

Addis Ababa
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College of Business and Economics

Department of Management

Executive MBA

**Factors Affecting the Adoption of Mobile Banking in
Addis Ababa**

**A Thesis Submitted to the Department of Management in Partial
Fulfillment for the Requirement of the Degree of Executive Masters
of Business Administration**

By

Tesfaye Matiwos

Advisor

Mesfin Fikre (PhD)

June, 2018

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Declaration

I, Tesfaye Matiwos declare that this thesis project entitled “Factors Affecting the Adoption of Mobile Banking in Addis Ababa” is the outcome of my own effort and study in which all sources of materials used for the study has been duly acknowledged. I have produced it independently except for the guidance and suggestion of the project advisor.

The study has not been submitted for any degree in this or any other university. It is offered for the partial fulfillment of the degree of executive masters of business administration.

Tesfaye Matiwos

Signature _____

Date _____

Statement of Certification

This is to certify that the thesis work entitled “Factors Affecting the Adoption of Mobile Banking in Addis Ababa” under taken by Tesfaye Matowos for the partial fulfillment of degree of executive masters of business. Administration at the Addis Ababa University, to the best of my knowledge, is an original work and not submitted for any degree at this university or in any other university.

Dr. Mesfin Fikre,

Thesis Advisor

This is to certify that this thesis prepared by Tesfaye Matowos entitled “Factors Affecting the Adoption of Mobile Banking in Addis Ababa” and submitted in partial fulfillment for the requirement for the degree of executive master of business administration complies with the regulation of the university and meets the accepted standards with respect to originality and quality.

Approved by the examining committee

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External examiner	Signature	Date

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Chair of Department of Graduate Program Coordinator

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ACRONYMS

M-Banking	Mobile Banking
ICT	Information Communication Technology
ATM	Automatic Teller Machine
POS	Point of Sale terminals
NBE	National Bank of Ethiopia
DB	Dashen Bank So
EBSD	E-Banking Service Department
ITD	Information Communication Technology
NBE	National Bank of Ethiopia
SMS	Short Message Service
CBE	Commercial Bank of Ethiopia
PDA	Personal Digital Assistance
UB	United Bank S.co
DB	Dashen Bank S.co
WB	Wegagen Bank S.co
BIB	Birehan International Bank S.co

ABSTRACT

Regardless of different benefits of mobile banking and huge mobile subscribes in Ethiopia, the adoption rate is too low. Therefore, the purpose of this research is to identify factors affecting the adoption of mobile banking in Ethiopia, Addis Ababa. The study tried to build on two widely used models for technology adoption. These are technology acceptance model (TAM) and United Theory of Acceptance of and use of technology (UTAUT). Hence the research model used TAM and UTAUT by integrating perceived risk, perceived trust and mobile phone experience as additional variables. The study was conducted based on the data collected from customers of four banks, namely United Bank, Dashen Bank, Wegagen Bank and Birehan international bank S.C. This study collected data using questionnaire distributed to 246 respondents. The collected data is analyzed using multiple regression method by SPSS version 20. The research finding indicated that effort expectancy, perceived usefulness, perceived ease of use; perceived cost and mobile phone experience are major factors affecting mobile banking adoption where as performance expectancy, perceived risk and perceived trust to have insignificant effect on mobile banking adoption. The study recommended banks to educate users about benefits of mobile banking services and make mobile banking applications ease and free of effort.

Key words: Mobile Banking Adoption, TAM, UTAUT, Effort Expectancy, Ease of use.

CHAPTER ONE

1. Introduction

1.1 Development of Banking Services in Ethiopia

The development of banking in Ethiopia goes back to 1905. When “Bank of Abyssinia” was established based on the agreement signed between the Ethiopia government and the National Bank of Egypt, which was owned by the British with a capital of one million Shillings, with a purpose of engaging in commercial banking (selling shares, accepting deposits and effecting payments in cheques) and to issue currency notes (Alemayehu and Teklemedhin, 2009).

The agreement prevented the establishment of any other bank in Ethiopia giving the bank of Abyssinia a monopoly right of banking operation.

In 1931, however, the Ethiopian government, under Emperor Haile Selassie, closed the Bank of Abyssinia, paid compensation to its shareholders and established the Bank of Ethiopia which was the first bank fully owned by Ethiopians with a capital of pound 750,000 and the bank became operational in 1932 with authority of combining the function of central banking (issuing currency notes and coins) and commercial banking. The bank of Ethiopia opened branches in Dire Dawa, Gore, Dessie, Debre Tabor and Harar with the Italian occupation (1936-1941), the operational of the Bank of Ethiopia came to a halt however, a number of Italian banks were operational in the country. There were Banko Di Roma, Banko Di Napoli and Banco Nazconal del lavora (Teklemedhin et al, 2009).

In 1941 another foreign bank named Barclay bank came to operation and was functional until 1943.

In 1946 Banque Del Indochine was opened and functioned until 1963. In 1945 the Agricultural Bank was established and replaced by the development Bank of Ethiopia in 1951 which changed into the Agricultural and Industrial Development Bank in 1970.

With the departure of Italians and the restoration of Emperor Haile Selassie's government the state bank of Ethiopia was established in 1943. In 1963, however split into the National Bank of Ethiopia and the Commercial Bank of Ethiopia S.C. with the purpose of segregation the function of central banking from those of commercial banking and the new bank, the commercial bank of Ethiopia started operation in 1964.

In 1964, the Addis Ababa Bank S.C was also established and until 1974, Revolution of Ethiopia there was stated owned, foreign owned and Ethiopians owned bank in Ethiopia. However, following the revolution, on Jan 1975 all private banks and insurance were nationalized and this continued until 1994.

After 1994, following Banking business proclamation No. 84/1994 private commercial banks are allowed to enter the market. Hence, according to NBE annual report (June, 2017) 16 private banks with a major purpose of resources mobilization are operating in Ethiopia.

One advantages of development of information and communication technologies (ICTs) is offering banking services through internet and mobile phones .Mobile phones have increasingly become tools that consumers use for banking, effecting payments and other services. Mobiles phones enhance the quality of services as customers of banks can perform their financial jobs in every time and place. Therefore, use of mobile phones for banking services is useful for both customers and banks.

Mobile banking, which is also called M banking, is defined as a channel where by a customer interacts with a bank via a mobile device, such as a mobile phone or personal digital assistant(PDA).Barnes and Corbitt (2001), M-banking is a subset of banking as it allows everyone easy access to their banking operations via mobile handsets, Yu and Fang (2009).The advancement in information communication technology(ICT) is playing a major role for the world in a numerous variety of business activities. Rapid development of information technology has also affected the banking industry world widely in different form. Banks seek always to achieve competitive advantage to be first in market so they keep looking for new technology which can improve the banking services.

Mobile banking is used in supporting financial institutions in enabling them avail different services in more effective and efficient manner. Typical mobile banking services may include fund transfer between customers account, checking of account balance, mini statements, bill payments, check book issuance request, stop payment request and so on.

Regardless of the above mobile banking services, mobile banking in Ethiopia is in its infant stage for Ethiopian banking customers. Hence, the need for research in identifying the factors affecting the adoption of mobile banking will have paramount importance in improving the easy adoption of mobile banking.

So far, all over the world different researches have been done in identifying the factors affecting the adoption of mobile banking but resulted in different findings. For example Roselyne(2015) in his findings indicates that there is no significant relationship between perceived ease of use and adoption of Mobile banking technology. In other view Chian-Son, (2012) reveals the perceived financial cost and perceived credibility are two crucial factors influencing people intention to adopt mobile banking. Furthermore Hanudin et al, (2013) found that the intention to use mobile banking is influenced by the extent of security and privacy associated within the context of mobile banking. Other researchers Tornatzky & Klein (1982) analyzed the adoption of mobile banking and explained that compatibility, relative advantage, and complexity had the most significant relationships with adoption across a broad range of innovation types. (Shallone & Simon,2013) in their findings indicated that perceived usefulness, perceived ease of use, relative advantages, personal innovativeness and social norms have significant effect on users' attitude thus influence the intention towards mobile banking adoption , whilst perceived risks and costs deterred the adoption of the service. The research conducted worldwide at different times brought different findings with regard to factors affecting the adoption of mobile banking Moreover, in Ethiopia as to the knowledge of the researcher is concerned, the research so far done focuses mainly on commercial bank of Ethiopia neglecting the private banks. For these different findings and very few researches in Ethiopia, identifying the factors affecting the adoption of mobile banking is still researchable. Thus, the major concern of this study is identifying factors affecting the adoption of mobile banking form Ethiopian bank customers' perspective.

1.2 Statement of the Problem

Ethiopia like other developing countries is a country where the majority of its population is unbanked for different reasons but mainly due to low level of banks branches presence particularly in remote areas of the country. According to the National Bank Ethiopia (NBE) annual report (2016/17), the total number of bank branches is 4,257. This means that one bank branch is serving 22,164 (bank branch population ratio) is 1:22,164 customers and overall only 4257 branches are available for 94.3 million people. Moreover with regard to the physical presence, most branches of the banks are in Addis Ababa or around Addis Ababa leaving the rural area unbanked. According to the National Bank of Ethiopia (NBE) annual report (2016/17) 1400 branches (33% of the entire branches) are located in Addis Ababa serving around 2.5 million people.

According to NBE annual report, (2016/17) the total number of mobile phone subscribers has reached 58 million. Contrary to the diversified advantages of mobile banking and huge number of mobile phone subscribers in Ethiopia (58 million as per NBE June 2016/17 report), mobile banking in Ethiopia is in an infant stage for Ethiopian bank customers. For instance per the unpublished annual report of Dashen Bank S.C as of 30th June 2017, mobile banking subscribers are only 19,462 out of 1.7 million customers constituting only 1% of the total customer base. As a result, paper based payment instruments like cash, checks and payment order continue to be widely used across the nation. (NBE, Financial Inclusion Strategy, April 2017).

Unlike Ethiopia, mobile banking development in other African countries like Kenya has reached higher level. In Kenya M-Pesa (mobile money) is a mobile phone based money transfer financing launched in 2007 by Vodafone for safaricom and Vodacom, the largest mobile operators in Kenya and Tanzania. According to the safaricom's results for 2013/14, M-PESA had 18.2 million active customers (KARIUKI N. 2014).

So far, all over the world different researches have been made in identifying the factors affecting the adoption of mobile banking but resulted in different finding. For instance, Chlan-son (2012), reveals the perceived financial cost and perceived credibility are two crucial factors influence people intention to adopt mobile banking. Moreover, Hanudin et al (2013) found that the intention to use mobile banking is influenced by the extent of security and privacy associated

with in the context of mobile banking. In Ethiopia, as to the knowledge of the researcher is concerned, research done so far mainly focused on the commercial bank of Ethiopia. Hence, identifying the factors affecting adoption of mobile banking is still researchable.

Therefore, this study tried to identify the factors affecting the adoption of mobile banking by Ethiopia commercial banks in general and Dashen Bank S.c, United Bank ,Wegagen Bank and Birehan International Bank s.c in particular.

1.3 Research Questions

Based on the above statement of the problem, the following research question is developed.

What are the main factors which affect the adoption of mobile banking in commercial banks in Addis Ababa?

1.4 General Objective of the Study

The general objective of this study is to identify factors affecting the adoption of mobile banking in private commercial banks mainly in Dashen Bank,Wegagen Bank,United Bank and Birehan International Bank share companies.

1.4.1 Specific Objectives

- To examine the impact of perceived usefulness on mobile banking adoption.
- To assess how perceived ease of use affects adoption of mobile banking.
- To assess how perceived risk affects the adoption of Mobile banking.
- To assess how effort expectancy affects adoption of mobile Banking.
- To evaluate how performance expectancy affects adoption of Mobile Banking.
- To evaluate the association of mobile phone experience on the adoption of Mobile Banking.

- To come up with recommendations on how to improve adoption of Mobile Banking.

1.5 Research Hypothesis

The study was done based on the following hypotheses which were derived from the specific objectives.

H1: Performance expectancy has positive and significant effect on the adoption of mobile Banking.

H2: Ease of use has positive and significant effect on mobile banking adoption.

H3: Usefulness has positive and significant effect on mobile banking adoption.

H4: Effort expectancy has positive and significant effect on mobile banking adoption.

H5: Trust has positive and significant effect on mobile banking adoption.

H6: Mobile phone experience has positive and significant effect on mobile banking adoption.

H7: Perceived Risk has negative and significant effect on adoption of mobile banking.

H8 Perceived cost has a negative and significant effect on the adoption of mobile banking

1.6 Significance of the Study

Mobile banking is a recent phenomenon in Ethiopia with low adoption rate. This research has tried to identify factors affecting the adoption of mobile banking including the kind of association each factors has on mobile banking adoption. The finding of the study will help bank management to improve mobile banking services. As the research output tried to provide knowledge on factors that affects mobile banking adoption.

The result of study is believed add knowledge to the existing literature and can also be used as a reference for researchers who need to conduct a research on the topic in the future.

Lastly, it will help the researcher to full fill his academic requirement to obtain master's degree in the Executive Masters of Business Administration.

1.7 Scope of the Study

Aiming at identifying factors affecting the adoption of mobile banking in private commercial banks, the study was limited to selected private commercial banks which already started mobile banking services, namely Dashen Bank, Wegagen Bank, United Bank and Birehan International bank.

1.8 Limitation of the Study

Limitations are those characteristics that limit the scope and define the boundary of the study. Since it is difficult, costly and time consuming to conduct a census survey on all of the banks, to see the factors that influence the adoption of mobile banking, the researcher limited the scope of the study to only four private banks located in the Metropolis of Addis Ababa.

Furthermore, the study has considered only eight variables among a number of variables that might affect the adoption of mobile banking.

