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**FACTORS AFFECTING ADOPTION OF MOBILE BANKING:  
THE CASE OF COMMERCIAL BANK OF ETHIOPIA ADDIS ABABA  
CITY CUSTOMERS**

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF EXECUTIVE MASTERS IN  
BUSINESS ADMINISTRATION (EMBA)

**ADDIS ABABA UNIVERSITY**

**COLLEGE OF BUSINESS AND ECONOMICS**

**DEPARTMENT OF MANAGEMENT**

**EMBA PROGRAM**

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**NOVEMBER 4, 2015**

## **LETTER OF CERTIFICATION**

This is to certify that Worku Muluaem has carried out his research project work under my supervision, on the topic of “FACTORS AFFECTING ADOPTION OF MOBILE BANKING: THE CASE OF COMMERCIAL BANK OF ETHIOPIA ADDIS ABABA CITY BRANCHES”. This work is original in its nature and it is suitable for Submission in partial fulfillment of the requirement for the award of Degree in Executive Masters Business Administration (MBA).

Dr. Salehu Anteneh

(Advisor)

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Signature

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**Date**

**Addis Ababa University**  
**College of Business and Economics**  
**Department of Management**  
**EMBA program**

Title: “FACTORS AFFECTING ADOPTION OF MOBILE BANKING: THE CASE OF  
COMMERCIAL BANK OF ETHIOPIA ADDIS ABABA CITY BRANCHES”

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## **Declaration**

I, Worku Mulualem, declare that the study entitled “**FACTORS AFFECTING THE ADOPTION OF MOBILE BANKING: THE CASE OF COMMERCIAL BANK OF ETHIOPIA ADDIS ABABA CITY BRANCHES**” is the result of my own effort in research undertaking. All information in this document has been obtained and presented in accordance with academic rules and ethical conduct. The study has not been submitted to any Degree or Diploma in any college or university. It is submitted in the partial fulfillment of the requirement of the Degree of Executive Master of Business Administration. Lastly I have fully cited, acknowledged and referenced all material and results that are not original to this work.

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Worku Mulualem

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## **List of Abbreviations and Acronyms**

ATM = Automatic Teller Machine

CBE = Commercial Bank of Ethiopia

GSMA = Global System Mobile Association

ITU = International Telecommunications Union

IVR = Interactive Voice Response

M-Banking = Mobile Banking

MFWAP = Making Finance Work FOR Africa Partnership,

MMA = Mobile Marketing Association

MNO = Mobile Network Operator

NBE = National Bank of Ethiopia

PEU = Perceived Ease of Use

PR = Perceived Risk

PU = Perceived Usefulness

SIM = Subscriber Identity Module

TAM = Technology Acceptance Model

TPB = Theory of planned behavior

TRA = Theory of Reasoned Action

USSD = Unstructured Supplementary Service Data

WAP = Wireless Application Protocol

## **Abstract**

Banking industry is one of the critical economic institutions in the economic development of a country. However, the majority of Ethiopians' do not have access to the banking services. Even most of the existing banks operate in cities and towns where significant customers exist to secure financial viability since all commercial banks operate for profit. Thanks to the advancement of information and communications technology in the banking sector commercial banks can provide banking services through mobile banking technology. However, in spite of the implementation of mobile banking technology in Ethiopia through commercial Banks the numbers of users of the services are very small as compared to other countries like Kenya. This research paper aims to understand the factors that affect the adoption of mobile banking technology in the case of Commercial Bank of Ethiopia Addis Ababa city customers using technology acceptance model developed by Davis with additional variable namely perceived risk. Understanding the factors that will affect customers' adoption behavior of mobile banking will help the commercial Bank of Ethiopia's Effort to increase the penetration and growth of mobile banking service.

To address the research objective 400 sample customers are selected based on purposive and convenient sampling method and questionnaire is distributed from which 294 sample respondents replied appropriately to the questionnaire. Data gathered are analyzed using descriptive statistics such as frequency, percentage, mean, mode, median and standard deviation. Besides binary logistics regression analysis is conducted to understand the relationship of mobile banking adoption and perceived usefulness, perceived ease of use and perceived risk. As result the study found out that perceived usefulness and perceived ease of use have positive relationship with the adoption of mobile banking whereas perceived risk has negative relationship with the adoption of mobile banking.

