researcher set its confidence level at 95% with 5% error term. Accordingly, using a Z score value of 1.96 at this confidence level, the following sample has been drawn.

$$n = \frac{Z^2 * P(1-P)}{d^2}$$

Where: n= sample size

Z= z-statistic for the level of confidence

P= expected prevalence or proportion (in proportion of 20% p=0.2)

d = precision (in proportion of one 5% d= 0.05)

$$n = \frac{1.96^2(2)(1-0.2)}{0.05^2} = 246$$

After determining a sample size of 246, the samples from each district has been taken in proportion to their CBE birr customers as of Feb, 2020.

TABLE 3.1: Proportional distribution of questionnaires

No	Name of District	No of CBE users(U)	Percentage proportion(P)	No of questionnaire
1	North Addis Ababa	155245	155245/1053932 *246	36.24
2	South Addis Ababa	220472	220472/1053932 *246	51.46
3	East Addis Ababa	529017	529017/1053932 *246	123.48
4	West Addis Ababa	149198	149198/1053932 *246	34.84
Total		**105,3932**		**246**

Source: Annual Report (2019/20)

Within 15ditricts four districts has taken, with in four districts 500 branches has taken from Addiss Ababa and only 100 branches customers has selected by systematic sample method as follows:

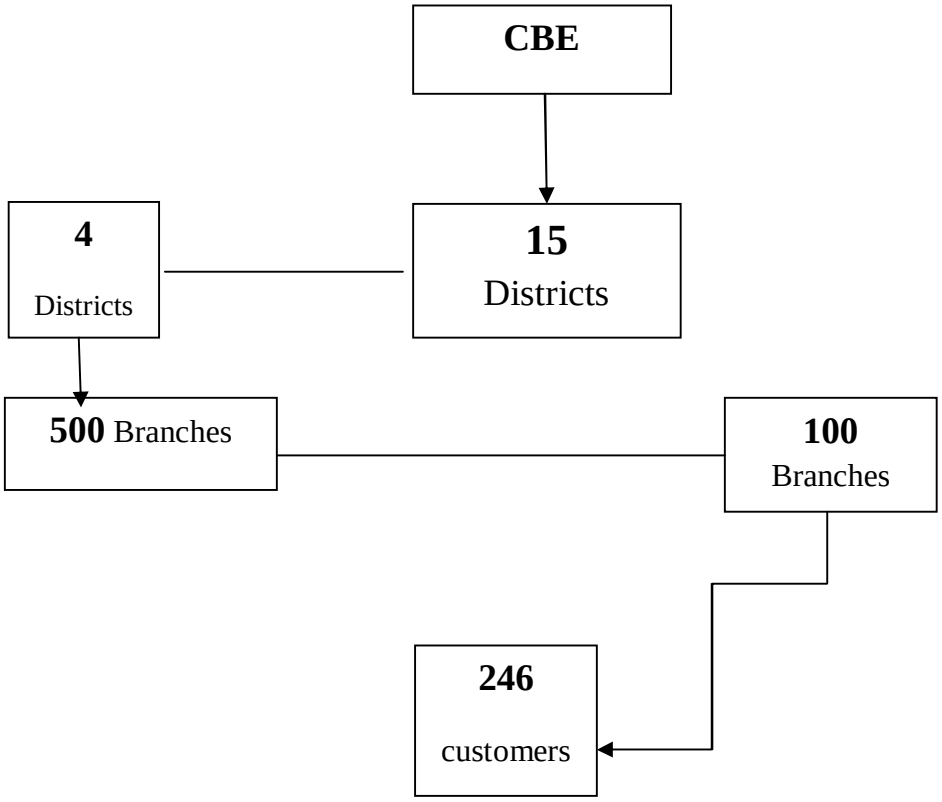


Figure 3.1. :Proportional distribution of questionnaires

3.5.2 Sampling Techniques

The researcher has used multistage random sampling techniques for questionnaires. It helps the researcher to select sample from different departments to give equal chances for all departments and obtained relevant information related to motivation.

3.6 Data type and Source

This study has used both primary and secondary data type. Primary data was collected through survey method. The researcher conducts survey, he observes some quantitative measurements, or the data, with the help of which he examines the truth contained in his hypothesis Kothari, (2004). Primary data has been collected through interview and questionnaire (both open ended and close ended) because; they will meet the purpose of the research. Secondary data has obtained from reviewing of different book, journals, archived research and document.

3.7 Data Collection Methods

The necessary primary and secondary data has collected to achieve the objective of the study. In order to gather the primary data, the study has used both questionnaires and interview. Questionnaires, as a technique is mostly used in social surveys to collect standardized data form a large number of people and it employ a five figure Liker scale that range from strongly agree to strongly disagree for the selected sample.

3.8 Methods of Data Analysis and Interpretation

To meet the research objectives, data collected from structured questionnaire has analyzed using statistics tool: tabulation, frequency distribution, and percentage to increase understanding and facilitate easy comparison of the data collected from the survey. Descriptive statistics, which include frequencies, percentages, means, and standard deviations, has presented the main characteristics of the sample. Also inferential statistics: t-test and ANOVA has used to present the relationship between independent variables (perceived trust, perceived usefulness, Ease of use, and awareness) and dependent variables (Customers' Intention to use CBE- BIRR). Major findings has interpreted based on the result and the collected data which processed with the help of SPSS software package (version 24) and this is due to the fact that the software package can reduce time cost and reduces the researcher's burden. Qualitative data collected by interviews has been analyzed by thematic analysis which consist identifying, coding, and categorizing patterns or themes found in the data.

3.9 Validity and Reliability of the Instruments

In order to ensure the quality of the research design, content and construct validity of the study has checked. According to Kothari (2004) Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study. Reliability is that individuals should receive a similar score each time they use the measuring instrument Jackson, (2010).The Cronbach's alpha has calculated for all dependent variables (Customers' Intention to use CBE-BIRR) and independent variables (perceived trust, perceived usefulness, Ease of use, and awareness). According to Uma Sekaran *(2005),* if the alpha value is less than .6, the instrument used has a low reliability which opens for some errors. If the alpha value is within .7, the instrument has acceptable.