1.9 Operational Definitions

1. Perceived usefulness (Pu) is one of the Constructs in the technology acceptance model (TAM) and is defined as the degree to which a person believes that using a particular system would enhance his/her job performance (Davis, 1989).
2. Perceived ease of use refers to the degree to which a person believes that engaging in online transactions through mobile banking would be free of effort (Davis et al, 1989.)
3. Performance expectancy is defines as the degree to which an individual believes that using the system will help him or her to attain gains in job performance (Venkatesh et al, 2003).
4. Effort expectancy is defined as the degree of ease associated with the use of technology (Venkatesh et al, 2003.)
5. Perceived Risk refers to the users' expectation of suffering a loss in the outcome of using mobile banking (Ali and Hayat, 2014).

6. Perceived cost refers the transaction cost of conducting mobile banking transaction.
7. Awareness refers to the level of information customers have on mobile banking (Sathye .1999)
8. Perceived Trust refers to the three dimensions of trust influenced by ability, integrity and benevolence

1.10 Organization of the Paper

The research paper consists of five chapters. The rest of the chapters has been organized as follows. Chapter two is about review of related literatures. Chapter three has dealt with research design and methodology. The research results and discussion is presented in chapter four. The final parts, chapter five conclude the study summarizing the findings and introducing direction for future research.

CHAPTER TWO

2. Review of Related Literatures

2.1 Introduction

Information Technology has been of great essence in banking system. What we see in today's banking features, ease of banking, banking right from our home, all are the result of technological advancement or what is called Information Communication Technology (ICT).

With the development of banking application, the banks process become faster and more reliable and the record keeping and retrieval becomes much easier. The computerized banking system offers great and reliable services. With the expansion of internet, the concept of core banking system comes in to picture followed by technology supported banking services. With the introduction of internet and mobile application development, the mobile banking were developed and this made users life easy making banking just on users mobile which is truly anywhere –any time 24/7 .

2.2 Mobile Banking Concept

Mobile Banking refers to provision of bank-related financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank transactions, to administer accounts and to access customized information Tiwari, R. and S. Buse, 2004. Mobile Banking, as one of bank-related financial services via mobile devices, comprises of services in the field of accounting, brokerage and financial information. Mobile Banking is increasingly being employed by many banks around the world to generate additional revenues, reduce costs or to increase customer satisfaction, often with very promising results. (Rajnish et al, 2006.)

Transactions through mobile banking may include obtaining account balances and lists of latest transactions, electronic bill payments, and funds transfers between a customer's or another's accounts. Some applications also enable copies of statements to be downloaded and sometimes printed at the customer's premises.

From the bank's point of view, mobile banking reduces the cost of handling transactions by reducing the need for customers to visit a bank branch for non-cash withdrawal and deposit transactions. Mobile banking does not handle transactions involving cash, and a customer needs to visit an ATM or bank branch for cash withdrawals or deposits. Many applications now however have a remote deposit option; using the device's camera to digitally transmit checks to their financial institution. Mobile banking functions can be Account information or Transaction services.

Account information

Mini-statements and checking of account history, Alerts on account activity or passing of set thresholds, Monitoring of term deposits, Access to loan statements, Access to card statements, and Insurance policy management

Transaction

Transactional mobile banking services include fund transfers between the customers' linked accounts ,Paying third parties, including bill payments and third party fund transfers and check deposits.

Besides account information and transactional services, mobile banking can also support investment activities and also provide other support activities.

Investments

Mobile banking functions in supporting investment activities including Portfolio management services, personalized alerts and notifications on security prices, Real-time stock quotes and Status of requests for credit, including mortgage approval, and insurance coverage

Support

Some of support functions of mobile banking include Check book and card requests, Exchange of data messages and email, including complaint submission and tracking and providing information on ATM Location

2.3 Mobile Banking Features

Mobile banking can be used for many of the same tasks that you would complete at a bank branch or on your home desk top computer. These include checking account balances, transferring money from one account to another, finding an ATM locations , setting up alerts (for example, to notify you if an account balance has hit a certain amount), or viewing account statements.

In addition to these basic features, mobile banking services may include direct deposit of checks using your device's camera, paying bills, sending money to another person, transferring credit card balances, or even conducting investment transactions.

Mobile Banking Is Convenient

Being able to do most, if not all, of your banking on the go is one of the biggest benefits of mobile banking. No matter where you are, you can take care of business without interrupting the rest of your life. Bank branches aren't going away any time soon, but being able to handle your financial life without having to drive to branches.

Mobile Banking Keeps You in Control

Because it is so easy and so convenient, mobile banking helps keep you in control of your finances. You can monitor your balances and always know where you are regarding your finance status viewing your balance using your mobile. With account alerts, you can know if your account falls below a certain threshold and instantly transfer money into that account and avoid overdraft fees. You can deposit checks instantly, which is a big help when you need the cash. You can get reminders when to pay bills so you never have to pay a late fee. You can even set up recurring bill payments so you don't even have to think about when a bill is due. All these features leave you in control of your money on your time.

Mobile Banking AS Secure

Mobile banking is as secure. All reputable financial institution use encryption that safeguards and protects your privacy, identity and your financial information. Some institutions even offer a security guarantee to make you use of mobile banking truly worry-free.

Understanding the benefits of mobile banking, Ethiopian banks have also started investing huge amounts of money to avail mobile banking services

The National Bank of Ethiopia (NBE) has also issued a directive of mobile and agent banking operation to strengthen the financial inclusion and expand the financial services to the unbanked population(directive no FIS/01/2012.) This facilitates the banks to use mobile banking as a one delivery channel for their products and services.

Contrary to the investment made and the benefits of mobile banking and the directive issued, the adoption of mobile banking in Ethiopians banks is still very low. This might be due to poor infrastructure, poor awareness or failure to identify the factors affecting the adoption of mobile banking services there by avail remedial solutions.

Therefore, the purpose of this study focuses on identifying the factors affecting the adoption of mobile banking services focusing on selected private banks.

2.4 Theoretical Review for Technology Adoption Models.

Technology adoption is one of the mature areas of research in information systems. Carr (1999) has defined technology adoption as the stage of selecting a technology for use by an individual or organization. Due to the high growth of information communication technology, new products particularly in banking industry have been released. The success of these products, however, depends on the degree to which the users adopt them .In order to identify how people can accept or adopt technology, different models have been developed .Among such model, and this study considers only two. TAM and UTAUT as discussed below.

- Technology Acceptance Model (TAM)
- The Unified Theory of Acceptance and Use of Technology (UTAUT)

2.4.1 Technology Acceptance Model (TAM)

Technology Acceptance Model was the first introduced by Fred Davis in 1989. It is one of the most popular research models to predict user acceptance of technology .TAM is a theory that models how users come to accept and use technology. It was developed from TRA and suggested that when users are presented with new technology, a number of factors influence their decisions about how and when will use the technology (Davis.1989) .TAM is an information system theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, two main factors influence their decision about how and when they will use it. These are:

- **Perceived usefulness (PU):** perceived usefulness was defined by Davis as “the degree to which a person believes the using a particular system would enhance his or her job performance”.
- **Perceived ease of use (PEOU):** is the degree to which a person believes that using a particular system would be free from effort (Davis, 1989).

Davis (1985) suggested that users’ motivation can be explained by three factors, Perceived ease of use, perceived usefulness and attitude towards using the system. He hypothesized that the attitude of a user towards using the system was a major determinant of whether the user will actually use or reject the system. The attitude of the user, in turn, was considered to be influenced by the two major determinants, perceived usefulness and perceived ease of use, with the perceived ease of use having a direct influence on perceived usefulness.

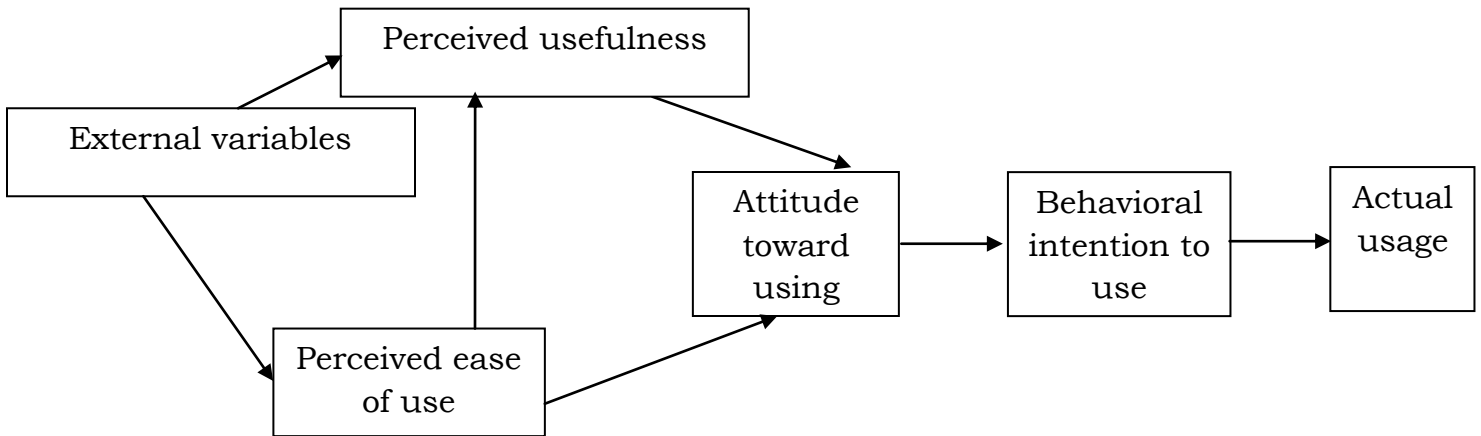


Figure 1: TAM (Davis 1989)

Limitations of TAM

Although TAM is the most popular model used in technology adoption model, it has been criticized for not providing adequate information on individuals’ opinion of informant system (moon and kim, 2001). TAM is designed for measuring usage in the work place where voluntariness of use may not be under an individual’s control or voluntariness was not explicitly included in the TAM. As to external variables, Davis et.al (1989) observed that external variables enhanced the ability of TAM to predict acceptance of future technology, which means the constructs of TAM need to be extended by incorporating additional factors depending on the target technology.

As indicated in the figure TAM shows the perceived usefulness and perceived ease of use determine an individual intention to use a system (technology) with the intention to use a system as a mediator of actual usage. Perceived usefulness is also seen as being directly impacted by perceived ease of use. Attitude and perceived usefulness jointly determine the behavioral intention and attitude is determined by perceived usefulness and perceived ease of use.

2.4.2 The Unified Theory of Acceptance and Use of Technology (UTAUT)

(Venkatesh and Davis 2003) has developed another important theoretical model named the unified theory of acceptance and use of technology (UTAUT) with four core determinants of intention and usage and up to four moderators of key relationships. The unified theory of acceptance and use of technology tried to explain the degree of acceptance of the use of information technology.

The four constructs included in the UTAUT are

1. Performance expectancy
2. Efforts expectancy
3. Social influence
4. Facilitating conditions

Performance Expectancy-is the degree to which an individual believes that using the system will help the users to attain gains in job performance. (Venkatesh et al., 2003)

Effort Expectancy:-is the degree of ease associated with the use of the system. (Venkatesh et al., 2003)

Social influence:-is the degree to which an individual perceives that important other believes he or she should use the system. (Venkatesh et al., 2003)

Facilitating Conditions: - is the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system. (Venkatesh et al., 2003)

Like other theories, the aim of UTAUT is determining user acceptance and usage behavior on technology as shown below in figure 2.

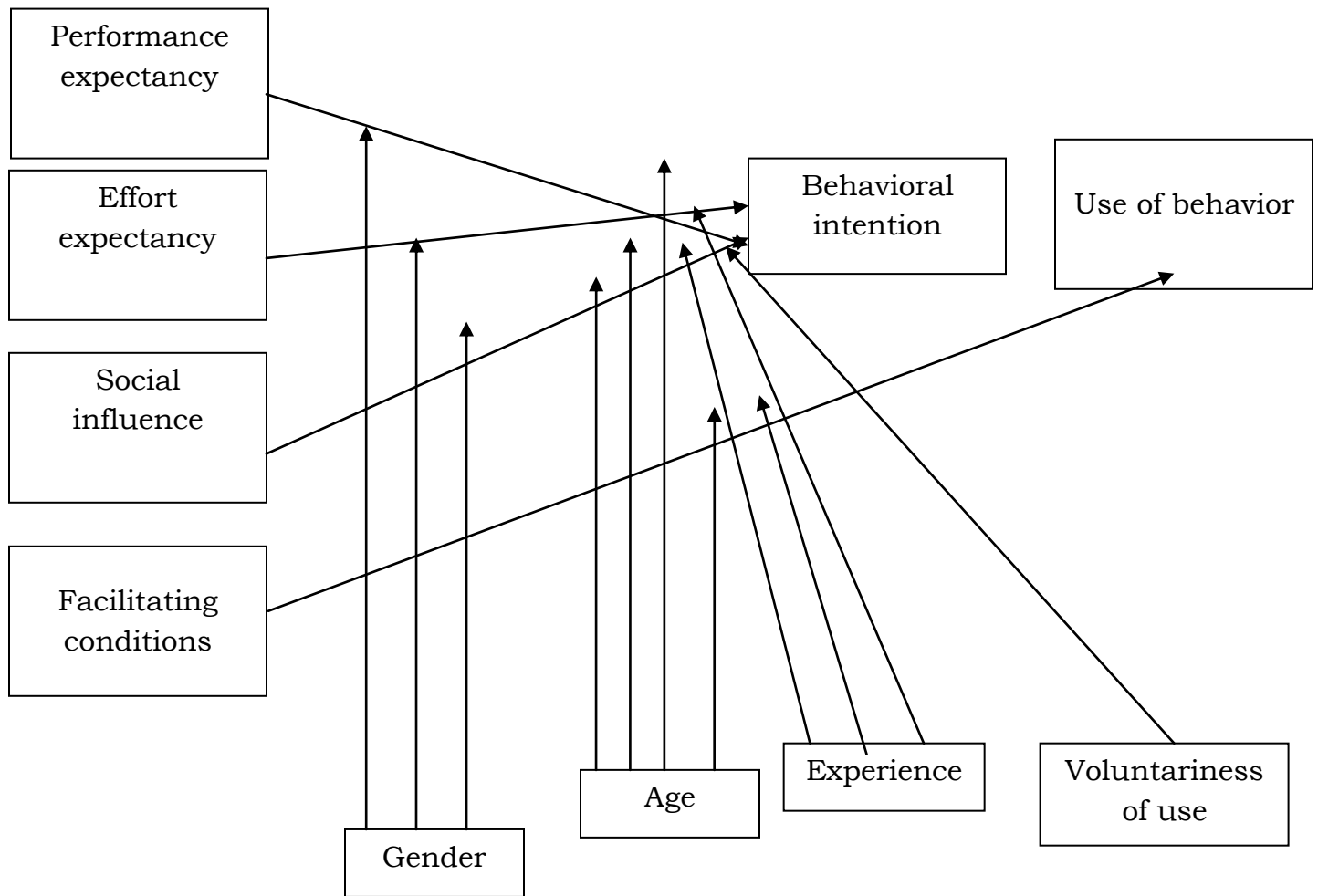


Figure 2: UTATU Model (venkash.et.al.2003)