**Key words:** TAM, Mobile Banking, perceived usefulness, perceived ease of use and perceived risk

## **Chapter One**

### **Introduction**

#### **1.1 Background of the Study**

Financial sector plays an important role in providing different financial services such as mobilizing financial resources from the surplus units to those who need financial resources to undertake different economic activities. Traditionally banks are the major players in the financial sectors in mobilizing public money in terms of saving and lend it to those who need it. This is the reality in developing countries even today where alternative financial institutions are at lower level of development relative to the banks. “These days, the function of commercial banks is confined not only to advancing loans to the public and accepting their deposits, their contribution in accelerating the rate of economic development in under- developed and developing countries is very important” V. K. Gangal (2013).

Access to banking service will improve the qualities of lives of a society; however, access to banking service in developing countries is at lower level. According to the report released by African development bank in 2013 only 23% of African have bank account whereas same report reported that high income countries account penetration is 89%, the report further lists various factors which contribute to this poor development such as: deficient infrastructure, physical-geographical isolation or inaccessibility, financial illiteracy, all of which culminate into exceedingly high cost of providing banking services.

According to the national bank of Ethiopia annual report (2013/2014) there are 19 banks in Ethiopia out of which 16 are private banks and three of them are state owned banks. During the same year, 480 new branches were opened raising the total branch network in the country to 2,208 from 1,728 last year. As a result, bank branch to population ratio declined from 1:49,826 people to 1:39, 402 in 2013/14. The significant branch expansion was undertaken by Commercial Bank of Ethiopia (CBE) with 124 branches, followed by Oromiya International Bank (44 branches), Awash International Bank (38 branches), Cooperative Bank of Oromiya (31

branches), Dashen Bank and Bunna International Bank (30 branches each), Berhan International Bank (26 branches), and United Bank (24 branches).

However, in spite of such growth recently in the banking sector, the financial service accessibility is still very limited in Ethiopia. For instance the country has one bank branch per every 39, 402 during 2013/14 according to the National Bank of Ethiopia Annual report (2013/14).

In order to expand the banking services to the poor and rural people where the majority of those people are not served in the traditional banking business model, innovative banking services shall be introduced that will enable commercial banks to provide the banking service in a viable and mutually beneficial ways. In this regard the usage of different technologies in banking service will have crucial role in creating access to the services.

One of the areas in the business environment where the application of information technology is pervasively used is banking. Anyasi and Otubu (2009) stated that over the years banking has transcended from traditional brick and mortar model of customer queuing for services in the banks to modern day banking where banks can be reached at any point for their services. Information technology is used in Banks today in all its process, starting from information sharing among different units up to the delivery of banking services to customers electronically.

Among the different technologies which have been adopted in banks to deliver banking services to their customers' mobile technology is the popular one both in developed and developing world this is related to the growth of mobile telephone users in the world. According to the report released by Global Systems Mobile Associations (GSMA), mobile-cellular subscriptions reach almost 7.1 billion by end of 2014 (GSMA, 2015). The increase is mostly due to growth in the developing world where mobile-cellular subscriptions account for 78 per cent of the world's total. In Ethiopia the number of mobile customers is rapidly increasing it has reached above 38 million subscribers (ethio telecom, June, 2015).

Mobile banking is defined in different ways by different writers but for this research project we use the definition by Rajnish Tiwari (2006). "Mobile Banking refers to provision and making available of bank-related financial services with the help of mobile telecommunication devices.

The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customized information.”

According to the study conducted by Making Finance Work for Africa Partnership (MFWAP, 2012), given the low density of physical access points like bank branches or ATMs, many Africans have few options, if any, for transferring money and accessing banking services. Mobile Banking (M-Banking) refers to the delivery of banking services through mobile phones, which can overcome the limitations of physical infrastructure. This creates an opportunity for banks to use the mobile technology in the banking services as an alternative channel of service delivery with lots of benefits for both the banks and their customers. Using mobile banking will improve the banking sectors accessibility for those who do not have access to banking service in a country usually called, the unbanked segments of the society. In this regard recently we have seen a progress in different banks like commercial bank of Ethiopia, Dashen Bank, United bank in adopting the technologies such as branch networking, ATM and usage of mobile applications such as SMS notification of bank transactions.

Therefore, recognizing the importance of mobile technology in providing banking services to potential bank customers, the main purpose of this research is to understand factors that affect customers’ adoption of mobile banking in the case of Commercial Bank of Ethiopia Addis Ababa city customers.