TABLE 3.2: The Cronbach's Alpha of the Items

Cronbach's Alpha		N of Items
Variables	.829	25

Source: Survey 2020

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

Under this section the data collected from respondents were presented and analysis was made based on the collected primary and secondary data through questionnaires and Interviews.

4.2 Response Rate

The questionnaires were distributed to a total of 246 respondents. Among them 222 (90.24%) were returned back. Out of distributed questionnaires 24(9.76%) questionnaires were not returned back. The questionnaires include the direct question to assess factors affecting the intention to use mobile money. Each questionnaire was accompanied by a further covering letter explaining the purpose of the study to the prospective respondent.

General instructions on completing the questionnaire and the importance of completing all questions were included. The covering letter also explained why it is important that the respondent personally complete the questionnaire. To measure the reliability, the instruments used Cronbach's alpha.

No	Respondents Category	Frequency	Percentage
1	Responded	222	90.24%
2	Didn't respond	24	9.76%

Source: Researcher computation

4.3 Demographic characteristic of Respondents

TABLE 4.1: What is your Gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	172	77.5	77.5	77.5
	Female	50	22.5	22.5	22.5
	Total	222	100.0	100.0	100.0

Source: Survey (2020)

The gender of majority of respondents as shown table 4.1 is male (77.5) whereas, 22.5 percent of respondents are Females. Hence most of users of CBE Birr are male the CBE should reevaluate its own users gender and must improve the gender equality.

TABLE 4.2: Which of the following Age categories describes you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 25	19	8.6	8.6	8.6
	25-35 years	76	34.2	34.2	42.8
	35-55 years	20	9.0	9.0	51.8
	Above 55 years	107	48.2	48.2	100
	Total	222	100.0	100.0	

Source: Survey (2020)

The majority of respondents' age was above 55 years old, which represents 107 (48.2%) of the total sample. Moreover, the remaining 76(34.2%) respondents were between 25-35 years category, 20 (9%) respondents are 35-55 and 19(8.6%) respondents indicates below 25 years old.

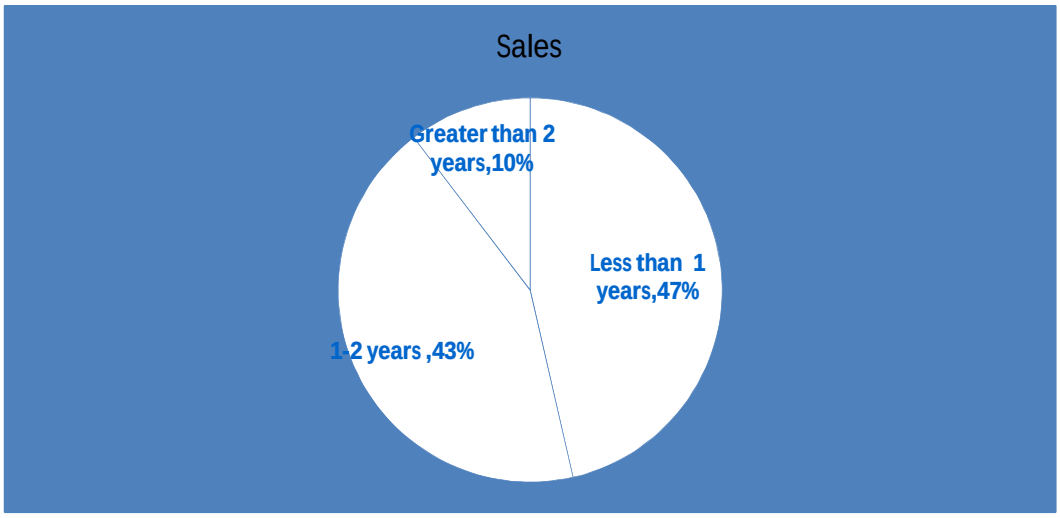
TABLE 4.3: Educational Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	College Diploma	42	18.9	18.9	18.9
	BA/BSc Degree	76	34.2	34.2	53.2
	Master's Degree	27	12.2	12.2	65.3
	Other	75	34.7	34.7	100
	Total	222	100.0	100.0	

Source: Survey (2020)

In addition to this, respondents were asked about their educational Qualification. Accordingly, the majority of the respondents (384.7%) were selected other means they were no has formal education and only 34.2% of the respondents were selected BA Degree. That means most of CBE customers in Addis Ababa district have higher educational qualification.

Figure 4.1: How long have you used CBE -Birr?



Source: Survey 2020

According to figure 4.1, majority (47%) of respondents have used CBE -Birr for less than one years, whereas 43% of them has used from 1-2 years and the remaining (10%) of them has used CBE - Birr for greater than two years.

TABLE 4.4: Customer Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Individual	207	93.2	93.2	93.2
	Organization	15	6.8	6.8	6.8
	Total	222	100.0	100.0	100.0

Source: Survey (2020)

With regard to customer type as shown in table 4.6 above 93.2 percent of the sample respondents replied that they are individual customers. On the other hand 6.8 percent of the respondents replied that they are organization.

4.4 Factors affecting the intention to use mobile money (CBE Birr) in Commercial bank of Ethiopia, Addis Ababa.

According to the survey result, Factors affecting the intention to use mobile money are identified and discussed as follows.

4.4.1 Experience of Using Mobile Phone

TABLE 4.5: Customers have using mobile phone for a long time

Mean	2.25
Median	2.00
Std. Deviation	.916

Customers have using mobile phone for a long time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	52	23.4	23.4	23.4
	Disagree (DA)	83	37.4	37.4	60.8
	Neutral (N)	67	30.2	30.2	91.0
	Agree (A)	20	9.0	9.0	100
	Total	222	100.0	100.0	

Source: Survey (2020)

The next question that the respondents answered is “I have been using mobile phone for a long time” and according to the survey result, majority of respondents (37.4%) have been disagreed with the statement, 30% of them responded neutral and 23.4% of them strongly disagreed with the statement.