Additional Variables

1. Perceived trust in mobile banking

Trust is not included in both TAM and UTAUT models. However, trust is one of the variables that have attracted attention of scholars. Trust is a fundamental component for establishing and maintains successful relationship between customers and business (Garbarino and Johnson, 1999). Soderstrom (2009) defined trust as the willingness to believe in the reliability, honesty, dependability and capability of others. It can also be defined as the belief that vendors will

perform some activities in accordance with customer's expectations (Gefen and Straub 2004). Trust in mobile banking can be formed by maintaining security, confidentiality and reliability of the service (Egger, 2011). Therefore, trust has paramount importance in technology adoption like that of mobile banking.

2. Perceived risk

Perceived risk refers to security and privacy concerns associated with technology in banking. Risk can be categorized from different perspective such as privacy risk; financial risk and system risk Lee et al (2009) defined these risks as follows. Privacy risk is a potential loss due to fraud or hacker interfering with the security of mobile banking user in disclosing both personal and financial information. Financial risk is monetary loss of the mobile banking user. System risk refers to main functions of mobile banking system.

3. Perceived cost

Luarb and lin (2005) defined perceived cost as the degree to which an individuals or users view that using mobile banking will incur cost. The costs involved in mobile banking include transactions charges, network charges and mobile devices. Hence, cost has impact on mobile banking adoption.

4. Mobile phone experience

The concept of experience in this study focus on experience of using a mobile phone and refers to the degree to which banks' customers have mobile phone usage experience (Bouwman, Carlsson, Walden and Molina-Castdlo, 2008). The more experienced customers are with new technologies, the greater expectation that they will use mobile banking (Ratten, 2011).

Empirical studies Related to Mobile Banking

The researcher has reviewed various empirical studies related with factories affecting the adoption of mobile banking and summaries them as follows.

Mardung (2013) investigated factors affecting the adoption of mobile money services in the banking and financial industries of Botswana in the light of the Technology Acceptance Model

(TAM) and demographic variables including age of individuals, income, education level and bank account.

To do the research closed ended questionnaire was administered to a total of 190 respondents from a targeted sample of 200 users and non-users of mobile banking services.

The analysis of the result showed that gross income and having bank account were insignificant in determining the use of the mobile banking services in Botswana. To the contrary, the age of the individual was found to be significant in determining whether an individual used mobile money services or not with more young people preferring to use mobile money services than older one.

The study also showed the education of individual did not show any influence on the preference to use mobile money services to access banking and financial services. The study revealed that gender was shown to be significant with more males than females using mobile money services. Employment status was also significant with more employed individual preferring to use mobile money services to access banking and financial services than unemployed.

Geogre and Gerald (2015) examined the determinants of mobile banking adoption among bank customers in Ghana with specific emphasis on Access bank. Accordingly, data were collected from 150 customers of access bank in order to investigate the determents to mobile banking adoption in the Ghanaian banking industry .The result from the study revealed that perceived creditability and perceived financial cost were the major setback with regard to customers adoption of mobile banking services provided by Access bank . The findings also showed that perceived creditability and perceived financial cost have a stronger effect on consumer intention to adopt and use of mobile banking services than perceived usefulness and perceived ease of use. The study also showed although, perceived creditability and perceived financial cost have a stronger effect on consumer intention to adopt and use mobile banking other factors such as awareness, usefulness ,simplicity , compatibility, self efficacy have also an influence on the adoption and usage of mobile banking service.

Masinge (2010) examined the factors influencing the adoption of mobile banking by the Bottom of the pyramid (BOP), the poor, in South African with a special focus on trust, perceived cost

and perceived risk including the facts of perceived risks, performance risk, security or privacy, time risk, social and financial risk using the original variables of extended technology acceptance model (TAM2) (venkatesh and Devis 2000.)

The research has found that customers in the BOP consider adopting mobile banking as long as it is perceived to be useful and perceived to be easing to use. The research also indicated that for people in the BOP, the most critical factor for the customers is cost, the service should be affordable.

Ndumba et.al. (2014) studied factors affecting adoption of Mobile Banking in Kenya on Kenyan commercial bank. They found that perceived risk was found to negatively affect adoption of M-Banking services. The study showed sending of money to wrong account or phone number and loss of personal or account information greatly affected the adoption of mobile banking. The study also identified perceived convenience was found to positively affect adoption of mobile banking by being ease to use and being useful in different ways .The usefulness presented in that study include accessibility, saving of time and comfort.

Studies Related to Mobile Banking Services in Ethiopia

Most researches so far conducted in Ethiopian case are mainly in the area of factors affecting the adoption of E- Banking services such researches are summarized as follows.

Gemech (2014) conducted a research to examine factors affecting the adoption of E- Banking in Ethiopia and found security, lack of trust, lack of legal and regulatory formwork, lack of ICT infrastructure and absence of competition between local and foreign banks as barriers of adoption of E banking in Ethiopia banking industry.

Zekeke (2016) investigated opportunities and challenges in the adoptions of E- Banking services with respect to Dashen Bank SC. The study examined opportunities and challenges in light of technology acceptance model (TAM) and technology organization- Environment (TOE) and found that perceived usefulness, perceived risk and environmental factors were found to have significant influence in adoption of E- Banking services.

Garedachew (2010) conducted research on the opportunities and challenges of E-Banking in Ethiopia and found that lack of suitable legal and regulatory frameworks for E-commerce and E-Payment, political stability in neighboring countries, high rates of illiteracy and absence of financial networks that links different banks are the major challenges of E-Banking in Ethiopia.

Mulualem (2015) examined factors affecting adoption of mobile banking (on CBE A.A branches using Technology Acceptance Model (TAM) with additional variables name perceived risk. The research found that perceived usefulness and perceived ease of use have positive relationship with the adoption of mobile banking but perceived risk has negative relationship with the adoption of mobile banking

Haile (2015) also conducted on factors affecting the adoption of mobile Banking (in commercial Bank of Ethiopia) using the unified theory of acceptance and use of technology (UTAUT). The findings of the study showed that performance expectancy, perceived risk, perceived cost, Efforts expectancy and trust were the factors affecting the adoption of mobile banking but mobile service quality was found to be insignificant in the study.

Research Gap

Being a recent technology to Ethiopian banking industry; many literatures are not available regarding the topic. The few are that available mainly focus on identifying factors affecting the adoption of E-Banking business. The very few literatures available on mobile banking adoption basically have two drawbacks. First, they are conducted only on very few CBE, Addis Ababa branches neglecting all private banks. Secondly, they are conducted only in Addis Ababa. Hence, the outcome of the researches may not be representative. Therefore, carrying out this research will help financial institutions in general and private banks in particular in pinpointing the factors affecting the adoption of mobile banking. Hence, it fills the research gap.

Conceptual Framework

To achieve the research objective and to answer the research questions, the research used the Technology Acceptance Model developed by (Davis et al 1989) combined with the Unified Theory of Acceptance and Use of Technology (UTAUT) as developed by Vankatesh and Davis,

2003 by considering perceived trust, perceived risk, perceived cost and mobile phone experience as additional variables. The TAM model as discussed earlier proposes perceived usefulness and perceived ease of use as fundamental determinants of technology adoption. The UTAUT theory considered four key constructs: 1) performance expectancy, 2) effort expectancy, 3) social influence, and 4) facilitating conditions. . Therefore, based on the above, the following model is developed.

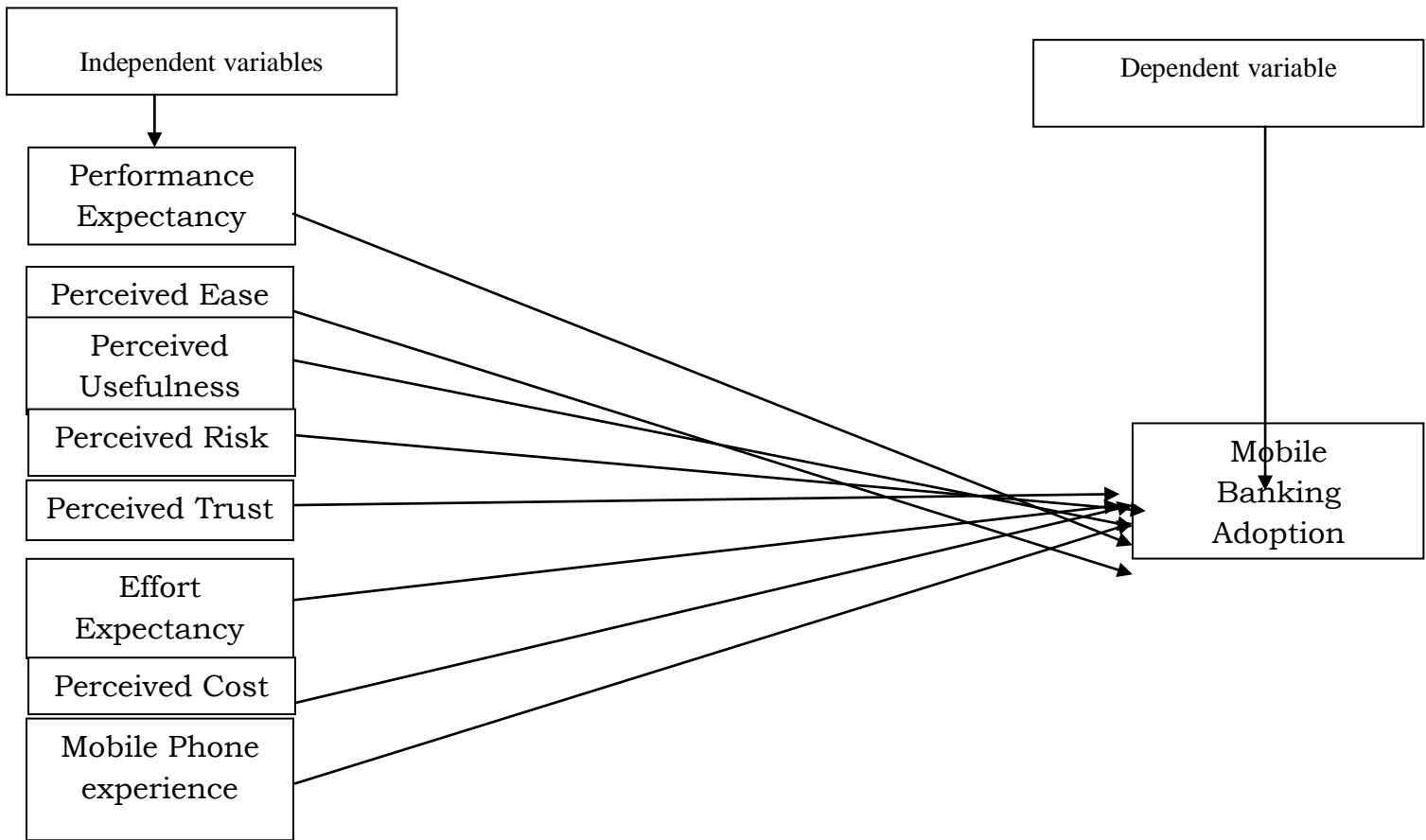
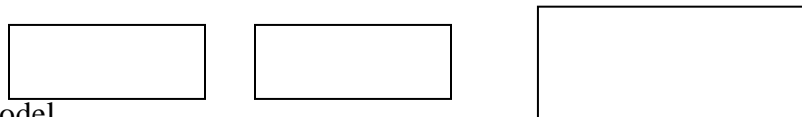


Figure 3: Research Model



CHAPTER THREE

3. Research Design and Methodology

3.1 Research Design

A research design constitutes the blue print for collection, measurement and analysis of data. It is the plan and the structure of investigation so conceived as to obtain answers to research questions. A research design is a master plan that specifies the methods and procedures for collecting and analyzing the needed information.

This research adopted a quantitative research approach by using both primary and secondary data. Quantitative research approach uses statistical methods in describing patterns of behavior and generalizing findings from samples to population of interest and employs structure of inquiry such as experiments and surveys. (Creswell, 2003).