## 1.2 Statement of the Problem

Ethiopia like other developing countries is a country where the majority of its population is unbanked for various reasons among which one of the main reasons is low level of banks presence throughout the country one bank branch per every 39,402 customers. According to the National Bank of Ethiopia (NBE) annual report (2013/14) and 2,208 bank branches are available for around 90 million people. Developed countries have 89 percent of the adult population with bank account whereas in Africa only 23 percent of the adult populations own bank account (ADB, 2013) or 20 percent at family level. Ethiopia is not an exception in Sub-Saharan Africa.

As, compared to other African countries like Kenya where the mobile banking services accessibility reach higher level, the level of adoption in Ethiopia is very low. For instance Commercial Bank of Ethiopia the pioneer bank in mobile banking adoption has very low users (167,000) as of March 31, 2015 (CBE, 2015).

Kenya stands out in several respects, according to the Safaricom's half year results for 2013-2014, M-PESA was reported to have 18.2 million active customers (KARIUKI NYAGA, 2014). M-PESA started operating in Kenya in 2007, and has taken the lead in terms of innovation for providing more inclusive access to finance for a large part of the population who hitherto had been without a bank account ( KARIUKI NYAGA, 2014).

When we look at the growth in mobile phone penetration in Africa in general and in Ethiopia in particular it is moving up at higher rate. In Ethiopia the number of mobile phone subscribers has now reached more than 38 million in Ethiopia as of July 07, 2015 as per unpublished annual performance report of ethio telecom. The challenges we have seen previously in providing access to banking services in Sub-Saharan Africa in general and Ethiopia in particular can be addressed by using mobile phone and mobile banking technology as witnessed empirically in the neighboring country Kenya. Hence, mobile banking is an opportunity for the banks in Ethiopia to address the potential market in the country where access to banking services is very low.

Various researches have been conducted in Africa to identify factors that affect mobile banking adoption such as: N.G. Karama, (2014), N.Solomon et al, (2014), and R. A. Oluoch, (2012). As

result of their research they identified different factors as determinant factors in the adoption of mobile banking like perceived usefulness, perceived ease of use, perceived risk and trust.

According to the library and internet search I conducted about mobile banking adoption in Ethiopia, except some researches in the general electronic banking in Ethiopia (senait, 2007) to identify the challenges of e-banking, I could not find research work conducted specifically with regard to mobile banking. Understanding the factors which affect mobile banking adoption is vital for the growth of mobile banking service; however, it is a gap in the case of Ethiopia. Hence, this research paper tried to fill research gap in the area about factors that affect the adoption of mobile Banking technology in in commercial banks specifically CBE.

### **1.3 Objectives of the Study**

The general purpose of this study is to identify factors which affect adoption of m-banking in the case of CBE customers in Addis Ababa. And the following specific objectives are designed.

1. To understand the relationship between customers perception of usefulness of mobile banking and adoption of mobile banking technology,
2. To understand the relationship between customers perception of ease of use of mobile banking and adoption of mobile banking technology,
3. To understand the relationship between customers perception of risk of mo-banking and adoption of m- banking technology,

### **1.4 Research Questions**

The following research questions were raised and answered in case of customers of CBE:

1. How do bank customers perceive mobile banking usefulness?
2. How do bank customers perceive mobile banking ease of use?
3. How do bank customers perceive mobile banking riskiness?
4. What is the direction and significance of the relationship between perceived usefulness and adoption of mobile banking?
5. What is the direction and significance of the relationship between perceived ease of use and adoption of mobile banking?

6. What is the direction and significance of the relationship between perceived risk and adoption of mobile banking?

### **1.5 Research Hypothesis**

- 1) Ha1: There is a relationship between mobile banking adoption and perceived usefulness
- 2) Ha2: There is a relationship between mobile banking adoption and perceived ease of use
- 3) Ha3: There is a relationship between mobile banking adoption and perceived risk
- 4) Ha4: All independent variables have significant relationship with adoption of mobile banking adoption.

### **1.5 Significance of the Study**

The findings of this research project have the following importance to Commercial Bank of Ethiopia, government, customers.

Commercial bank of Ethiopia (CBE) and other commercial banks will be benefited from this study. Because understanding the perception of customers with regard to the adoption of mobile banking technology will help the bank make informed decision in the provision of mobile banking to customers. As result it will be benefited from the huge potential banking market where the majority of whom are still not banked. Other commercial banks on the way to adopt mobile banking technology in their service delivery will also benefit from this study to design appropriate mobile banking adoption strategy.