4.4.2 Perceived Ease of Use

TABLE 4.6: Using CBE-Birr would enable Customers to accomplish my tasks more quickly.

Mean	2.51
Median	3.00
Std. Deviation	.855

Source: Survey (2020)

Using CBE-Birr would enable Customers to accomplish my tasks more quickly.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	28	12.6	12.6	12.6
	Disagree (DA)	77	34.7	34.7	47.3
	Neutral (N)	92	41.4	41.4	88.7
	Agree (A)	25	11.3	11.3	100.0
	Total	222	100.0	100.0	

Source: Survey 2020

The next statement that the respondents answered is “Using CBE-Birr would enable me to accomplish my tasks more quickly” and according to the survey result, majority of respondents(41.4%) have been responded neutral with the statement, 34.7% of them responded disagree and 12.6% of them strongly dis agreed with the statement.

TABLE 4.7: The registration procedures are easy for Customers

Mean	2.23
Median	2.00
Std. Deviation	1.096

The registration procedures are easy for Customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	73	32.9	32.9	32.9
	Disagree (DA)	65	29.3	29.3	62.2
	Neutral (N)	44	19.8	19.8	82.0
	Agree (A)	40	18.0	18.0	100
	Total	222	100.0	100.0	

Source: Survey (2020)

The next statement that the respondents answered is "The registration procedures are easy for me" and according to the survey result, majority of respondents(32.9%) have been responded strongly disagreed with the statement, 29.3% of them responded disagree and 19.8% of them neutral with the statement.

TABLE 4.8: The interface with CBE-Birr mobile money is user friendly

Mean	2.55
Median	2.50
Std. Deviation	.959

The interface with CBE-Birr mobile money is user friendly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	32	14.4	14.4	14.4
	Disagree (DA)	79	35.6	35.6	50.0
	Neutral (N)	69	31.1	31.1	81.1
	Agree (A)	42	18.9	18.9	100
	Total	222	100.0	100.0	

Source: Survey (2020)

The next statement that the respondents answered is “The interface with CBE- Birr mobile money is user friendly” and according to the survey result, majority of respondents (35.6%) have been disagreed with the statement, 31.1% of them responded neutral and 18.9% of them agreed with the statement.

TABLE 4.9: It is easy for customer to become skillful at using CBE-Birr mobile money

Mean	4.65
Median	5.00
Std. Deviation	1.966

It is easy for Customers to become skillful at using CBE-Birr mobile money service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	20	9.0	9.0	9.0
	Disagree (DA)	22	9.9	9.9	18.9
	Neutral (N)	26	11.7	11.7	30.6
	Agree (A)	58	26.1	26.1	42.3
	Strongly agree (SA)	44	19.8	19.8	100
	Total	222	100.0	100.0	

Source: Survey (2020)

The next statement that the respondents answered is “It is easy for me to become skillful at using CBE-Birr mobile money service” and according to the survey result, majority of respondents (26.1%) have been agreed with the statement, 19.8% of them strongly agreed and 11.7% of them responded neutral for the statement.

4.4.3 Perceived Usefulness

TABLE 4.10: CBE-Birr mobile money is useful way of makingpayment

Mean	2.50
Median	2.00
Std. Deviation	1.121

CBE-Birr mobile money is useful way of making payment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	48	21.6	21.6	21.6
	Disagree (DA)	77	34.7	34.7	56.3
	Neutral (N)	34	15.3	15.3	71.6
	Agree (A)	63	28.4	28.4	100
	Total	222	100.0	100.0	

Source: Survey (2020)

Respondents were asked about CBE-Birr mobile money is useful way of making payment (table 4.10) around 34.7 % of the respondents disagreed. In addition to this, 28.4% of respondents were agreed. Whereas, 21.6% of respondents were strongly disagreed about its usefulness

TABLE 4.11: CBE - Birr Mobile money service helps save time

Mean	1.77
Median	2.00
Std. Deviation	.728

CBE - Birr Mobile money service helps save time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	90	40.5	40.5	40.5
	Disagree (DA)	93	41.9	41.9	82.4
	Neutral (N)	39	17.6	17.6	100
	Total	222	100.0	100.0	

Source: Survey (2020)

Respondents were asked about CBE - Birr Mobile money service helps save time (table 4.11) around 41.9 % of the respondents disagreed. In addition to this, 40.5% of respondents were strongly dis agreed. Whereas, 17.6% of respondents were neutral about mobile money service helps save time.

TABLE 4.12: CBE-Birr is more convenient and accessible.

Mean	2.27
Median	2.00
Std. Deviation	.805

CBE-Birr is more convenient and accessible.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	29	13.1	13.1	13.1
	Disagree (DA)	126	56.8	56.8	69.8
	Neutral (N)	46	20.7	20.7	90.5
	Agree (A)	21	9.5	9.5	100.0
	Total	222	100.0	100.0	

Source: Survey (2020)

Respondents were asked about CBE-Birr **is** more convenient and accessible (table 4.12) around 56.8 % of the respondents disagreed. In addition to this, 20.7% of respondents were responded neutral. Out of total 13.1% of respondents were strongly disagreed about convenient and accessible.

TABLE 4.13: CBE - BIRR mobile money service would outweigh the disadvantages

Mean	3.10
Median	3.00
Std. Deviation	.999

CBE - BIRR mobile money service would outweigh the disadvantages

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	13	5.9	5.9	5.9
	Disagree (DA)	61	27.5	27.5	33.3
	Neutral (N)	38	17.1	17.1	50.5
	Agree (A)	110	49.5	49.5	100.0
	Total	222	100.0	100.0	

Source: Survey (2020)

Respondents were asked about CBE - BIRR mobile money service would outweigh the disadvantages (table 4.13) around 49.5 % of the respondents agreed. In addition to this, 27.5% of respondents were disagreed, whereas, 17.1% of respondents were neutral about it.

4.4.4 Perceived Trust

TABLE 4.14: In using CBE - Birr, Customers believe that my transactions are secured.