The researcher used explanatory designs to describe factors affecting the adoption of mobile banking in private commercial banks. In doing this, the researcher employed descriptive and explanatory approaches of research design.

Descriptive researches are those research studies which concerned with describing the characteristics of a particular individual or of a group (Kothari, 2004). Descriptive research is used by gathering data from individuals or group and used average member or the average performance of a member being studied. Descriptive research design is selected because it is appropriate when the research objective include determination of the degree to which certain variables are related to actual phenomena as such information can provide decision makers with evidence that can lead to action (Hair & Ortinau, 2006).

Explanatory research design helps to determine cause and effect relationships with a primary purpose of determining new events that occur and which events affects or influence a particular outcomes (Dawson & Bob, 2006). Casual relationships answers questions by explaining which variables are the causes or the independent variables and which variables are being affected or dependent variable.

The research is descriptive, descriptive data were collected through questionnaire from customers and used in the descriptive analysis using various descriptive means. The research was explanatory as the researcher tried to explain the cause-effect relationship among factors affecting the adoption of mobile banking.

3.2 Target Population

According to Cooper and Schidler (2006), population is the total collection of elements about which we wish to make some inferences. As of June 30, 2017, twelve private commercial banks have been providing mobile banking services. As per NBE annual reports of June 30, 2017, the total population of the banks using mobile banking all over the country were 2.4 million. However, since it is difficult, cost and time consuming to conduct a census survey, the researcher drawn representative sample to conduct the study.

Accordingly, the researcher selected four banks out of the twelve banks using simple random sampling technique or lottery method. Following this, four banks, namely United Bank, S.c., Dashen Bank S.c, Birhan International Bank S.c and Wegagen Bank S.c were included in the sample.

The target population of the study comprised of customers of four banks in Addis Ababa who are currently using mobile banking services. According to the internal annual report of the four banks, as of the June 30, 2017, the four banks had a total population of 161,014 who are using mobile banking services (Appendix 1).

3.3 Sampling Techniques and Sample Size

In order to determine the sample, size, the researcher adopted a statistical formula developed by Daniel (1999) as cited by L. Nating T. Winn B.N. 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 were 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)

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

$$= 245.86=246$$

After determining a sample size of 246, the samples from each four banks were taken in proportion to their mobile banking subscribers as of June 30, 2017. Accordingly, the following table shows the proportional distribution of questionnaires to each bank.

Table 1: shows the proportional distribution of questionnaire

S.No	Name of Banks	Total mobile banking subscriber	Percentage proportional	No of questionnaire
1	United Bank S.C	106,826	(106,826)/161826*246	163
2	Dashen Bank S.C	19,456	(19,456)/161826*246	30
3	Brihan Bank S.C	22,872	(22,872)/161826*246	35
4	Wegagen Bank S.C	11,860	(11,860)/161826*246	18
	Total	161,014		246

Source: Annual Reports (June 2017)

3.4 Source and Instrument of Data Collection

The researcher used both primary and secondary sources of data to conduct the study. Accordingly primary data was collected from customers of the respective banks through questionnaire developed to solicit their opinion regarding the factors affecting the adoption of

mobile banking. The researcher also used secondary data sources like, annual reports, directives which supported the study.

As a research instrument, structured questionnaire was used to gather data from the respective banks respondents. The questionnaires consisted of closed ended question. To ensure successes, the questionnaires were short and precise with questions moving from easy to difficult ones. Data that were relevant to answer the research questions to meet the research objectives were included and a five points likert scale was used where 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= strongly agree was used to measure the respondents concerning the variables.

3.5 Data Collection Procedure.

The questionnaires were distributed to selected branches of the four banks in Addis Ababa. The branches were selected based on judgmental (purposive) sampling techniques as it enabled the researcher to select those branches that have high number of mobile banking subscribers.

Accordingly, 246 questionnaires were distributed to the branches in proportion to their mobile banking subscribers and 100% were collected during week days for three weeks running from March 25, to April 14, 2018.

3.6 Method of Data Analysis

After collection of the data, but before proceeding to the analysis, the collected data were checked for its reliability and normality test using Cronbach's alpha and kurtosis test. Descriptive statistics such as frequency distribution was used to assess the demographic profile of the respondents to make the analysis more meaningful, clear and understandable. Accordingly, the relevant data was obtained in a standard form using tables, frequencies and percentages to analyze and interpret the information and the analysis of data was also done using multiple regression analysis with the help of the statistical software called statistical packages for social sciences (SPSS) version 20.

3.7 Variable Measurement and Hypothesis Formulation

Research Model specification and Hypotheses Development in Mobile Banking Adoption Hair et al (2005) indicated that for analyzing the relationship between one dependent variable and several independent variables multiple regressions analysis can applied. Therefore, multiple regression analysis is an appropriate way to check the relationship between independent variables and dependent variable in this study.

The literature review in the chapter two identified the main factors that affects adoption of mobile banking from technology acceptance model and unified theory of acceptance and use of technology (UTAUT) perspective and the model that would help to investigate the relationship of the main factors and mobile banking adoption was designed.

The linear multiple regressions based on previous model designed by (Rokibul, 2013) and algorithm used by the SPSS is modified using the variables from the above conceptual framework and is stated as follows.

$$MBA = \beta_0 + \beta_1 PEXP + \beta_2 PEU + \beta_3 PU + \beta_4 PR + \beta_5 PC + \beta_6 EEXP + \beta_7 PT + \beta_8 MEXP + \epsilon$$

Where = MBA = Mobile banking adoption

β_0 = Mobile banking adoption in the absence of the Variable considered in the study.

β_1 = Partial change in MBA due to percentage change in performance expectancy.

β_2 = partial change in MBA due to change in perceived ease of use.

β_3 = partial change in MBA due to change in usefulness.

β_4 = the partial change in MBA due to change in perceived risk.

β_5 = the partial change in MBA due to change in perceived cost.

β_6 = the partial change in MBA due to change in effort expectancy.

β_7 = the partial change in MBA due to change in perceived trust

β_8 = the partial change in MBA due to change in mobile phone experience

Table 2: Variables Measurement

	Notation	Variables	Measures	Source
Department variable	MBA	Mobile banking adoption	Question no 1 – 9	
Independent variables	PEXP	Performance expectancy	Question no 2.1 - 2.5	Rodrigues et.al. 2016
	PEOU	Perceived ease use	Question no 3.1 - 3.4	Gu et.al (2009) Lin (2011)
	PEU	Perceived usefulness	Question no 4.1 – 4.3	Gu et.al (2009) Lin (2011)
	PR	Perceived risk	Question no 5.1 – 5.4	Lee (2009)
	PT	Perceived trust	Question no 6.1 – 6.3	Bhattachesjee (2002)
	EEXP	Effort expectancy	Question no 7.1 – 7.5	Rodrigues et.al. 2016
	PC	Perceived cost	Question no 8.1 – 8.2	Luarn & Lin 2005
	MPE	Mobile phone experience	Question no 1	:Laforet and Li ()

Source: Developed by the Researcher

Hypothesis formulation

Performance expectancy is the degree to which an individual believe that using the technology will help a person to attain gains in his or her job performance. (Venkatesh et al, 2003). Performance expectancy impacts mobile baking adoption because people are more willing to use a new technology if they get gain in their job performance. From this reason, the following hypothesis is developed.

H1: performance expectancy positively affects mobile banking adoption.

Perceive ease of use refers to the degree to which a person believes that engaging in online transaction through mobile banking would be free of effort (Davis et al, 1989). Technology features needs to be simple to use and make the user feel comfortable to work with regardless of knowledge of the technology. Hence, the following is hypothesized.

H2: Perceived ease of use positively affects mobile banking adoption.

Perceived usefulness: is defined as the degree to which using technology will be useful or improve performance (Davis et.al, 1989). Before using new products everyone looks for the outcome or benefits of the product .perceived usefulness affects mobile banking adoption because people are more willing to use a new technology when they understand its usefulness. Hence, from this it is possible to propose the following.

H3: perceive usefulness positively affects mobile banking adoption.

Effort expectancy is the degree of ease associated with the use of technology (Venkatesh et al, 2003) people are encouraged to use a new technology when it does not require a lot of effort, therefore, it is possible to propose the following.

H4: Effort expectancy positively affects mobile banking adoption

Perceived trust is the basis for any relationship in business. It is very crucial to sustain the relationship between business and customers. Studies have shown the trust is one of the factors that affect adoption of mobile banking (klm et al, 2009). Hence, the following is proposed.

H5: Perceived trust positively affects mobile banking adoption

Mobile phone experience the concept of mobile phone experience in this study focused on experience of a mobile phone referring to the degree to which banks customers have mobile phone usage experience. Experience plays a vital role in the study of mobile banking use. The

more experienced customers with new technologies, the greater the expectation that they will use mobile banking (Ratten 2011). Hence, the hypothesis is as follows.

H6: mobile phone experience positively affects mobile banking adoption.

Perceived risk perceived risk is defined as the potential financial risk in online transaction, perceived risks has been measured as a crucial variable in the use of mobile services because as mobile serves grow there will be financial security threats. Individuals' perceptions of risk regarding a specific technology are deeply associated with the use of that technology (Laforet and Li, 2005). Hence, the following the hypothesis.

H7: Perceived risk negatively affects adoption of mobile banking adoption

Perceived cost Mobile banking adoption involves several costs like equipment and service charges. Users are facing different cost that generally affects their decision making on adopting mobile banking (Hung et.al, 2003) the hypothesis is:

H8: perceived cost negatively affects the adoption of mobile banking.

CHAPTER FOUR

4. Data Analysis and Interpretation

4.1 Introduction

This chapter covers the presentation, analysis and interpretation of the data collected by the researcher. A total of 246 questionnaires were distributed to customers of United Bank, Dashen Bank, Birehan International Bank and Wegagaen bank s.c located in Addis Ababa city.

The questionnaires were fully collected. Regarding the methodology, descriptive statistics for analyzing the demographic data and correlation as well as multiple regressions for analyzing variables against the Dependent variable Mobile Banking Adoption was used. All the data were entered in to SPSS version and inferences were made based on the statistical results.

4.2 Reliability Test

Cronbach's alpha reliability coefficient normally ranges between 0 and 1. The closer alpha coefficient is to 1.0, the greater the internal consistency and vice versa. In this research the rule of thumb developed by (George and Mallery, 2003) was used where an alpha value ≥ 0.90 is excellent, ≥ 0.80 is good, ≥ 0.70 is acceptable, ≥ 0.60 is questionable, ≥ 0.50 is poor, ≤ 0.50 is unacceptable. Since the value of all the constructs were above 0.80, we can conclude that the data collection instrument is consistent and dependable as indicated in the following table.

Table 3. Reliability test

Construct	Number of item	Cronbach's alpha	Internal consistency
Performance Expectancy	5	0.868	Good
Perceived Ease of use	4	0.717	Acceptable
Perceived Usefulness	3	0.700	Acceptable
Perceived Risk	4	0.756	Acceptable
Trust	3	0.883	Good
Effort Expectancy	5	0.821	Good
Perceived Cost	2	0.760	Acceptable
Mobile Phone Experience	2	0.782	Acceptable
Overall Reliability	29	0.876	Good

Source: SPSS data, 2018

4.3 Skewness and Kurtosis Test

This test was conducted to measure the degree of asymmetry or departure from symmetry of a distribution and to measure peakedness.

Table 4: Skewness and Kurtosis Test

Statistics

	Performance Expectancy	Perceived Ease of Use	Perceived Usefulness	Perceived Risk	Perceived Trust	Effort Expectancy	Perceived Cost	Mobile Banking Adoption	Mobile phone Experience
N Valid	246	246	246	246	246	246	246	246	246
N Missing	0	0	0	0	0	0	0	0	0
Skewness	-.953	-.158	-.576	-.552	-.861	-.699	-.322	-.970	-1.296
Std. Error of Skewness	.155	.155	.155	.155	.155	.155	.155	.155	.155

Kurtosis	2.281	-.271	.828	.028	1.173	.958	-.169	.790	1.918
Std. Error of Kurtosis	.309	.309	.309	.309	.309	.309	.309	.309	.309

Source: SPSS data, 2018

The result showed that all variables are in the acceptable range means between -2 and +2 except for performance expectancy. Performance expectancy was acceptable for skewness test but not for kurtosis test.

4.4 MultiCollinearity Testing

A test of Multi collinearity was conducted to determine the correlation of the independent variables. Multicollinearity refers to the extent to which an independent variable can be explained by other independent variables in the analysis and if too high this can have harmful effect on regression.

Two major approaches were utilized in order to determine the presence of multicollinearity among independent variables in this study. These methodologies involved calculation of both a Tolerance test and Variance Inflation Factor –VIF (inverse of the tolerance) (Kleinbaum et.al, 1988) cited by (T. Velnampy & S. Sivesan, 2012) and Tolerance level is < or equal to 1 calculated as $(1-R^2)$ where R is correlation values; and all VIF is $1/\text{Tolerance}$ values are well below 10 is acceptable.

As can be seen from this data, all of the Tolerance level is < or equal to 1; and all VIF values are well below 10. Thus, the measures selected for assessing independent variables in this study are found acceptable.