Government as responsible stakeholder in establishing the policy and infrastructural framework for the mobile banking will benefit from this study. Because the finding of this research will give government policy and decision maker's inputs to make informed decision based on the research findings.

At the same time the finding of this research will benefit potential and existing customers. This will mainly be because the findings of the research will encourage commercial banks to adopt the technology so that their existing and potential customers will get alternative banking services and banking service channels with lots of advantages for the customers in terms of convenience, cost, communication and additional offers.

## **1.6 Scope of the Study**

This study mainly looks at mobile banking adoption from customers' perspective in selected commercial bank of Ethiopia branches in Addis Ababa. And the study is based on the technology acceptance model with additional variable perceived risk included on top of the basic variables in the model. And the findings of the study indicate the direction and degree of relationship between mobile banking adoption and the independent variables in the model. Besides the finding will help to understand customers' perception about mobile banking adoption.

## **1.7 Limitation of the Study**

The study is conducted in selected Addis Ababa branches Commercial Bank of Ethiopia and the branches are selected with purposive sampling technique. Besides the sample respondents are selected in convenient sampling method due to difficulty of accessing sample customers. These may limit the representative of the research work.

Furthermore, the finding of this research shall be used carefully in order to make generalization because, the research involves only customers in Addis Ababa CBE branches, in addition to these other factors other than perceived usefulness, perceived ease of use and risk may affect customers' adoption behavior. In doing the research work the focus of this research as stated in the objectives is to analyze the dependent variables effect on the dependent variable. The relationships among the independent variables are not included in the research.

## **1.8 Organization of the Paper**

The research paper is organized into five chapters: Chapter one deals with the introduction part of the paper. And second chapter discussed the review of related literatures about the subject matter followed by chapter three deals with research methodology used in the research. In chapter four data analysis performed in the research is extensively covered. Finally, in chapter five of the document the summary, conclusions and recommendations of the research with recommendation for future research included in.

## **Chapter Two**

### **Literature Review**

#### **2.1 Theoretical Literature Review**

##### **2.1.1 M-Banking Definition and Services**

Mobile Banking is defined as “The availment of bank-related financial services via mobile devices. It comprises of services in the field of accounting, brokerage and financial information” ( Tiwari et al, 2006). The offered services may include transaction facilities as well as other related services that cater primarily to informational needs revolving around financial activities. Mobile banking can offer specific services such as, account information, mini statements, checking of account history, alerts on account activity(passing of set thresholds) monitoring of term deposits, access to loan statements, access to card statements, mutual funds (equity statements, stop payment on cheque, ordering cheque books, balance checking in the account.

According to Porteous (2006), M-Banking can be classified in to two transformational and additive M-Banking the former is provisioning of banking services using mobile phone to reach unbanked population where the latter is using mobile phone as an additional channel that is used to provide banking services to those already banked.

##### **2.1.2 M- Banking Benefits**

Mobile banking brings significant benefits to customers and banks in this regards R. Chandra, (2014) lists the following benefits:

- Time saving: Instead of allocating time to walk into a bank, you can check account balances, schedule and receive payments, transfer money and organize your accounts when you're on the go.
- Convenient: The ability to access bank accounts, make payments, and even track investments regardless of where you are can be a big advantage Do your banking at a time and place that suits you, instead of waiting in queues.

- Secure: Generally, good mobile banking applications have a security guarantee or send you a SMS verification code you need to input to authorize a payment for added security. Mobile banking is said to be even more secure than online/internet banking.
- Easy access to your finances: with the introduction of mobile banking, you are able to access your financial information even beyond the working hours. It helps to avail banking services even by making a call to the bank.
- Increased efficiency: mobile banking functions are functional, efficient and competitive. It also helps in decongesting the banking halls and reduces the amount of paperwork for both the banker and the customer
- Fraud reduction: one very real advantage to implementing mobile banking. “Customers are being deputized in real time to watch their accounts.
- It utilizes the mobile connectivity of telecom operators and therefore does not require an internet connection.
- You can check your account balance, review recent transaction, transfer funds, pay bills, locate ATMs, deposit cheques, manage investments, etc.
- Mobile banking is available round the clock 24/7/365, it is easy and convenient and an ideal choice for accessing financial services for most mobile phone owners in the rural areas.