Mean	3.06
Median	3.00
Std. Deviation	1.120

In using CBE - Birr, Customers believe that my transactions are secured.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	29	13.1	13.1	13.1
	Disagree (DA)	32	14.4	14.4	27.5
	Neutral (N)	70	31.5	31.5	59.0
	Agree (A)	78	35.1	35.1	94.1
	Strongly agree (SA)	13	5.9	5.9	100.0
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.15: In using CBE - Birr, Customers believe that my privacy is secured.

Mean	2.79
Median	3.00
Std. Deviation	.744

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree (DA)	89	40.1	40.1	40.1
	Neutral (N)	90	40.5	40.5	80.6
	Agree (A)	43	19.4	19.4	100
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.16: In using mobile banking, Customers information is kept confidential

Mean	2.95
Median	3.00
Std. Deviation	.795

In using mobile banking, Customers information is kept confidential

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree (DA)	64	28.8	28.8	28.8
	Neutral (N)	115	51.8	51.8	80.6
	Agree (A)	32	14.4	14.4	95.0
	Strongly agree (SA)	11	5.0	5.0	100
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.17: Customers have well aware of the existence of CBE - Birr services.

Mean	3.69
Median	4.00
Std. Deviation	.671

Customers have well aware of the existence of CBE - Birr services**.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral (N)	95	42.8	42.8	42.8
	Agree (A)	101	45.5	45.5	88.3
	Strongly agree (SA)	26	11.7	11.7	100
	Total	222	100.0	100.0	

Source: Survey (2020)

To measure the attitude of respondents with regard to Perceived Trust, the respondents were asked four questions using five-point Likert scale.

For the first question table4.14 (In using CBE - Birr, I believe that my transactions are secured.) (35.1%) of them agree with the statement and of the respondent, (31.5%), are responding neutral with the statement

For the second question table 4.15 (In using CBE - Birr, I believe that my privacy is secured.) (40.5%) of them disagree with the statement and of the respondent, (40.1%), are strongly disagreeing with the statement.

For the third question 4.16 (In using mobile banking, my information is kept confidential) (51.8%) of them were neutral with the statement and of the respondent, (28.8%), are dis agree with the statement.

For the fourth question 4.17 (I am well aware of the existence of CBE - Birr services.) (45.5%) of them agree with the statement and of the respondent, (42.8%), are neutral with the statement.

4.4.5 Perceived Risk

TABLE 4.18: If Customers lose their mobile phone, they will not lose my money as well

Mean	3.46
Median	3.00
Std. Deviation	.656

If Customers lose their mobile phone, they will not lose my money as well

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral (N)	140	63.1	63.1	63.1
	Agree (A)	62	27.9	27.9	91.0
	Strongly agree (SA)	20	9.0	9.0	100.0
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.19: If there is a network problem, Customers transactions will be affected

Mean	2.15
Median	2.00
Std. Deviation	.673

If there is a network problem, my transactions will be affected

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Strongly disagree (SD)	26	11.7	11.7	11.7
	Disagree (DA)	147	66.2	66.2	77.9
	Neutral (N)	39	17.6	17.6	95.5
	Agree (A)	10	4.5	4.5	100
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.20: It is difficult for Customers money to be stolen if using CBE-Birr mobile money service

Mean	2.87
Median	3.00
Std. Deviation	.786

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree (DA)	84	37.8	37.8	37.8
	Neutral (N)	82	36.9	36.9	74.8
	Agree (A)	56	25.2	25.2	100
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.21: There is a low risk of other people tampering with my personal information during the transaction

Mean	2.95
Median	3.00
Std. Deviation	.650

There is a low risk of other people tampering with my personal information during the transaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree (DA)	53	23.9	23.9	23.9
	Neutral (N)	128	57.7	57.7	81.5
	Agree (A)	41	18.5	18.5	100
	Total	222	100.0	100.0	

Source: Survey (2020)

To measure the attitude of respondents with regard to Perceived Risk, the respondents were asked four questions using five-point Likert scale.

For the first question table 4.18 (If I lose my mobile phone, I will not lose my money as well.) (63.1%) of them respond neutral with the statement and of the respondent, (77.9%), are agreeing with the statement.

For the second question table 4.19 (If there is a network problem, my transactions will be affected.) (66.2%) of them disagree with the statement and of the respondent, (17.6%), where neutral with the statement.

For the third question 4.20 (It is difficult for my money to be stolen if using CBE-Birr mobile money service) (37.9%) of them were disagreed with the statement and of the respondent, (36.9%) where respond neutral with the statement.

For the fourth question 4.21 (There is a low risk of other people tampering with my personal information during the transaction) (57.7%) of them respond neutral with the statement and of the respondent, (23.9%), where dis agree with the statement.

4.4.6 Intention to Use CBE-Birr mobile money service

TABLE 4.22: Customers intend to continue to use CBE-Birr mobile money service

Mean	3.50
Median	3.00
Std. Deviation	.629

Customers intend to continue to use CBE-Birr mobile money service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree (DA)	1	.5	.5	.5
	Neutral (N)	124	55.9	55.9	56.3
	Agree (A)	82	36.9	36.9	93.2
	Strongly agree (SA)	15	6.8	6.8	100
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.23: Customers intend recommending CBE-Birr mobile money service to others

Mean	2.57
Median	3.00
Std. Deviation	.688

Customers intend recommending CBE-Birr mobile money service to others

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	15	6.8	6.8	6.8
	Disagree (DA)	76	34.2	34.2	41.0
	Neutral (N)	121	54.5	54.5	95.5
	Agree (A)	10	4.5	4.5	100.0
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.24:I enjoy using all available CBE-Birr mobile money services

Mean	1.89
Median	2.00
Std. Deviation	.901

I enjoy using all available CBE-Birr mobile money services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	85	38.3	38.3	38.3
	Disagree (DA)	94	42.3	42.3	80.6
	Neutral (N)	25	11.3	11.3	91.9
	Agree (A)	18	8.1	8.1	100.0
	Total	222	100.0	100.0	

Source: Survey (2020)

TABLE 4.25: My CBE-Birr menu is very easy to understand.