Table 5: Multicollinearity Test

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	.014	.352		.039	.969		
	Performance Expectancy	.069	.075	.059	.917	.360	.539	1.855
	Perceived Ease of Use	.180	.069	.155	2.599	.010	.620	1.612
	perceived Usefulness	.201	.094	.148	2.141	.033	.464	2.157
	perceived Risk	-.056	.049	-.058	-1.141	.255	.869	1.151
	Perceived Trust	.069	.059	.069	1.172	.242	.645	1.550
	Effort Expectancy	.292	.074	.252	3.975	.000	.551	1.816
	Perceived Cost	-.109	.043	-.129	-2.530	.012	.846	1.182
	Mobile phone Experience	.166	.047	.185	3.505	.001	.797	1.254

a. Dependent Variable: Mobile Banking Adoption

4.5 Results of the Study

4.5.1 Demographic Profile of the Respondents

Table 6: Respondent Profile

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	143	58.1	58.1	58.1
	Female	103	41.9	41.9	100.0
Age	20-30	121	49.2	49.2	49.2
	31-40	103	41.9	41.9	91.1
	51-60	17	6.9	6.9	98.0
	Above 60	5	2.0	2.0	100.0
Educational Level	Diploma	28	11.4	11.4	11.4
	First Degree	184	74.8	74.8	86.2
	Second Degree	14	5.7	5.7	91.9
	High school complete	20	8.1	8.1	100.0
Monthly Income	800-1600	4	1.6	1.6	1.6
	1601-2500	3	1.2	1.2	2.8
	2501-3500	10	4.1	4.1	6.9
	3501 – 5000	15	6.1	6.1	13.0
	Above 5000	214	87.0	87.0	100.0
Occupation	Business Person	59	24.0	24.0	24.0
	Student	8	3.3	3.3	27.2
	Unemployed	2	.8	.8	28.0
	Salaried	177	72.0	72.0	100.0
Marital Status	Married	118	48.0	48.0	48.0

	Single	128	52.0	52.0	100.0
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Source: Analysis of survey data using SPSS data, 2018

Gender of the Respondents

From the 246 samples drawn from the population, 143 or 58% were males whereas 103 or 41.9% of them were females. The male respondents took the loin share.

Age of the Respondents

As indicated in the table 4.4 above, the respondents indicated that people from age 20-30 were the majority of the respondents constituting 49.2 %or 121 while respondents whose age ranges from 31-40 were 103 or 41.9 %.The respondents whose age ranged from 51-60 were 17 or 6.9 %, the last but not the least respondents were those above 60 and they constituted 5 in number or 2% of the total. From this result we can figure out that most of the respondents are from 20-30 age group.

Respondents Educational Status

In terms of their educational level, 184 respondents or 74.8 % were first degree holders whereas 14 or 5.7 % were second degree holders' .However, Diploma and high school complete were 28 (11.4%) and 20 (8.1%) respectively. The data indicated that the upper hands of the respondents are first degree holders (74.8%) implying the majority of the respondents are educated. The fact more of them are educated signifies that the more they understand the questions and the more the response obtained was reliable.

Monthly Income of the Respondents

Viewing the respondents monthly income point of view, the majority of the respondents were earning monthly salary above Br.5000.00 and the constituted 87% or 214 of the sample collected.6.1 % or 15 respondents were earning monthly income ranging from 3501-5000 where as 1.6 % or 4 and 1.2 % or 3 respondents were earning income that ranges from 800-1600 and 1601-2500 respectively.

Respondents Occupational Status

In terms of occupation, 177 or 72 % of the sample collected were salaried respondents, 59 respondents constituting 24 % were business person .3.3 % of the respondents or 8 of them were students and 2% of the respondents were unemployed.

Respondents Martial Status

The respondents were also requested to indicate their marital status. Accordingly, 118 or 48% of the respondents are married whereas 128 or 52% of were single.

4.5.2 Factors Affecting Mobile Banking Adoption in Addis Ababa

Factors that can affect the adoption of Mobile Banking including performance Expectancy, Perceived Ease of Use, Perceived Usefulness, Perceived Risk, Perceived Trust, Effort Expectancy, Perceived cost and, mobile phone experience were analyzed and the following descriptive results was obtained and presented below.

A. Performance Expectancy

To measure this variable five related questions were forwarded, analyzed and presented in the below table by taking the necessary data from SPSS.

Table 7: Frequency distribution of Performance Expectancy

	Str. Dis	Dis	Neutral	Agree	Str Agr	Mean	S.dev
Mobile banking services useful	4(1.6)	3(1.2)	25(10.2)	132(53.7)	82(33.3)	4.16	0.78
Mobile banking services increase my productivity	5(2.0)	8(3.3)	43(17.5)	117(47.6)	73(29.7)	4.00	0.89
mobile banking services enhance my banking transaction quality	3(1.2)	10(4.1)	55(22.4)	118(48.0)	60(24.4)	3.90	0.86

Mobile banking services increase efficiency banking tasks	4(1.6)	7(2.8)	46(18.7)	124(50.4)	65(26.4)	3.97	0.84
Mobile banking services improve my payment convenience.	7(2.8)	11(4.5)	55(22.4)	120(48.8)	53(21.5)	3.82	0.92
Grand Mean						3.9	

Source: SPSS data, 2018

To measure the attitude of respondents with regard to performance expectancy, the respondents were asked five questions using five-point Likert scale. For the first question (I found mobile banking service useful.) 132 (53.75%) of them agree with the statement and of the respondent, 83 (33.3%), are strongly agree with the statement. The rest 25 (10.2%), 3 (1.2%) and 4(1.6%) of respondents respectively responded neutral, disagree and strongly disagree. The other question that was asked for the respondent to measure performance expectancy of the respondents was whether the Mobile banking service increases their productivity.. Consequently, similar to the above result most respondent, 117 (47.6%) and 73 (29.7) of the total agree and strongly agree with the statement respectively, believe that mobile banking increases their productivity. Likewise 43 or 17.55% of them were neutral about the statement and the res8 (3.3%) and 5 (2%) were disagree and strongly disagree with the statement. The third question was about weather mobile banking services enhance transaction quality or not, 118 (48%) were agree, 60(24.4%) were strongly agree, 55 (22.4%) were neutral, the rest 10 (4.1%) and 3 (1.2%) were disagree and strongly disagree respectively.

The fourth question was about the impact of mobile banking on efficiency, 124 (50.4%) were agreed with the statement, 65 (26.4%) were strongly agree, the rest 46 (18.7%), 7 (2.8%) and 4 (1.6%) where neutral, disagree and strongly disagree. The fifth question is about the convenience of making payment using mobile banking transaction, 120 (48.8%) were agreed with the statement, 52 (21.5%) were strongly agreed, the rest 55 (22.4%), 11 (4.53%) and 7 (2.8%) where neutral, disagree and strongly disagree .This showed that mobile banking helps users in facilitating job performance.

When we compute mean for the questions under performance expectancy, the highest was 4.16 and the lowest 3.82.

B. Perceived Ease of Use

To measure the variable, four questions were forwarded, analyzed and presented in the following table using the necessary output data taken from SPSS.

Table 8: Frequency distributions of Perceived Ease of use

	Str. Dis	Dis	Neu	Ag	Str Agr	Mean	S.dev
Learning to use mobile banking would be easy.	3(1.2)	7(2.8)	30(12.2)	111(45.1)	95(38.6)	4.17	0.84
Interaction with mobile banking does not require a lot of mental effort.	5(2.0)	18(7.3)	41(16.7)	110(44.7)	72(29.3)	3.92	0.97
It is easy to use mobile banking to accomplish my baking task.	2(0.8)	9(3.7)	35(14.2)	122(49.6)	78(31.7)	4.08	0.82
Using mobile banking does not require training	16(6.5)	64(26.0)	75(30.5)	52(21.1)	39(15.9)	3.14	1.16
Grand Mean						3.8	

Source: SPSS data, 2018

To measure the attitude of the respondents with regard to perceived ease of use, the respondents were asked four questions. The first question was to assess whether learning mobile banking is easy or not. Accordingly 111 respondents or 45.1/ agree to the question and 95 respondents or 38.6% were strongly agree to the easiness of learning mobile banking. 3 respondents (1.2%) and 7 respondents (2.8%) strongly disagree and disagree respectively. However, 30 respondents (12.2%) were neutral to the statement.

The second question that was forwarded to the respondents was to measure whether interaction with mobile banking requires effort or not. Accordingly the response indicated that 110 (44.7%)

agreed to the statements. 72 respondents (29.3%) of them were strongly agree. However 5 respondents (2%) were strongly disagree, 18 respondents (7.3%) also disagree to the statement. 41 respondents comprising 16.7% of the total were natural to the question.

The third question was to measure how using mobile banking is easy to accomplish banking tasks. Accordingly the collected response indicated that 122 respondents (49.6%) agree to the question and 78 respondents or 31.7% were strongly agree to the question likewise, 2 respondents (0.8%) were strongly disagree and 9 respondents (3.7%) were also disagree to the question. However, 35 respondents (14.2%) were neutral to the question. The last question forwarded was to assesses whether using mobile banking requires training or not .The analyzed data indicated that 52 respondents (21.1%) were agree, 39 respondents (15.9%) strongly agree to the need of training, 16 respondents (6.5%) strongly disagree, 64 respondents (26%) were disagree to the statements and 75 respondents of 30.5% were natural to the questions. This showed that the easier the mobile banking services, the more likely to be adopted. These results concur with Hoppe et al., 2001 that suggested the more complex a new technology is perceived to be, the less likely it will be used.

C. Perceived Usefulness

To measure this variable, the researcher forwarded three questions, analyzed and presented in the following table using the output data taken from SPSS.

Table 9: Frequency distribution for Perceived Usefulness

	Str. Dis	Dis	Neu	Ag	Str Agr	Mean	S.dev
Using mobile Banking would enable me to accomplish my tasks more quickly	2(0.8)	6(2.4)	32(13.0)	127(51.6)	79(32.1)	4.12	0.78
Using mobile banking would make it easier for me to carry out my tasks	2(0.8)	3(1.2)	43(17.5)	132(53.7)	66(26.8)	4.04	0.75
Overall using mobile banking is advantageous.	1(0.4)	0(0.0)	34(13.8)	91(37.0)	120(48.8)	4.34	0.74

Grand Mean						4.1	
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Source: SPSS data, 2018

As mentioned earlier, three questions were forwarded; the first question was to measure whether mobile banking service enables users to accomplish banking tasks more quickly. From the 246 respondents, 127 (51.6%) were agree ,79 respondents (32.1%) strongly agree to the question, 2 respondents and 6 respondents (1.2%) were strongly disagree and disagree respectively, however, 32 respondents (13%) of them were neutral to the question forwarded.

The second question was to measure whether mobile banking service makes banking service easy or not. Accordingly, 132 respondents or 53.7% of them agree to the questions and 66 respondents or 26.8% were strongly agreed in contrast, 2 respondents strongly disagree and 3 respondents disagree to the statement. 43 respondents (17.5%) were neutral. The third question was to measure whether mobile banking is advantageous or not. The collected data indicated that 91 respondents (37%) of them were agreed and 120 respondents or 48.8% of them were strongly agree to the question. 1 respondent strongly d agree, and 34 respondents (13.8%) were neutral. However, no respondents disagree to the question the result implies that adopting mobile banking is useful in performing banking activities. This finding agreed with Luarn and lin (2005) that stated perceived usefulness is a vital factor of determine adoption of mobile banking.

D. Perceived Risk

To measure this variable, four questions were forwarded to the 246 respondents. The collected data were analyzed and presented in the following table below

Table 10: Frequency distribution of Perceived Risk

	Str. Dis	Dis	Neu	Ag	Str Agr	Mean	S.dev
Mobile banking may not perform well because of network problem.	8(3.3)	15(6.1)	27(11.0)	101(41.1)	95(38.6)	4.06	1.02
I am afraid that loss of my	28(11.4)	38(15.4)	41(16.7)	91(37.0)	48(19.5)	3.38	1.27

money due to transactions							
not comfortable of using mobile banking as carrying my phone and my code	34(13.8)	65(26.4)	55(22.4)	66(26.8)	26(10.6)	2.94	1.23
Overall using mobile banking is risky.	36(14.6)	50(20.3)	76(30.9)	56(22.8)	28(11.4)	2.96	1.21
Grand Mean						3.3	

Source: SPSS data, 2018

The first question was to measure the functionality of mobile banking from network point of view. Accordingly, the data collected indicated that 101 respondents (41.1%) agree to the question, 95 respondents (38.6%) strongly agree whereas 27 respondents (11%) of them were neutral. 8 respondents (3.3%) strongly disagree, and 15 respondents (6.1%) disagree to the question.

The second question was to measure whether customers fear while transacting using mobile banking due to different reasons like mistake in using their account, inputting wrong amount. Accordingly, 91 respondents (37%) strongly agree to the question, 48 respondents (19.5%) strongly agree to the question. 28 respondents (11.4%) of them strongly disagree, 38 respondents (15.4%) disagree however, 41 respondents (16.7) were neutral.

The third question was to measure whether users are comfortable of using mobile banking at carrying the phone and code may expose them to risks.

Accordingly, 66 respondents (26.8%) were agreed to the question, 26 respondents (10.6%) were strongly agree however 34 respondents or 13.8% where strong disagree and 65 (26.4%) of the respondents disagree. However, 55 respondents (22.4%) were neutral to the question.

The last question forwarded was to measure how customers measure the overall riskiness of mobile banking. According, 56 respondents, or 22.8% were agreed to the question; 28 respondents or 11.4% were strongly agreed to the question. 36 of the respondents or 14.6% strongly disagree, 50 respondents (20.3%) disagree however, 76 or 30.9% of them were neutral. The result could indicate that perception of risk regarding the mobile banking affects its

adoption. This is consistency with Chitungo and Munongo,2015)who suggested that the presence of perceived risk negatively affects adoption of mobile adoption.

E. Perceived Trust

To measure this variable, the researcher forwarded three question accordingly the collected data were analyzed and presented in the following table below taking the data from the SPSS.