### **2.1.3 M- banking Technology Platforms**

The high level technical architecture for mobile banking use mobile devices as alternative channel in which customers will access banking services just like ATMs, POS, branch and internet banking as shown below in figure one. Mobile banking is seen to be an extension of the existing payment infrastructure of a bank to mobile phones as a channel for the leveraging of the mobile network and its reach, to deliver banking services to consumers” (Gavin T. Krugel, 2007). The mobile banking infrastructure thus sits in a similar technical environment to the banks ATMs, POS, branch and internet banking service offerings.

A bank's core banking system, the system that houses the consumer's account and related transaction management and history, would require a means to translate banking instructions, received from consumers, through one of the bank channels such as ATMs or the internet, into a format that the core banking system can process.

The mobile banking channel can be delivered to the consumer through two bearer or application environments. Client-side applications are applications that reside on the consumer's SIM card or on their actual mobile phone device.

Server-side applications are developed on a server away from the consumer mobile phone or SIM card. Server-side technologies include USSD2, IVR, SSMS and WAP.



**Figure: 1 Mobile Banking Overall Banking Architecture (Gavin Troy Krugel, 2007)**

To deliver mobile banking service there are different stakeholders and according to Gavin Troy Kurgel (2007), there are four primary stakeholders in the services. The delivery of a mobile banking service to a consumer involves the participation of four primary players:

- A Bank,
- Mobile Network Operator (MNO),
- A Mobile Banking Technology Vendor, and
- The consumer.

In most instances the mobile banking vendor has been the pioneer in shaping industry adoption and lobbying the other two principle stakeholders on the value of extending the banking franchise to mobile.

Mobile banking services are provided through mobile technology using different technology platforms. M-banking media channel platforms can be categorized as follows:

- Short message service (SMS),
- Mobile web and
- Mobile client applications each of them have their own strength and weakness. Brief description of each mobile banking channel is presented below.(Mobile Marketing Association (MMA, 2009)

### **2.1.3.1 Short Message Service (SMS)**

It is widely available and affordable M-banking channel for consumers. From the banks perspective a simple application or set of API (application programming interface) can be used by the bank to generate short message to send to a customer's mobile device or respond to customer's request MMA (2009) like URL in a web short code is used as unique locator for communication between the bank and customers is applied by the bank.

## **Advantages of SMS**

According to the MMA Mobile Banking an Overview (2009) short message service has the following advantages:

- Easy to use
- Common messaging tool among consumers
- Work across all wireless operators
- Affordable for consumers
- Require no software installation
- Allows banks and financial institutions to provide real time information to customers and employees
- Stored messages can be accessed without a network connection

In the same document MMA (2009) short message service does have the following disadvantages:

- Text only an limited to 140 – 160 character per message
- Does not offer secure environment

### **2.1.3.2 Mobile Web**

Mobile web allows users to access web sites from their handsets and it is a channel for the delivery of web contents through the mobile handset. As result of the advancement in mobile handset devices in terms having web browsing feature as well as wider screen with high resolution coupled with availability of mobile internet services with higher quality (broadband) and affordable services relative to what was before, use of mobile web for various services is growing across the various segments of consumers. Among those services use of mobile web for mobile banking is becoming popular in the banking business. Like SMS channel mobile web has its own advantages and disadvantages some of which are described below.

## **Advantages**

- User experience of browsing the internet from mobile device is familiar and offers a rich experience,
- Allows users to access corporate applications
- Secure connections can be established on most of the mobile browsers

## **Disadvantages**

- Many nonstandard variables including handsets, browsers, and operating systems
- Inconsistent user experience due to varying connection speeds and handset limitations
- Users need to have data plan which may be a barrier to adoption among price sensitive demographics
- No off line (out of the coverage) capability

### **2.1.3.3 Mobile Client Applications**

Mobile client applications are a rapidly developing segment of the global mobile market. Mobile client applications are common on most mobile phones today and are key to providing user interfaces for basic telephony and messaging services as well as for more advanced and entertaining experiences. It has evolved to give a user access to services that require richer, faster and not necessarily connected user experiences. In this respect mobile applications are distinctly different from browsing the mobile web. The combination of a client application on the handset and server component enables many benefits including access to all banking functionalities strong authentication and encryption of sensitive data and the ability for customization and branding.

From the financial services and applications point of view mobile client applications has variety of advantages and disadvantages.