Mean	1.62
Median	1.00
Std. Deviation	.785

My CBE-Birr menu is very easy to understand.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree (SD)	116	52.3	52.3	52.3
	Disagree (DA)	84	37.8	37.8	90.1
	Neutral (N)	12	5.4	5.4	95.5
	Agree (A)	10	4.5	4.5	100.0
	Total	222	100.0	100.0	

Source: Survey (2020)

To measure the attitude of respondents with regard to Intention to Use CBE-Birr mobile money service, the respondents were asked four questions using five-point Likert scale.

For the first question table 4.22, I intend to continue to use CBE-Birr mobile money service (55.9%) of them respond neutral with the statement and of the respondent, (36.9%), are agree with the statement.

For the second question table 4.23, I intend recommending CBE-Birr mobile money service to others (54.5%) of them where respond neutral for the statement and of the respondent, (34.2%), where dis agree with the statement.

For the third question 4.24, I enjoy using all available CBE-Birr mobile money services (42.3%) of them were disagreed with the statement and of the respondent, (38.3%) of them where strongly disagree with the statement. For the fourth question 4.25, My CBE-Birr menu is very easy to understand (52.3%) of them strongly disagree with the statement and of the respondent, (37.8%), where dis agree with the statement.

4.5 Relationship between Experience of Using Mobile Phone, and Variables

To describe relationship between Variables and Intention to Use CBE-Birr mobile money service, the researcher has been used correlation analysis statistical technique, because this method indicates whether items share something in common with each other. Pearson correlation analysis shows as follows:

TABLE 4.26: COEFFICIENT RANGE

Coefficient Range	Strength
±0.91 to ±1.00	Very poor/ very strong
±0.71 to ±0.90	Poor /high
±0.41 to ±0.70	Fair /moderate
±0.21 to ± 0.40	Well /small but definite relationship
±0.00 to ±0.20	Very well/ high relationship

TABLE 4.27:RELATIONSHIPS BETWEEN ITEMS

Items	Pearson (r)	Level of significance (P)
Experience of Using Mobile Phone	.140	.143
Perceived Ease of Use	-.100	.299
Perceived Usefulness	.203	.033
Perceived Trust	.250	.043
Perceived Risk	.120	.120

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

Source: (Survey 2020)

Table above shows the result of correlation analysis with(r = .140 p=.143) Experience of Using Mobile Phone. This indicates there is significant relationship between Experience of Using Mobile Phone and Intention to Use CBE-Birr mobile money service. The result of correlation analysis with (r = -.100 p= .299) is significant relationship between Perceived ease of use and Intention to Use CBE-Birr mobile money service. This shows that Perceived ease of use highly affected by Intention to Use CBE-Birr. Table above shows (r = .203p= .033) is significant relationship between Perceived Usefulness and Intention to Use CBE-Birr mobile money services.

4.6 Effects of respondents profile on Intention to Use CBE-Birr mobile money service

In these section the relation between Intention to Use CBE-Birr mobile money services and respondent's profile (sex, age group, qualification experiences and customer type) are analyzed using t-test and one way ANOVA inferential statistics tools.

TABLE 4.28: Relation between Intention to Use CBE-Birr mobile money service and Gender of respondents

	Levene's Test for Equality of Variances				
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	0.816	0.367	-1.001	220	0.318
Equal variances not assumed			-1.021	82.173	0.310

Source: (Survey 2020)

The relationship between Intention to Use CBE-Birr mobile money services and Gender of respondent is presented with the help of t-test on above table 4.28. The result shows (F= .816, P = .318). Which illustrates there is Frequency relationship between Intention to Use CBE-Birr mobile money services and sex group of the Employees.

TABLE 4.29: Relation between Intention to Use CBE-Birr mobile money service and Age of respondents

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.849	3	1.950	.368	0.072
Within Groups	179.525	218	0.824		
Total	185.374	221			

Source: (Survey 2020)

The relationship between Intention to Use CBE-Birr mobile money services and age of respondents is presented with the help of one-way ANOVA on table 4.30. The result shows (F=.368, P =.0.072). Which illustrates there is Frequency significant relationship between Intention to Use CBE-Birr mobile money services and age group of the employees.

TABLE 4.30: Relation between Intention to Use CBE-Birr mobile money service and education of respondents

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.101	4	2.525	.126	0.016
Within Groups	175.273	217	0.808		
Total	136.216	221			

Source: (Survey 2020)

The relationship between Intention to Use CBE-Birr mobile money service and educational qualification of employees is presented with the help of one-way ANOVA on table 4.31. The result shows (F= .126, P =.016). Which illustrates there is significant relationship between Intention to Use CBE-Birr mobile money service and educational qualification of the respondents.

TABLE 4.31: Relation between Intention to Use CBE-Birr mobile money service and duration of using CBE Birr

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.837	2	5.419	.799	0.001
Within Groups	174.537	219	0.797		
Total	136.216	221			

Source: (Survey 2020)

The relationship between Intention to Use CBE-Birr mobile money services and year using CBE Birr is presented with the help of one-way ANOVA on table 4.32. The result shows (F=.799, P=.0.001). Which illustrates there is Frequency relationship between Intention to Use CBE-Birr mobile money services and year of using CBE Birr.

TABLE 4.32: Relation between Intention to Use CBE-Birr mobile money service and customer type

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.771	1	0.771	0.919	0.339
Within Groups	184.603	220	0.839		
Total	136.216	221			

Source: (Survey 2020)

The relationship between Intention to Use CBE-Birr mobile money services and customer type is presented with the help of one-way ANOVA on table 4.33. The result shows (F= .919, P=.339).Which illustrates there is Frequency relationship between Intention to Use CBE-Birr mobile money services and customer type.

4.7 Effects of Variables on the Intention to Use CBE-Birr mobile money service

The general objective of this study is assessing Intention to Use CBE-Birr mobile money service in case of Commercial Bank of Ethiopia.