Table 11: Frequency distributions of Trust

	Str. Dis	Dis	Neu	Ag	Str Agr	Mean	S.dev
I believe that my transactions are secured	4(1.6)	11(4.5)	40(16.3)	123(50.0)	68(27.6)	3.98	0.88
believe that my privacy is secured	4(1.6)	12(4.9)	46(18.7)	116(47.2)	68(27.6)	3.94	0.90
all my information is kept confidential	4(1.6)	17(6.9)	45(18.3)	107(43.5)	73(29.7)	3.93	0.95
Grand Mean						3.9	

Source: SPSS data, 2018

The first question was to measure whether customers feel secured of their transaction in using mobile banking. Accordingly 123 respondents constituting 50%; agreed to the question and 68 respondents (27.6%) were strongly agreed. However, 4 respondents (1.6%) were strongly disagreed, 11 respondents (4.5%) of them were disagreed but 40 respondents (16.3%) were neutral to the question.

The second question was to measure whether customers believe that their privacy is secured or not while using mobile banking. Accordingly, 116 respondents (47.2%) agreed to the question.

Moreover, 68 respondents (27.6%) strongly agreed to the question indicating that their privacy is secured 4 respondents (1.6%) and 12 respondents (4.9%) responded by choosing strongly disagree and disagree respectively. However 48 (18.7%) of the respondents were neutral to the question.

The last questions was to assess whether customer believe to the confidentiality of their information. Accordingly 107 respondents of 43.5% agreed to the question and 73 respondents (29.7%) of them strongly agree. However, 4(1.6%) of the respondent, strongly disagree and 17 respondents (6.9%) of them also disagree 45 respondents (18.3%) were neutral. This implies that as long as customers developed trust on mobile banking the adoption rate is high. This finding is also consistency with the finding of Gulee and suh, 2009) that stated the high the level of trust, the higher the greater intension on the part of the user to engage in mobile banking ser

F. Effort Expectancy

Five questions were forwarded to measure this variable, and the collected data were analyzed and the findings are presented in the following table as follows.

Table 12: Frequency distribution of Effort Expectancy

	Str.	Dis	Dis	Neu	Ag	Str Agr	Mean	S.dev
My mobile banking menu is very easy to navigate	3(1.2)	25(10.2)	37(15.0)	107(43.5)	74(30.1)	3.91	0.98	
My mobile banking menu is very easy to understand.	2(0.8)	17(6.9)	32(13.0)	114(46.3)	81(32.9)	4.04	0.90	
It is easy to make payment using mobile banking	6(2.4)	18(7.3)	41(16.7)	111(45.1)	70(28.5)	3.90	0.98	
Is easy to make money transfer using mobile banking	3(1.2)	11(4.5)	24(9.8)	118(48.0)	90(36.6)	4.14	0.86	
It is easy to make balance inquiry using mobile	4(1.6)	8(3.3)	26(10.6)	93(37.8)	115(46.7)	4.25	0.89	

banking.							
Grand Mean						4	

Source: SPSS data, 2018

The first question forwards was to measure the extent to which mobile banking menu is easy to navigate. Accordingly, 107 respondents or 45.3% were agreed to the question and 74 (30.1%) were also strongly agreed. In contrast, however, 3(1.2%) were strongly disagree and 25 or 10.2% of the respondents disagreed and 37 respondents, or 15% of them were neutral.

The second question was to measure the degree to which mobile banking menu is easy to understand. From the 246 respondents, 114 or 46.3% were agreed to the question, 81 respondents or 32.9% were strongly agreed. However, 2 respondents strong disagree and 17 respondents or 6.9% were disagreed but 32 respondents or 13% of them were neutral.

The third question was to make whether making payment using mobile banking is easy or not accordingly, 111 or 45.1% of the respondents agreed to the question and 70 respondents or 28.5% were strongly agreed to the statement. However, 6 or 2.4% of the respondents were strongly disagreed and 18 or 7.3% of them were also disagreed. However, 41 respondents or 16.7% were neutral to the question.

The fourth question was to measure the easiness of mobile banking service in making money transfer. Accordingly, of 246 respondents, 118 or 48% of them agree to the question, 90 respondents or 36.6% were strongly agreed. However, 3(1.2%) of the respondents were strongly disagreed and 11 or 4.5% of the respondents disagree. However, 24 respondents or 9.8% of them were neutral

The fifth question was to measure how easy to make balance inquiry using mobile banking service. Accordingly, 93 respondents or 37.8% of them were agreed to the question and 93 or 37.8% of them were also strongly agreed. However, 8(1.6%) were strongly disagreed and 8 respondents (3.3%) were disagree. However, 26 respondents or 10.6% of them were neutral. The finding indicated that the more mobile banking is free from effort, the more likely it will be adopted.

G. Perceived Cost

To measure this variable, two questions were forwarded and the data collected were analyzed and presented in the following table as follows

Table 13: Frequency distribution for Perceived Cost

	Str. Dis	Dis	Neu	Ag	Str Agr	Mean	S.dev
transaction fee is expensive to use	29(11.8)	64(26.0)	36(14.6)	60(24.4)	57(23.2)	3.21	1.37
MB is not cheaper than visiting bank branches	10(4.1)	8(3.3)	34(13.8)	95(38.6)	99(40.2)	4.08	1.02
Grand Mean						3.6	

Source: SPSS data, 2018

The first question forwarded in connection with perceived cost was to measure to expensiveness of transaction fee. Accordingly, 60 respondents (24.4%) were agreed to the question and 57 or 23.2% strongly agree. In contrast, 29 respondents (11.8%) were strongly agreed and 64 respondents (26%) disagree. However, 36 respondents or 14.6% were neutral.

The second question was to measure using mobile banking service is cheaper over visiting bank branches. Accordingly, 95 respondents or 38.6% of them were agreed and 99 or 40.2% of the respondents strongly agreed .However, 10 respondents (4.1%) strongly disagree and 8 respondents (3.3%) were disagree and 34 respondents or 13.8% were neutral.

H. Mobile Phone Experience

To measure this variable, the researcher forwarded one question to assess the respondents' experience and knowledge of mobile banking. and accordingly the analyzed data were presented in the following table as follows.

Table 14. Frequency distribution for Mobile phone Experience

Mobile phone Experience

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	Strongly Disagree	5	2.0	2.0	2.0
	Disagree	10	4.1	4.1	6.1
	Neutral	25	10.2	10.2	16.3
	Agree	109	44.3	44.3	60.6
	Strongly Agree	97	39.4	39.4	100.0
	Total	246	100.0	100.0	Total
	Mean				4.15

Accordingly 109 or 44.3 % of the respondents agree while 97 or 39.4 % of them strongly agree to the question. It is only 4.1 % and 2 % that disagree and strongly disagree to the question. This could imply that the more experience in mobile phone the higher the mobile bank adoption. This is in harmony with Ratten, 2011 the more experienced consumers with new technologies, the greater expectation that they will use mobile banking.

4.6 Correlation Between Constructs

Since the aim of the research was to describe the factors that affect the adoption of mobile banking and make statistical analysis to determine if there is significant relationship between the constructs, this study used descriptive method. Regarding the statistical analysis, the researcher employed both correlation and regression analysis to determine whether there is statistically significant relationship between the independent and dependent variables. In the cases of performance expectancy, Perceived Ease of Use, perceived Usefulness, perceived Risk, Perceived Trust, Effort Expectancy, mobile phone experience and Perceived Cost the research findings supported the literature by showing the factors that are likely to influence the adoption of mobile banking.

Table 15: Correlation between Mobile Banking Adoption with indicators

		Mobile Banking Adoption
Mobile Banking Adoption	Pearson Correlation	1
	Sig. (2-tailed)	
	N	246
Performance Expectancy	Pearson Correlation	.427**
	Sig. (2-tailed)	.000
	N	246
Perceived Ease of Use	Pearson Correlation	.500**

	Sig. (2-tailed)	.000
	N	246
perceived Usefulness	Pearson Correlation	.498**
	Sig. (2-tailed)	.000
	N	246
perceived Risk	Pearson Correlation	-.069
	Sig. (2-tailed)	.283
	N	246
Perceived Trust	Pearson Correlation	.417**
	Sig. (2-tailed)	.000
	N	246
Effort Expectancy	Pearson Correlation	.575**
	Sig. (2-tailed)	.000
	N	246
Perceived Cost	Pearson Correlation	-.323**
	Sig. (2-tailed)	.000
	N	246
Mobile phone Experience	Pearson Correlation	.426**
	Sig. (2-tailed)	.000
	N	246

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

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

4.6.1 Performance Expectancy

Performance Expectancy- Performance expectancy is defined as the degree to which an individual believes that using the system will help him or her to attain gains in job performance. (Venkatesh et al. 2003). The correlation results indicated that performance expectancy factor has a positive relationship with mobile banking adoption of customers towards the adoption of mobile banking services. This supports the hypothesis that stated performance expectancy positively affects mobile banking adoption.

4.6.2 Perceived Ease of Use

The correlation results indicated that perceived ease of use factor has a positive relationship with mobile banking adoption. This supports the hypothesis that stated perceived ease of use positively affects mobile banking adoption.

4.6.3 Perceived Usefulness

The correlation results indicated that perceived usefulness has a positive relationship with mobile banking adoption supporting the hypothesis that stated perceived usefulness positively affects mobile banking adoption.

4.6.4 Perceived Risk

The correlation results indicated that perceived risk has a negative relationship with mobile banking adoption. This is in harmony with the hypothesis that stated perceived risk negatively affects mobile banking adoption.

4.6.5 Perceived Trust

The correlation results indicated that perceived trust has a positive relationship with mobile banking adoption. This also supports the hypothesis that stated perceived trust positively affects mobile banking adoption.

4.6.6 Effort Expectancy

The correlation results indicated that effort expectancy has positive relationship with mobile banking adoption supporting the hypothesis that stated effort expectancy positively affects the adoption of mobile banking.

4.6.7 Perceived Cost

The correlation results indicated that perceived cost has a negative relationship with mobile banking adoption and this supports the hypothesis that stated perceived cost negatively affects the adoption of mobile banking.

4.6.8 Mobile Phone Experience

The correlation results indicated that mobile phone experience has positive association with mobile banking adoption .The also supports hypothesis that stated mobile phone experience positively affect mobile banking adoption.

4.7 Regression Analysis

The following table shows the unstandardized and standardized regression weights for the variables and the result discussed and interpreted below along with regression model.

Table 16: Multiple Regression Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.689 ^a	.475	.457	.60145

- a. Predictors: (Constant), Mobile phone Experience, perceived Risk, perceived Usefulness, Perceived Cost, Perceived Ease of Use, Perceived Trust, Effort Expectancy, Performance Expectancy

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.516	8	9.690	26.786	.000 ^b
	Residual	85.733	237	.362		
	Total	163.249	245			

- a. Dependent Variable: Mobile Banking Adoption
- b. Predictors: (Constant), Mobile phone Experience, perceived Risk, perceived Usefulness, Perceived Cost, Perceived Ease of Use, Perceived Trust, Effort Expectancy, Performance Expectancy

Table 17: Predictors of Mobile Banking Adoption.

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
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		B	Std. Error	Beta		
1	(Constant)	.014	.352		.039	.969
	Performance Expectancy	.069	.075	.059	.917	.360
	Perceived Ease of Use	.180	.069	.155	2.599	.010
	perceived Usefulness	.201	.094	.148	2.141	.033
	perceived Risk	-.056	.049	-.058	-1.141	.255
	Perceived Trust	.069	.059	.069	1.172	.242
	Effort Expectancy	.292	.074	.252	3.975	.000
	Perceived Cost	-.109	.043	-.129	-2.530	.012
	Mobile phone Experience	.166	.047	.185	-3.505	.001

Source: SPSS data, 2018

4.8.2 Hypothesis Testing Using Regression Analysis

Correlation analysis does not provide enough information to make proper decision regarding the level of significance of the independent variable to the dependent variable. Hence, multiple regressions have used to test the hypothesis for independent variables and dependent variable and their level of significance. Hence, this section discusses the analysis of the results for each independent variable and their significance in influencing mobile banking adoption furthermore; the discussion analyzes the statistical findings of the study in relation to pervious empirical evidences. In the above table, the regression model presents how much of the variance in mobile banking adoption is explained by the considered variables. The model or the predictor variables have accounted for 47.5% of the variability. It means that 47.5% of the variations in mobile banking adoption in Addis Ababa, Ethiopia were explained by variables included in the model.

4.8.2.1 Performance Expectancy

The result in table above shows that performance expectancy has a coefficient of 0.069 and P-value of .360, holding other explanatory variables constant, performance expectancy is found to have a statistically insignificant positive association with the adoption of mobile banking. Therefore, the researcher rejected the hypothesis that stated performance expectancy has a positive relationship with mobile banking adoption. This result is inconsistency with pervious research by Alsheikh and Bojei (2014

4.8.2.2. Perceived Ease of Use

As it can be shown in the table above perceived ease of use has a coefficient of 0.180 with its P-Value of 0.010. It can be seen that keeping other variables constant, Perceived ease of use is found to have a positive and statistically significant impact on the adoption of mobile banking. Therefore, the researcher failed to reject the hypothesis that stated perceived ease of use has positive relationship with mobile banking adoption. This finding is also consistent with results by (Khalifa and Sen 2008, Kimetal 2009; wei et.al 2009) that stated perceived ease of use has a positive influence on mobile banking.

This finding could imply that when customers understand the easiness of mobile banking that can be handled without difficulty; they are more likely to adopt mobile banking

. 4.8.2.3 Perceived Usefulness

As can be indicated in the above table, perceived usefulness has a coefficient of 0.201 with a P-value of 0.033. This implies that holding other factors constant, perceived usefulness has positive and statistically significant influence on mobile banking adoption. Hence, the research failed to reject the hypothesis that stated perceived usefulness has a positive effect on mobile banking adoption moreover, this result is consistent with/Luarn and Lin,(2005) that stated perceived usefulness has a positive influence on mobile banking adoption. The possible reason behind could be the more customers understands the benefits of mobile banking, there is a highly likely to adopt mobile banking.