## **Advantages**

- Offers organizations more control over the user experience with a rich user interface capability
- Ability to work even when there is no connection to the wireless network

- Secure access can be established with applications
- Support for access to corporate customs applications
- Most applications also provide the ability to provide remote wipe- out of information when device is lost or stolen

#### **2.1.4 M- Banking Business Models**

A wide spectrum of Mobile/branchless banking models is evolving. However, no matter what business model, if mobile banking is being used to attract low-income populations in often rural locations, the business model will depend on banking agents, i.e. retail or postal outlets that process financial transactions on behalf telecoms or banks. The banking agent is an important part of the mobile banking business model since customer care, service quality, and cash management will depend on them. Many telecoms will work through their local airtime resellers. However, banks in Colombia, Brazil, Peru, and other markets use pharmacies, bakeries, etc.

These models differ primarily on the question that who will establish the relationship (account opening, deposit taking, lending etc.) to the end customer, the Bank or the Non-Bank/ telecom Company.

##### **2.1.4.1 Bank-focused Model**

The bank-focused model emerges when a traditional bank uses non-traditional low-cost delivery channels to provide banking services to its existing customers. Examples range from use of automatic teller machines (ATMs) to internet banking or mobile phone banking to provide certain limited banking services to banks' customers. This model is additive in nature and may be seen as a modest extension of conventional branch-based banking.

##### **2.1.4.2 Bank- Led Model**

The bank-led model offers a distinct alternative to conventional branch-based banking in that customer conducts financial transactions at a whole range of retail agents (or through mobile phone) instead of at bank branches or through bank employees. This model promises the potential to substantially increase the financial services outreach by using a different delivery channel (retailers/ mobile phones), a different trade partner (telecom operators / chain store)

having experience and target market distinct from traditional banks, and may be significantly cheaper than the bank-based alternatives. The bank-led model may be implemented by either using correspondent arrangements or by creating a JV between Bank and Telco/non-bank. In this model customer account relationship rests with the banks Non-bank-led Model

#### **2.1.4.3 Non – Bank Led Model**

The non-bank-led model is where a bank does not come into the picture (except possibly as a safe-keeper of surplus funds) and the non-bank (e.g. telecom operators) performs all the functions.

#### **2.1.5 M-banking Technology Adoption models**

Adoption: is defined as the act or process of beginning to use something new or different (M. Webster). Technology adoption is thus the process of beginning to use new technology or different technology by customers, organizations etc. As result of the dynamism of the information and communications technology innovative technological products are released. And the growth of nations, organizations and individuals is highly dependent on how best they adopt the technology in their operations. In order to understand how people can accept or adopt technology various models are developed and used. In the following paragraphs some technology acceptance models are briefly discussed which include:

- The Theory of Reasoned Action (TRA)
- Theory of planned Behavior (TPB)
- Innovations Diffusion Theory
- Technology Acceptance Model (TAM)

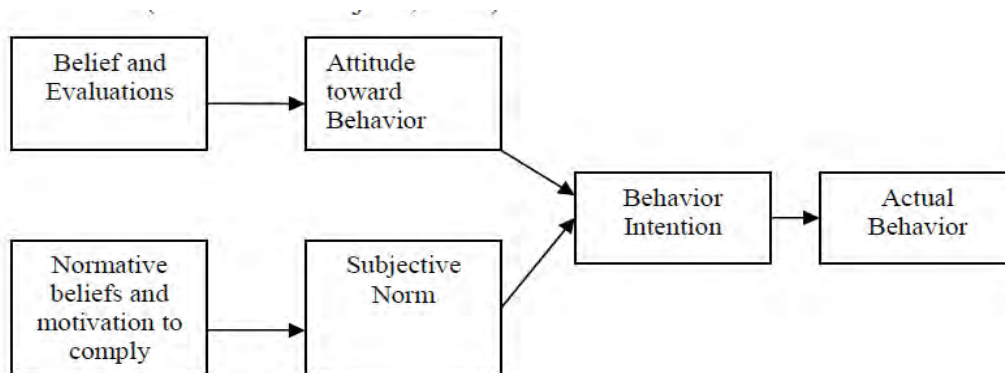
##### **2.1.5.1 The Theory of Reasoned Action (TRA)**

According to The Theory of Reasoned Action (TRA), beliefs influence attitude and social norms which in turn shape a behavioral intention guiding or even dictating an individual's behavior (Ajzen & Fishbein 1980; Leach, Hennessy & Fishbein 1994). Intention is the cognitive representation of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior. TRA has two core constructs as can be seen from figure two

below of intention: (1) attitude toward behavior (ATB) and (2) subjective norm (SN) associated with that behavior. The attitude toward the behavior (ATB) is the previous attitude of a person toward performing that behavior. It suggests that people think about their decisions and the possible outcomes of their actions before making any decision to be involved or not involved in a given behavior.