The Intention to Use CBE-Birr mobile money service was measured by four variables. It is found that the mean score of all variables is range between 2.27 -3.391. This indicates that respondent's perception with four items is at low level on five-point scale.

To identify the dominant one among items those have high relationship with Intention to Use CBE-Birr mobile money service the following multiple regression models has used.

TABLE 4.33: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.561[a]	.315	.222	1.060

a. Predictors: (Constant), Perceived Ease of Use, Perceived Usefulness, Perceived Trust and Perceived Risk.

b. Dependent Variable:Intention to Use CBE-Birr

Source: (Survey 2020)

The model summary of the multiple regression as shown in table 4.34 the value R=0.222 (22.2%) of four variables. The result of variance in dependent variable (R square = 32%) has been significantly explained by independent variables.

TABLE 4.34:ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	75.821	20	3.791	3.377	.000[b]
	Residual	165.030	147	1.123		
	Total	240.851	167			

a. Dependent Variable: Intention to Use CBE-Birr

b. Predictors: (Constant), Perceived Ease of Use, Perceived Usefulness, Perceived Trust and Perceived Risk.

The result of table 4.35 shows that the predictor is significantly related to Intention to Use CBE-Birr. The model in this study reaches statistically significance of 0.000 ($p<0.01$).

TABLE 4.35: COEFFICIENTS[a]

Model	Un standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.012	0.555		0.022	0.983
Perceived Ease of Use	0.009	.078	-0.001	0.111	0.053
Perceived Usefulness,	0.327	.067	0.302	3.638	0.961
Perceived Trust	0.155	.073	0.147	1.403	0.018
Perceived Risk	0.227	.052	0.186	1.841	0.168

a. Dependent Item: Intention to Use CBE-Birr mobile money service

Source: (Survey 2020)

The model summary of the multiple regression as shown in table 4.19 the value R=0.299 (29.9%) of three Items. The result of variance in Items (R square = 9%) has been significantly explained by other items. The result of table 4.20 shows that the predictor (Perceived Ease of Use, Perceived Usefulness, Perceived Trust and Perceived Risk.) are insignificantly related to l Intention to Use CBE-Birr mobile money service. The mode in this study reaches statistically insignificance of 0.019 (p>0.01). The overall Beta value of Items of Intention to Use CBE-Birr mobile money service has summarized on above table. The Beta value for Perceived Ease of Use (-0.047) and Perceived Trust (0.187), this means both of them are the dominant items influencing the Intention to Use CBE-Birr mobile money service in CBE. Based on finding the multiple regression result shows there is positive relationship between Intention to Use CBE-Birr mobile money service and Perceived Usefulness,,Perceived Trust and Perceived Risk.

The overall Beta value of variables of Intention to Use CBE-Birr has summarized in table 4.35. The Beta value for Perceived Ease of Use -0.001) and Trust (0.147), this means Perceived Ease of Use and Trust are the dominant factors influencing the Intention to Use CBE-Birr than Usefulness (0.302), and Risk (0.186).the perceived usefulness and risk are the dominant factors of Intention to Use CBE-Birr mobile money service in CBE.

Summary of the interview response: Majority of managers said that, Transactions through mobile banking depend on the features of the mobile banking app provided and typically includes

obtaining account balances and lists of latest transactions, electronic bill payments, remote check deposits, and funds transfers between a customer's or another's accounts.

Why do you prefer mobile banking rather than manual banking? Majority of managers said that,for people who travel a lot and want to be able to do all of their banking activities on their phone, mobile banking is a great solution. Opening an account through an online bank is also far faster than traditional banks. ... Mobile banking also offers users a lot more control.

What Challenges you faced to adopt mobile banking services in CBE?Majority of managers said that,Customer awareness, Due to lack of knowledge and awareness about mobile banking is also a reason for distrust in mobile banking services and it is also another reason for risk and security issue in mobile banking because this is new technology in banking and financial system so all banking customer are not aware about it.

What is existing opportunities for improving the CBE-Birr banking services? Majority of managers said that, Build Customer-Focused Products Mobile banking and digital services offer a great opportunity for banks to reduce operational costs, but they should always be designed with a consumer-first mindset. To ship products that put the customer first, you need to truly understand who your end users are.

What Benefits has CBE realized from the CBE-Birr mobile banking service? Majority of managers said that,with the help of Mobile, Banking user can transfer funds, and pay bills, checking account balance, study your recent transaction, block your ATM card, etc. Mobile Banking is cost-effective, and Banks offer this service at less cost to the customers

What is Advantages and Limitations of CBE-Birr Birr mobile banking service? Majority of managers said that,Mobile banking is said to be even more secure than online/internet banking. Disadvantages, mobile banking users are at risk of receiving fake SMS messages and scams. The loss of a person's mobile device often means that criminals can gain access to your mobile banking PIN and other sensitive information.

CHAPTER FIVE

SUMMARY OF FINDING, CONCLUSION AND RECCOMMENDATION

Summary of findings, conclusion, recommendations, and future research direction have included in this section.

5.1 Summary of Finding

The factors affecting Intention to Use CBE-Birr mobile money service in case of Selected Branches of Commercial Bank of Ethiopia has been assessed in this research. Correlation research has been done using primary and secondary sources of data. The collected data has been analyzed using descriptive and inferential statistical techniques.

According to analysis, findings and interpretations made in chapter Four, the major findings of the study are summarized as follows:

Investigating the factors affecting Intention to Use CBE-Birr mobile money service in the case of commercial bank of Ethiopia is the central objective of this research. Finding of the study shows mean value of all items range 2.97 - 3.913.

The study looked at the following factors when studying internal influence Gender, Age, education level, year of using CBE-Birr, and customer type. The study revealed that there was a significant relationship between demographic information and Intention to Use CBE-Birr mobile money service.