4.8.2.4 Perceived Risks

As indicated in the table above, perceived risk has a co-efficient of $-.056$ and its P-value is 0.225 holding other factors constant perceived risk has negative but statistically insignificant influence on mobile banking adoption. The possible cause of the result could be mobile banking services have encryption and the development of mobile banking in our country is at infant stage and as a result users may not worry about risks that might encounter. Hence, the researcher rejected the hypothesis perceived risk has negative and significant effect on mobile banking adoption.

The study results is inconsistent with the Luarn and Lin, (2005): Safeena et.al, 2011 who stated perceived risk is one of the factors to be focused on while developing mobile banking services. The possible reason for this could be as mobile banking services have encryption and the services 'development is at infant stage ,users are not worrying of the possible risks that the might encounter.

4.8.2.5 Perceived Trust

As if can be seen from the above table, the coefficient of perceived trust is 0.059 with P-value of $.242$ holding other variable constant, perceived trust was found to have a positive relationship but statistically insignificant influence on the adoption of mobile banking. This could be, culturally users have a great trust on banks. Therefore, to adopt mobile banking users do not consider trust as a major factor as service provider is trusty worthy for them. Therefore, the research rejected the hypothesis that stated trust has a positive effect on mobile banking adoption this result is inconsistency with the findings of (Gu, Lee and Suh, 2009: Lee et al, 2007) that showed the high the level of trust in a service provider will lead to a great intention on the part of users to adopt mobile banking services.

4.8.2.6. Effort Expectancy

As it can be seen from table 17, the coefficient of effort expectancy is 0.292 with a significant value of 0.000 indicating that holding other factors constant, effort expectancy has a positive relationship with mobile banking adoption with statistically significant influence on adoption. Therefore, the research failed to reject the hypothesis that stated effort expectancy has a positive relationship with mobile banking adoption. This result is also consistent with the result reported

by Jaradat and Al Rababa (2013) .Hence, this finding could imply when mobile banking usage is very easy that does not require much effort, there is high likely that customers adopt mobile banking .

4.8.2.7 Perceived Cost

As it can be seen from table, the coefficient of perceived cost is -0.109 with P-value of 0.012 indicating that perceived cost negatively related and statistically significant with mobile banking adoption. Hence, the research failed to reject the working hypothesis that stated perceived cost is negatively related with mobile banking adoption. This finding could imply that increase in costs like transaction fee discourage customers from adopting mobile banking.

4.8.2.8 Mobile phone Experiences

As indicated in the table 15, mobile phone experience has a coefficient of 0.166 with a P-value of 0.001 implying that, keeping other explanatory variables constant; mobile phone experience has a positive and statistically significant impact on adoption of mobile banking. Hence, the research failed to reject the hypothesis that stated mobile phone experiences has a positive relationship with mobile banking adoption. The finding is also consistent with prior research of (Laforest and Li 2005) that indicated mobile phone experience significantly influence customers ‘adoption of mobile banking.

4.8 Summary of Hypothesis Result

Table 18: Summary of hypothesis test

No	Hypotheses	Results	
H1	Performance expectancy has Positive and significant effect on the adoption of mobile banking.	Rejected	Correlation results, Rho=0.427, Pr<0.01, Alpha=0.05 Regression result $\beta = .069$, sig. 0.360

H2	Perceived Ease of Use has Positive effect on the adoption of mobile banking.	Supported	Correlation results, Rho=0.500, Pr<0.01, Alpha=0.05 Regression result β = 0.180, sig. 0.010
H3	perceived Usefulness has Positive effect on the adoption of mobile banking	Supported	Correlation results, Rho=0.498, Pr<0.01, Alpha=0.05 Regression result β = 0.201, sig. 0.033
H4	Perceived risk has negative effect on adoption of mobile banking.	Rejected	Correlation results, Rho=-.069, Pr>0.01, Alpha=0.05 Regression result β = -.056, sig. 0.255
H5	Trust has a positive effect on adoption of mobile banking.	Rejected	Correlation results, Rho=0.417, Pr<0.01, Alpha=0.05 Regression result β = 0.069, sig. 0.242
H6	Effort Expectancy has a positive effect on adoption of mobile banking.	Supported	Correlation results, Rho=0.575, Pr<0.01, Alpha=0.05 Regression result β = 0.292, sig. 0.000
H7	Perceived Cost has Negative effect on the adoption of mobile banking	Supported	Correlation results, Rho=-0.323, Pr<0.01, Alpha=0.05 Regression result β = -.109, sig. 0.012
H8	Mobile phone experience has Positive effect on the adoption of mobile banking	Supported	Correlation results, Rho=0.426, Pr<0.01, Alpha=0.05 Regression result β = 0.166, sig. 0.001

CHAPTER FIVE

5. Conclusion and Recommendation

5.1 Conclusion

This paper developed a model of users' adoption on mobile banking services based on the unified theory of acceptance and use of technology (UTAUT) and technology acceptance model (TAM) and attempted to explain the influencing factors which play rolls on adoption of mobile banking. The researcher collected data from 246 respondents of four private banks located in Addis Ababa and made statistical analysis using SPSS.

Eight factors were considered in the model. These are performance expectancy. Perceived ease of use, perceived usefulness, perceived Trust, perceived risk, effort expectancy, perceived cost and mobile phone experience.

Effort expectancy was found to have a significant and positive influence on mobile banking adoption showing that for mobile banking technology to be accepted by users, the technology has to be from effort. Therefore, it can be concluded that people will adopt mobile banking services when the service brings efficiency in performing banking tasks.

Performance expectancy has insignificant positive effect on mobile banking adoption implying that performance expectancy has on significant impact on adoption of mobile banking for customers in Addis Ababa.

Perceived usefulness was found to have a positive and significant effect on adoption of mobile banking. The finding suggest that for mobile banking technology to be accepted by users, the customers should have to perceive it as useful, better and quick of doing banking activities as compared to traditional banking. Therefore, it can be concluded that people will adopt mobile banking services when the service is useful and advantageous in performing their banking tasks.

Perceived risks the finding indicated that perceived risk has negative and insignificant impact on mobile banking adoption. This might be due the low level or infant stage of mobile banking in our country in which we are remote to see the risk. This showed that at current development that

mobile banking has reached, people's fear of risk that might happen in connection with network, doing transactions like transfer of money using mobile banking is not material.

Perceived trust has a positive and statically insignificant effect on mobile banking. This implies that when people believe that mobile banking is secured and their information is kept confidential, they are encouraged to adopt mobile banking. Therefore, it can be concluded that, when people feel that transaction on mobile banking are secured and privacy is secured, they are encouraged to adopt mobile banking.

Performance expectancy has positive but insignificant impact on mobile banking adoption , Perceived cost was found to have positive and significant impact on mobile banking adoption. This could imply that people understood the cost of mobile banking as compared to traditional banking which involves physical visit of banks (cost in terms of time and money) as better. Hence, it can be concluded that as people aware of value of time, they are more concerned with adoption not with the transaction costs.

Mobile phone experience was also found to have a positive and significant effect on mobile banking adoption. This could imply that the more people aware of using their phones, they are encouraged to use technologies like mobile banking using their phones.

5.2 Recommendation

Based on the above findings, to improve the adoption of mobile banking in Ethiopia ,for banks, which already adopt the technology or looks for the mobile banking adoption, the researcher recommend the followings.

Among the eight variables considered in this study, effort expectancy found the most significant in influencing the adoption of mobile banking. Hence, the researcher recommends that bank should do a lot in making their mobile application in such a way that does not require much effort.

The finding of this research indicated that ease of use is the second variables following effort expectancy in influencing mobile banking adoption among customers. Therefore to reap the benefits of mobile banking services banks should strongly work on making the service ease.

Perceived Usefulness is one of the factors identified in the study significantly influencing mobile banking adoption among customers of Addis Ababa. Hence in order to reap the fruits of mobile banking, banks has to educate the different benefits and advantages that mobile banking services offer. Risk is also one of the variables in the study that affects the adoption of mobile banking negatively but having insignificant effect. The insignificant impact currently may be due to the low level of mobile banking development in which customers are remote to sense the risks. But as the relationship of risk with adoption is negative banks should work on higher security when providing mobile banking services in order to obtain higher mobile banking adoption. The banks should also work to the extent of innovating and offering better and reliable security by encryption information to protect their customers' privacy.

Mobile Phone Experience is also one of the variables that significantly influence the adoption of mobile banking services. The more customers are experienced about their phone is the more they adopt the services. Therefore, in availing mobile banking services, banks should focus on those customers who well acquainted themselves with mobile phone utilization without neglecting others. That is they have to well educate others in exhibiting how to use mobile banking services. The awareness creation mechanisms may start from the bank counter and may also use other alternative means. In this study, cost is one of the factors that negatively affected mobile banking adoption with significant effect on the adoption of the service. This implies that when cost like transaction fees increase; customers are discouraged from adopting mobile banking. Hence, banks have to take care in setting charges for the mobile banking services.

To summarize, the identified factors have influential impact on the adoption of mobile banking. Therefore, banks should well aware of the impact of each factory and strongly do on them so that the adoption rate of mobile banking service will be improved.

5.3 Future Study

The following are areas to be accounted for future research: This research is conducted only in four private banks in Addis Ababa. Therefore, further studies may consider respondents from other banks and out of Addis Ababa. The researcher considers only eight variables among a number of factors that might affect mobile banking adoption and hence, future studies may consider additional variables.

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APPENDIX

Appendix 1: Lists of Banks in Ethiopia

Name of Banks

1. Commercial Bank of Ethiopia
2. Development Bank of Ethiopia
3. Awash International Bank
4. Dashen Bank
5. Abyssina Bank
6. Wegagen Bank
7. United Bank
8. NIB International Bank
9. Cooperative Bank of Oromiya
10. Lion International Bank
11. Oromia International Bank
12. Zemen Bank
13. Buna International Bank
14. Berhan International Bank
15. Abay Bank
16. Addis International Bank
17. Debub Global Bank
18. Enat Bank

Appendix 2: Mobile Banking Subscribes of the four banks

No	Name of bank	No of Mobile Baking Subscribers
1	United Bank	106,826
2	Dashen Bank	19,456
3	Berehan International Bank	22,872
4	NIB International Bank	11,860
	Total	161,014

Source: Annual Report of Respective Banks

Appendix 3: SPSS Output

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	143	58.1	58.1	58.1
Valid Female	103	41.9	41.9	100.0
Total	246	100.0	100.0	

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
20-30	121	49.2	49.2	49.2
31-40	103	41.9	41.9	91.1
Valid 51-60	17	6.9	6.9	98.0
Above 60	5	2.0	2.0	100.0
Total	246	100.0	100.0	

Educational Level

	Frequency	Percent	Valid Percent	Cumulative Percent
Diploma	28	11.4	11.4	11.4
First Degree	184	74.8	74.8	86.2
Valid Second Degree	14	5.7	5.7	91.9
High school complete	20	8.1	8.1	100.0
Total	246	100.0	100.0	

Monthly Income

	Frequency	Percent	Valid Percent	Cumulative Percent
800-1600	4	1.6	1.6	1.6
1601-2500	3	1.2	1.2	2.8
Valid 2501-3500	10	4.1	4.1	6.9
3501 - 5000	15	6.1	6.1	13.0
Above 5000	214	87.0	87.0	100.0
Total	246	100.0	100.0	

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Business Person	59	24.0	24.0	24.0
Student	8	3.3	3.3	27.2
Valid Unemployed	2	.8	.8	28.0
Salaried	177	72.0	72.0	100.0
Total	246	100.0	100.0	

Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Married	118	48.0	48.0	48.0
Valid Single	128	52.0	52.0	100.0
Total	246	100.0	100.0	

I found Mobile banking services useful using mobile banking services enablement accomplish my banking tasks more quickly.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	4	1.6	1.6	1.6
Disagree	3	1.2	1.2	2.8
Valid Neutral	25	10.2	10.2	13.0
Agree	132	53.7	53.7	66.7
Strongly Agree	82	33.3	33.3	100.0
Total	246	100.0	100.0	

Using mobile banking services increase my productivity in handling my banking tasks.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Disagree	5	2.0	2.0	2.0
Disagree	8	3.3	3.3	5.3
Valid Neutral	43	17.5	17.5	22.8
Agree	117	47.6	47.6	70.3
Strongly Agree	73	29.7	29.7	100.0
Total	246	100.0	100.0	

Using mobile banking services enhance my banking transaction quality.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	3	1.2	1.2	1.2
Disagree	10	4.1	4.1	5.3
Neutral	55	22.4	22.4	27.6
Agree	118	48.0	48.0	75.6
Strongly Agree	60	24.4	24.4	100.0
Total	246	100.0	100.0	

Using mobile banking services increase my efficiency in conducting my banking tasks.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	4	1.6	1.6	1.6
Disagree	7	2.8	2.8	4.5
Neutral	46	18.7	18.7	23.2
Agree	124	50.4	50.4	73.6
Strongly Agree	65	26.4	26.4	100.0
Total	246	100.0	100.0	

Mobile banking services improve my payment convenience.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	7	2.8	2.8	2.8
Disagree	11	4.5	4.5	7.3
Neutral	55	22.4	22.4	29.7
Agree	120	48.8	48.8	78.5
Strongly Agree	53	21.5	21.5	100.0
Total	246	100.0	100.0	

Learning to use mobile banking would be easy.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	3	1.2	1.2	1.2
Disagree	7	2.8	2.8	4.1
Neutral	30	12.2	12.2	16.3
Agree	111	45.1	45.1	61.4
Strongly Agree	95	38.6	38.6	100.0
Total	246	100.0	100.0	