This theory views the intention of an individual whether to perform a given behavior or not as the immediate determinant of action, and attitude is determined by the person's beliefs and evaluation of behavioral outcomes. So an individual, who strongly believes that positive outcomes will result from performing a particular behavior, will have positive attitudes towards that behavior. On the other hand, if a person strongly believes that a particular behavior will have a negative outcome, then there will be negative attitudes towards that behavior.

Subjective norm (SN) is the social pressure exerted on the person or the decision maker to perform the behavior. SN refers to an individual's perception about what other people think of his or her behavior in question (Leach, Hennessy & Fishbein 1994). What other individuals or groups will think, agree or disagree about the decision of a person to perform a given behavior and how important these other individuals or groups are to the decision maker play a vital role. So it is normal that sometimes people will consult others before making any decisions.



**Figure 2: The theory of Reasoned Action Conceptual Model (Ajzen & Fishbein 1980)**

TRA is a general well-researched intention model that has been applied extensively in predicting and explaining behavior across many domains and virtually any human behavior (Ajzen & Fishbein 1980). Information science researchers often use this theory to study the determinants of information technology innovation usage behavior (Han 2003). Although current models of technology acceptance have their roots in many diverse theoretical perspectives, much literature related to technology acceptance begins studies with the Theory of Reasoned action (TRA).

#### **2.1.5.2 Theory of Planned Behavior (TPB)**

The Theory of Planned Behavior (TPB) is proposed as an extension of the Theory of Reasoned Action (which was related to voluntary behavior), because of the limitations of TRA in dealing with behaviors over which people have incomplete Volitional/autonomous control. The TPB introduced a third independent determinant of intention, perceived behavior control (PBC).

For this reason, TPB was introduced by Ajzen in 1985 (Ajzen 1985) The theory was called the theory of planned behavior (TPB) since it evolved from the Theory of Reasoned Action, with an additional construct (PBC). According to Ajzen (1991), TPB incorporates an additional construct in order to account for situations where an individual lacks the control or resources necessary for carrying out the targeted behavior freely. TPB is a theory that predicts deliberate behavior, because behavior can be deliberative and planned, and TPB is considered to be more general than TRA because of PBC (Chau & Hu 2002a).

#### **2.1.5.3 Innovations Diffusions Theory**

The Innovation Diffusion Theory has been used to study a variety of innovations. Rogers identifies five attributes of an innovation that influence the adoption and acceptance behavior: relative advantage, complexity, compatibility, trial ability, and observe-ability. In the Information Systems field, Moore and Benbasat (1991) expand this attributes set to study information technology acceptance. The set includes:

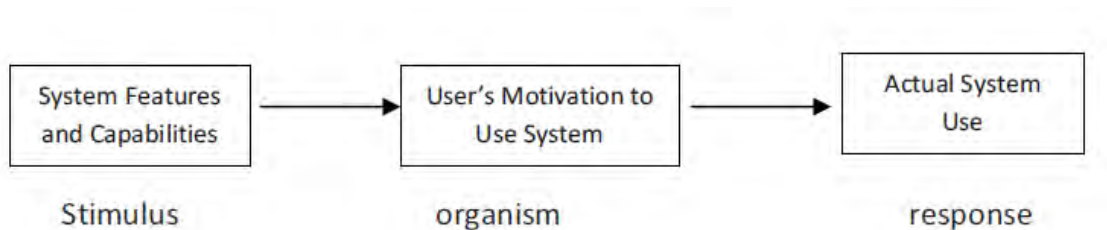
- **Relative Advantage:** “the degree to which an innovation is perceived as being better than its precursor” .

- **Ease of use:** “the degree to which an innovation is perceived as being difficult to use”.
- **Image:** “The degree to which use of an innovation is perceived to enhance one's image or status in one's social system” .
- **Visibility:** The degree to which one can see others using the system in the organization.
- **Compatibility:** “the degree to which an innovation is perceived as being consistent with the existing values, needs, and past experiences of potential adopters” .
- **Results Demonstrability:** “the tangibility of the results of using the innovation, including their observe- ability and communicability”.
- **Voluntariness of Use:** “the degree to which use of the innovation is perceived as being voluntary, or of free will” .