During analysis of Perceived Ease of Use: I can accomplish my task Using CBE-Birr, The registration procedures are easy for me, The interface with CBE-Birr mobile money is user friendly, and CBE Birr mobile money service is easy to me to become skill full. According to the findings most of the respondents agree CBE Birr mobile money service is easy to me to become skill full.

The study examined the following features for Perceived Usefulness: CBE-Birr mobile money is useful way of making payment, CBE - Birr Mobile money service helps save time, CBE-Birr is more convenient and accessible, and CBE - BIRR mobile money service would outweigh the disadvantages. Respondents were agreed with CBE - BIRR mobile money service would outweigh the disadvantages with high mean scored value.

According to the findings most of the respondents agree that the Intention to Use CBE-Birr mobile money service is influenced by Perceived Trust and Perceived Risk.

For general speaking, some respondents were not happy about the results of their Intention to Use CBE-Birr mobile money service, the bank were good in doing job on mobile money analysis, whereas Developing comprehensive mobile money service Strategies and Promoting positive workforce attitudes towards CBE-Birr were key challenges that hindered the intention to Use CBE-Birr mobile money service.

5.2 Conclusion

The purpose of this study was to investigate the factors affecting Intention to Use CBE-Birr mobile money service in the case of commercial bank of Ethiopia, the following at the conclusions made based on the findings and discussions. The study concluded that, CBE has independent E payment service department which implement digital banking service to improve customers intention to use mobile banking and most of respondents agreed by the availability of the service.

According to the survey result Establish trusted relationship with the Agents, High cost of advertisement to create customer awareness, resistance to changes in technology by the society, Limitation in building effective agent network and Lack of reliable customer support service are the main Factors for Intention to Use CBE-Birr mobile money service in the case of commercial bank of Ethiopia.

The result further revealed lack of customer awareness, customer lack of confidence with the security aspects Product Image in the Society and Limitation in availability and quality of infrastructure are the other factors affecting Intention to Use CBE-Birr mobile money service in commercial bank of Ethiopia.

5.3 Recommendations

Based on the finding derived and conclusions drawn from this study, the following recommendations are forwarded for CBE, and for the future researchers of related studies, with the hope that the implementation would reduce the problem identified.

For CBE:

- To improve the benefits of mobile banking services CBE should strongly work on making the service ease.
- CBE should improve the customer's confidence and decision on the system security.
- CBE should also work to the extent of offering better and reliable security by encryption information to protect their customer's privacy.
- In order to make simple the service, CBE should be available with voice or other channel to illiterate customers who can't read and write.

REFERENCES

Africa Economic Brief; the Banking System in Africa: Main Facts and Challenges. *Volume 3 Issue 4 2019.*

Afewerk, G. (2015). Assessment of adoption of agent banking innovation in Ethiopia barriers, *Addis Ababa, Addis Ababa University. Unpublished thesis.*

CBE annual report, (June 2019), commercial bank of Ethiopia annual performance in 20118/19 plan period, Addis Ababa, Ethiopia

Commercial bank of Ethiopia corporate performance, end year report, 2018/2019, *complete meeting slide share for branch managements and staffs.*

Farnood, H.(2009). "e-marketing" publication of the Institute

Feig, N. (2010). Bank Systems and Technology Journal: Living in Limbo. *San Diego: The Grand Del Mar*

Garedachew, W. (2010) Electronic Banking in Ethiopia - Practice, Opportunities and Challenges. Addis Ababa, Ethiopia. *Retrieved from http//:ssrn.com Journal of Internet Banking and Commerce*

Hanudin A. Rostinal S. Masurniwati, M. A and Ricarde B.(2013). Receptiveness of mobile banking by Malaysian local customers in sabahi; *an empirical investigation journal of internet banking and commerce, 17 (1).*

Husain Ibid (2018).Structural adjustment and the long term development of Sub Saharan Africa.InR.van der Hoeven&F.van der Kraaij (Eds.), *structural adjustment and beyond in Sub Saharan Africa.* London: James Currey.

P. Buys, D. Susmita, S.T. Timothy, and D. Wheeler, "Determinants of a Digital Divide in Sub Saharan Africa: *A Spatial Econometric Analysis of Cell Phone Coverage." World Development, 2009, 37(9): 1494–1505*

Shah and Clarke (2009), E-Banking-Management-Issues-Solutions-and-Strategies, (1sted.), *University of Hull, UK*

World Bank Group. (2018). Global financial development report 2018: Financial Inclusion (Vol. 3). *World Bank Publications.*

Janet Morrison (2018). When Did Online Banking Begin? https://www.sapling.com/5035719/did-online-banking-begin

Muche, B. (2016). Assessment of the Opportunities and Challenges for the Adoption of Mobile Banking Service In Ethiopia. *Mekelle, Ethiopia:Mekelle University.*

P. Buys, D. Susmita, S.T. Timothy, and D. Wheeler, "Determinants of a Digital Divide in Sub-Saharan Africa: A Spatial Econometric Analysis of Cell Phone Coverage." *World Development, 20-09, 37(9): 1494–1505*

Porteous, D.(2006). The Enabling Environment for Mobile Banking in Africa. London: DFID.

P.J. Tichernor, G.A. Donohue and C.N. Olien, "Mass Media Flow and Differential Growth in Knowledge", *Public Opinion Quarterly, Vol. 34, No. 2, pp. 159-170, 1970*

Rosenberg, J. (2010). Access to Finance, Customer Adoption, Innovation and Mobile Banking. Retrieved 12 Feb, 2020 from http://technology.cgap.org/category/geography/kenya/....

Sira, Y.T. (2013). Analysis of Factors Influencing customers' Intention To The Adoption of E-Banking Service Channels in Bahirdar City: *An Integration of Tam, Tpb and Pr. European Scientific Journal, Vol. 9 No. 13 Issn: 1857-7881, 1-16.*

Steafel, E. (2015, December 7). Vodafone brings mobile money to 15m people without bank accounts in Ghana.