Interaction with mobile banking does not require a lot of mental effort.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	5	2.0	2.0	2.0
Valid Disagree	18	7.3	7.3	9.3
Valid Neutral	41	16.7	16.7	26.0
Valid Agree	110	44.7	44.7	70.7
Valid Strongly Agree	72	29.3	29.3	100.0
Total	246	100.0	100.0	

It is easy to use mobile banking to accomplish my baking task.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	2	.8	.8	.8
Valid Disagree	9	3.7	3.7	4.5
Valid Neutral	35	14.2	14.2	18.7
Valid Agree	122	49.6	49.6	68.3
Valid Strongly Agree	78	31.7	31.7	100.0
Total	246	100.0	100.0	

Using mobile banking does not require training

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	16	6.5	6.5	6.5
Valid Disagree	64	26.0	26.0	32.5
Valid Neutral	75	30.5	30.5	63.0
Valid Agree	52	21.1	21.1	84.1
Valid Strongly Agree	39	15.9	15.9	100.0
Total	246	100.0	100.0	

Using mobile Banking would enable me to accomplish my tasks more quickly.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	2	.8	.8	.8
Valid Disagree	6	2.4	2.4	3.3
Valid Neutral	32	13.0	13.0	16.3
Valid Agree	127	51.6	51.6	67.9
Valid Strongly Agree	79	32.1	32.1	100.0
Total	246	100.0	100.0	

Using mobile banking would mark it easier for me to carry out my tasks

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	2	.8	.8	.8
Disagree	3	1.2	1.2	2.0
Neutral	43	17.5	17.5	19.5
Agree	132	53.7	53.7	73.2
Strongly Agree	66	26.8	26.8	100.0
Total	246	100.0	100.0	

Overall using mobile banking is advantageous.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	1	.4	.4	.4
Neutral	34	13.8	13.8	14.2
Agree	91	37.0	37.0	51.2
Strongly Agree	120	48.8	48.8	100.0
Total	246	100.0	100.0	

Mobile banking may not perform well because of network problem.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	8	3.3	3.3	3.3
Disagree	15	6.1	6.1	9.3
Neutral	27	11.0	11.0	20.3
Agree	101	41.1	41.1	61.4
Strongly Agree	95	38.6	38.6	100.0
Total	246	100.0	100.0	

When transferring money through mobile banking I am afraid that I will lose my money due to different mistakes like using wrong account number, wrong input of the amount of money.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	28	11.4	11.4	11.4
Disagree	38	15.4	15.4	26.8
Neutral	41	16.7	16.7	43.5
Agree	91	37.0	37.0	80.5
Strongly Agree	48	19.5	19.5	100.0
Total	246	100.0	100.0	

I am not comfortable of using mobile banking as carrying my pone and my code together will expose me to marauds.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	34	13.8	13.8	13.8
Disagree	65	26.4	26.4	40.2
Neutral	55	22.4	22.4	62.6
Agree	66	26.8	26.8	89.4
Strongly Agree	26	10.6	10.6	100.0
Total	246	100.0	100.0	

Overall using mobile banking is risky.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	36	14.6	14.6	14.6
Disagree	50	20.3	20.3	35.0
Neutral	76	30.9	30.9	65.9
Agree	56	22.8	22.8	88.6
Strongly Agree	28	11.4	11.4	100.0
Total	246	100.0	100.0	

In using mobile banking, I believe that my transactions are secured.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	4	1.6	1.6	1.6
Disagree	11	4.5	4.5	6.1
Neutral	40	16.3	16.3	22.4
Agree	123	50.0	50.0	72.4
Strongly Agree	68	27.6	27.6	100.0
Total	246	100.0	100.0	

In using mobile banking, I believe that my privacy is secured.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	4	1.6	1.6	1.6
Disagree	12	4.9	4.9	6.5
Neutral	46	18.7	18.7	25.2
Agree	116	47.2	47.2	72.4
Strongly Agree	68	27.6	27.6	100.0
Total	246	100.0	100.0	

In using mobile banking, I believe that all my information is kept confidential

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	4	1.6	1.6	1.6
Disagree	17	6.9	6.9	8.5
Neutral	45	18.3	18.3	26.8
Agree	107	43.5	43.5	70.3
Strongly Agree	73	29.7	29.7	100.0
Total	246	100.0	100.0	

My mobile banking menu is very easy to navigate

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	3	1.2	1.2	1.2
Disagree	25	10.2	10.2	11.4
Neutral	37	15.0	15.0	26.4
Agree	107	43.5	43.5	69.9
Strongly Agree	74	30.1	30.1	100.0
Total	246	100.0	100.0	

My mobile banking menu is very easy to understand.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	2	.8	.8	.8
Disagree	17	6.9	6.9	7.7
Neutral	32	13.0	13.0	20.7
Agree	114	46.3	46.3	67.1
Strongly Agree	81	32.9	32.9	100.0
Total	246	100.0	100.0	

It is easy to make balance inquiry using mobile banking.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	4	1.6	1.6	1.6
Disagree	8	3.3	3.3	4.9
Neutral	26	10.6	10.6	15.4
Agree	93	37.8	37.8	53.3
Strongly Agree	115	46.7	46.7	100.0
Total	246	100.0	100.0	

I think the transaction fee is expensive to use:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	29	11.8	11.8	11.8
Disagree	64	26.0	26.0	37.8
Neutral	36	14.6	14.6	52.4
Agree	60	24.4	24.4	76.8
Strongly Agree	57	23.2	23.2	100.0
Total	246	100.0	100.0	

I think the access cost is expensive to use:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	10	4.1	4.1	4.1
Disagree	8	3.3	3.3	7.3
Neutral	34	13.8	13.8	21.1
Agree	95	38.6	38.6	59.8
Strongly Agree	99	40.2	40.2	100.0
Total	246	100.0	100.0	

I am well aware of the existence of mobile banking services.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	3	1.2	1.2	1.2
Disagree	8	3.3	3.3	4.5
Neutral	30	12.2	12.2	16.7
Agree	100	40.7	40.7	57.3
Strongly Agree	105	42.7	42.7	100.0
Total	246	100.0	100.0	

I am using mobile banking

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	7	2.8	2.8	2.8
Disagree	15	6.1	6.1	8.9
Neutral	22	8.9	8.9	17.9
Agree	96	39.0	39.0	56.9
Strongly Agree	106	43.1	43.1	100.0
Total	246	100.0	100.0	

Correlations

		Mobile Banking Adoption	Performance Expectancy	Perceived Ease of Use	perceived Usefulness	perceived Risk	Perceived Trust	Effort Expectancy	Perceived Cost	Mobile phone Experience
Mobile Banking Adoption	Pearson Correlation									
	Sig. (2-tailed)									
Performance Expectancy	N	246								
	Pearson Correlation	.427**								
Perceived Ease of Use	N	246	246							
	Pearson Correlation	.500**	.363**							
perceived Usefulness	N	246	246	246						
	Pearson Correlation	.498**	.641**	.485**						
perceived Risk	N	246	246	246	246					
	Pearson Correlation	-.069	.107	-.065	.020					
Perceived Trust	N	246	246	246	246	246				
	Pearson Correlation	.417**	.298**	.396**	.445**	-.255**				
Effort Expectancy	N	246	246	246	246	246	246			
	Pearson Correlation	.575**	.410**	.547**	.503**	-.078	.475**			
Perceived Cost	N	246	246	246	246	246	246	246		
	Pearson Correlation	-.323**	.305**	-.175**	.265**	.162*	.136	.283**		
Mobile phone Experience	N	246	246	246	246	246	246	246	246	
	Pearson Correlation	.426**	.325**	.327**	.251**	.032	.279**	.357**	.207**	
										246

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

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

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.689 ^a	.475	.457	.60145

a. Predictors: (Constant), Mobile phone Experience, perceived Risk, perceived Usefulness, Perceived Cost, Perceived Ease of Use, Perceived Trust, Effort Expectancy, Performance Expectancy

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	77.516	8	9.690	26.786	.000 ^b
	Residual	85.733	237	.362		
	Total	163.249	245			

a. Dependent Variable: Mobile Banking Adoption

b. Predictors: (Constant), Mobile phone Experience, perceived Risk, perceived Usefulness, Perceived Cost, Perceived Ease of Use, Perceived Trust, Effort Expectancy, Performance Expectancy

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.014	.352		.039	.969
	Performance Expectancy	.069	.075	.059	.917	.360
	Perceived Ease of Use	.180	.069	.155	2.599	.010
	perceived Usefulness	.201	.094	.148	2.141	.033
	perceived Risk	-.056	.049	-.058	-1.141	.255
	Perceived Trust	.069	.059	.069	1.172	.242
	Effort Expectancy	.292	.074	.252	3.975	.000
	Perceived Cost	-.109	.043	-.129	-2.530	.012
	Mobile phone Experience	.166	.047	.185	-3.505	.001

Questionnaire

Dear respondents:

My name is Tesfaye Matiwos, Executive Masters of Business Administration (EMBA) Students in the Department of Management at Addis Ababa University. The aim of this questionnaire is to assess factors affecting the adoption of mobile banking in Ethiopia and Thereby used to improve the mobile banking service in the banks.

I would like to assure that the information you provide will be used only for the research purpose and kept confidential. Your genuine responses are regarded as a great input to the quality of the research outcomes. Hence: I do believe that you will assist me by participating in the study your honest and thoughtful responses invaluable.

Thank you in advance for your participation

With Respect!

EMBA Student at Addis Ababa University

College of Business and Economics

Department of Management

General Guidance

This questionnaire contains two sections and 5 pages that will be expected to take approximately 15 to 20 minutes to complete. You are kindly requested to respond to the question based on the instructions under cash section.

Section I. Demographic profile of Respondents. Please indicate your responses to the following questions by ticking (√) on the spaces provided.

1. Gender Male Female
2. Age 20-30 31-40 41-50
 51-60 Above 60
3. Education Level
- Diploma First degree
 Masters Degree High School complete
4. Monthly income (in Eth. Birr)
- 800 – 1,600 1,601 – 2,500
 2,501 – 3,500 3,501 – 5,000 Above 5,000
5. Occupation
- Business person Student
 Pensioner Unimproved
 Salaried
6. Marital status
- Married Divorced
 Single Widow (er)
7. Please indicate your bank
- Dashen Bank Wegagen Bank
 United Bank Berhan International Bank

Section II. Questionnaires related with factors affecting Mobile Banking adoption. Instruction: Below are list of statements pertaining to adoption of Mobile Banking. Please indicate whether you agree or disagree with each statement by ticking () in the spaces that specifies your choice form the options ranging from “strongly agree” to “strongly disagree”. Each choice is identified by numbers ranged form 1 to 5.

Note: SA – Strongly Agree = 5 A-Agree =4 N-Neural =3

DA – Disagree =2, SD- Strongly Disagree = 1

1. Mobile Phone Experience:		SA	A	N	DA	SD
		5	4	3	2	1
1	I have been using mobile phone for a long time and my general knowledge in the mobile phone is excellent.					
2. Performance Expectancy:		SA	A	N	DA	SD
		5	4	3	2	1
2.1	I found Mobile banking services useful using mobile banking services enablement accomplish my banking tasks more quickly.					
2.2	Using mobile banking services increase my productivity in handling my banking tasks.					
2.3	Using mobile banking services enhance my banking transaction quality.					
2.4	Using mobile banking services increase my efficiency in conducting my banking tasks.					
2.5	Mobile banking services improve my payment convenience.					

3. Perceived Ease of Use:		SA	A	N	DA	SD
		5	4	3	2	1
3.1	Learning to use mobile banking would be easy.					
3.2	Interaction with mobile banking does not require a lot of mental effort.					
3.3	It is easy to use mobile banking to accomplish my baking task.					
3.4	Using mobile banking does not require trainary.					
4. perceived Usefulness:		SA	A	N	DA	SD
		5	4	3	2	1
4.1	Using mobile Banking would enable me to accomplish my tasks more quickly.					
4.2	Using mobile banking would mark it easier for me to carry out my tasks					
4.3	Overall using mobile banking is advantageous.					
5. perceived Risk:		SA	A	N	DA	SD
		5	4	3	2	1
5.1	Mobile banking may not perform well because of network problem.					
5.2	When transferring money through mobile banking I am afraid that I will lose my money due to different mistakes like using wrong account number, wrong input of the amount of money.					
5.3	I am not comfortable of using mobile banking as carrying my pone and my code together will expose me to marauds.					
5.4	Overall using mobile banking is risky.					

6. Perceived Trust:		SA	A	N	DA	SD
		5	4	3	2	1
6.1	In using mobile banking, I believe that my transactions are secured.					
6.2	In using mobile banking, I believe that my privacy is secured.					
6.3	In using mobile banking, I believe that all my information is kept confidential					
7. Effort Expectancy:		SA	A	N	DA	SD
		5	4	3	2	1
7.1	My mobile banking menu is very easy to navigate					
7.2	My mobile banking menu is very easy to understand.					
7.3	It is easy to make payment using mobile banking					
7.4	Is easy to make money transfer using mobile banking.					
7.5	It is easy to make balance inquiry using mobile banking.					
8. Perceived Cost:		SA	A	N	DA	SD
		5	4	3	2	1
8.1	I think the transaction fee is expensive to use:					
8.2	I think the access cost is expensive to use:					
8.3	I think the equipment cost is expensive to use					
9. Awareness :		SA	A	N	DA	SD
		5	4	3	2	1
9.1	I am well aware of the existence of mobile banking services.					
9.2	I am using mobile banking					

Thank you very much for completing this questionnaire and assisting me in my research.

With best regards