Shallone, S., (2013). “An analysis of Mobile banking usage intentions: An extension of the technology acceptance model,” *International Journal of Business and Society*, Vol. 05, No. 3: 12-19

Tao Zhoua, YaobinLub and Bin Wang, “Integrating TTF and UTAUT to Explain Mobile Banking User Adoption”, *Computers in Human Behavior, Vol. 26, No. 4, pp. 760-767, 2010.*

Taigo Oliveira, Manoj Thomas, Goncalo Baptista and Filipe Campos, “*Mobile payment” computers in Human behavior, Vol.61,pp. 404-414,2016.*

Tilahun Damtew (2018), the effects of E-banking on the Financial Performance of Commercial Banks in Ethiopia, Addis *Ababa University. Unpublished MA thesis*

Uma Sekeran. (2005). Research methods the business a skill building method, 3rd edition, John Wiley and sons, inc. Canada.

Warren, P., “Banks Help Firms Move into Portable Markets”, Computing, Dec (1995): 2-3.

Van Hove, L, & Dubus, A. (2019), M-PESA and financial inclusion in Kenya: Switzerland, 11(3), 1-26.

ViswanathVenkatesh, Michael G. Morris, Gordon B. Davis and Fred D. Davis, “User Acceptance of Information Technology: *Toward A Unified View”, MIS Quarterly, Vol. 27, No. 3, pp. 425-478, 2003.*

Voice of America.www.voanews.com › africa › ethiopia-introduce-mobile-banking

Venable Telecommunications and Financial Services, (2008).Mobile Banking. White Paper of November 2008.

APPENDIXES I

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MBA PROGRAM

QUESTIONNAIRE TO BE FILLED BY CUSTOMERS OF COMMERCIAL BANK OF ETHIOPIA

Dear Respondents:

I am currently in the process of writing my research for the completion of a Master's degree in Business Administration (MBA) under the support of the Addis Ababa University, College Of Business And Economics.

The purpose of this questionnaire is to **assess factors affecting the intention to use mobile money (CBE Birr) in Commercial bank of Ethiopia, Addis Ababa**. It will be appreciated if you could answer all the questions in the attached questionnaire. The questions relate to factors affecting the intention to use mobile money (CBE Birr). I would like to thank you in advance for your cooperation and for scarifying your valuable time. By not placing your name on the questionnaire your responses are kept anonymous and no one will be able to identify you as a respondent in this study.

Thank you in advance for your participation

Part I: Basic Demographic Information

Instruction: Please indicate your responses by ticking one of response option.

1. What is your Gender?

   A. Male ☐ B. Female ☐

2. Which of the following Age categories describes you?

   A. Under 25 ☐ C. 35-55 years ☐

   B. 25-35 years ☐ D. Above 55 years ☐

3. Educational Qualification:

A .College Diploma ☐ C. Master's Degree ☐

B .BA/BSc Degree ☐ D. Other _____

4. How long have you used CBE -Birr?

A. Less than 1 years ☐ C. above 3 years ☐

B. From 1-2 years ☐

5. Customer type:

   A. Individual ☐ B. Organization ☐

Part II: Questionnaires to assess factors affecting the intention to use mobile money (CBE Birr) in Commercial bank of Ethiopia, Addis Ababa.

Instructions: Now please tell me how you feel and think about mobile money (CBE Birr). Put a "√" in the appropriate box/ alternative that best describes your level of agreement or disagreement regarding use of mobile money (CBE Birr) for the following statement. Each choice is identified by numbers ranged from 1 to 5.

1	2	3	4	5
Strongly disagree (SD)	Disagree (DA)	Neutral (N)	Agree (A)	Strongly agree (SA)

No	Variables	Response				
1	**Experience of Using Mobile Phone**	SD	DA	N	A	SA
1.1	I have been using mobile phone for a long time					
2	**Perceived Ease of Use**	**SD**	**DA**	**N**	**A**	**SA**
2.1	Using CBE-Birr would enable me to accomplish my tasks more quickly.					
2.2	The registration procedures are easy for me					
2.3	The interface with CBE-Birr mobile money is user friendly					
2.4	It is easy for me to become skillful at using CBE-Birr mobile money service					
3	**Perceived Usefulness**	**SD**	**DA**	**N**	**A**	**SA**
3.1	CBE-Birr mobile money is useful way of making payment					
3.2	CBE - Birr Mobile money service helps save time					
3.3	CBE-Birr is more convenient and accessible.					
3.4	CBE - BIRR mobile money service would outweigh the disadvantages					
4	**Perceived Trust**	**SD**	**DA**	**N**	**A**	**SA**
4.1	In using CBE - Birr, I believe that my transactions are					

	secured.					
4.2	In using CBE - Birr, I believe that my privacy is secured.					
4.3	In using mobile banking, my information is kept confidential					
4.4	I am well aware of the existence of CBE - Birr services.					
5	**Perceived Risk**	**SD**	**DA**	**N**	**A**	**SA**
5.1	If I lose my mobile phone, I will not lose my money as well					
5.2	If there is a network problem, my transactions will be affected					
5.3	It is difficult for my money to be stolen if using CBE-Birr mobile money service					
5.4	There is a low risk of other people tampering with my personal information during the transaction					
6	**Intention to Use CBE-Birr mobile money service**	**SD**	**DA**	**N**	**A**	**SA**
6.1	I intend to continue to use CBE-Birr mobile money service					
6.2	I intend recommending CBE-Birr mobile money service to others					
6.3	I enjoy using all available CBE-Birr mobile money services.					
6.4	My CBE-Birr menu is very easy to understand.					

7- If any, please mention other factors affecting the intention to use mobile money (CBE Birr) mobile money service? _____

_____

Thank you!

APPENDIX II

INTERVIEW QUESTIONS

This is going to be answered by CBE Employees

- What kinds of mobile banking services you provide for customers with on line?
- Why do you prefer mobile banking rather than manual banking?
- What Challenges you faced to adopt mobile banking services in CBE?
- What is existing opportunities for improving the CBE-Birr banking services?
- What Benefits has CBE realized from the CBE-Birr mobile banking service?
- What is Advantages and Limitations of CBE-Birr Birr mobile banking service?