Innovation diffusion research regards individuals’ perceptions about these characteristics of an information technology as important factors in influencing an individual’s acceptance behavior (Agarwal and Prasad, 1997, 1998; Karahanna et al., 1999; Plouffe et al., 2001).

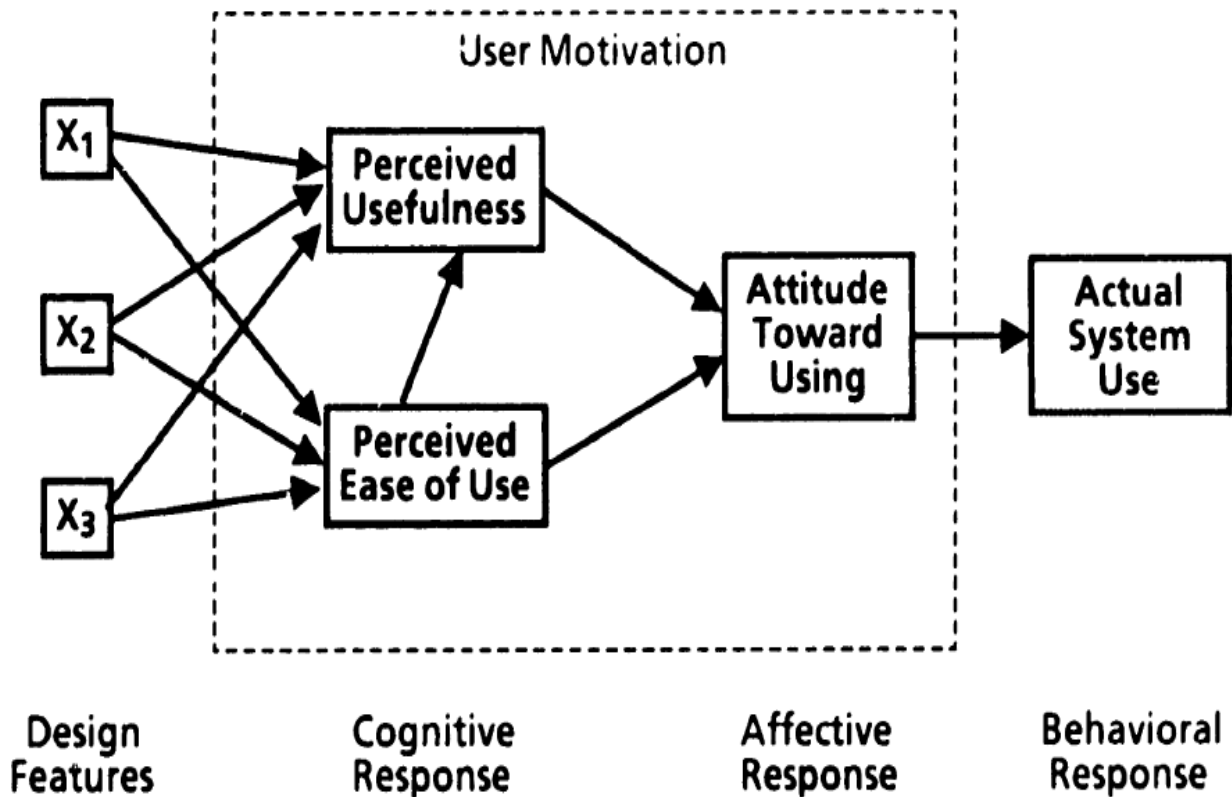
#### 2.1.5.4 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was developed from TRA by Davis (Davis 1985). He proposed that systems use is a response that can be explained or predicted by users’ motivation which in turn is directly influenced by an external stimulus consisting of the actual systems features and capabilities



**Figure 3: Conceptual Model for Technology Acceptance Model (Davis 1985, P.10)**

Davis further developed his conceptual model to propose Technology Acceptance Model (TAM) as follows:



**Figure 4: Developed Technology Acceptance Model – TAM (Davis, 1986)**

In his conceptual model Davis suggest that users’ motivation can be explained by three factors: perceived ease of use, Perceived Usefulness, and Attitude toward Using the System. According to the model a potential user’s overall attitude towards using a given system is hypothesized to be a major determinant of whether or not he actually uses it. Attitude towards using, in turn, is a function of two major beliefs: perceived usefulness and perceived ease of use perceived ease of use has causal effect on perceived usefulness. Design Features directly influence perceived

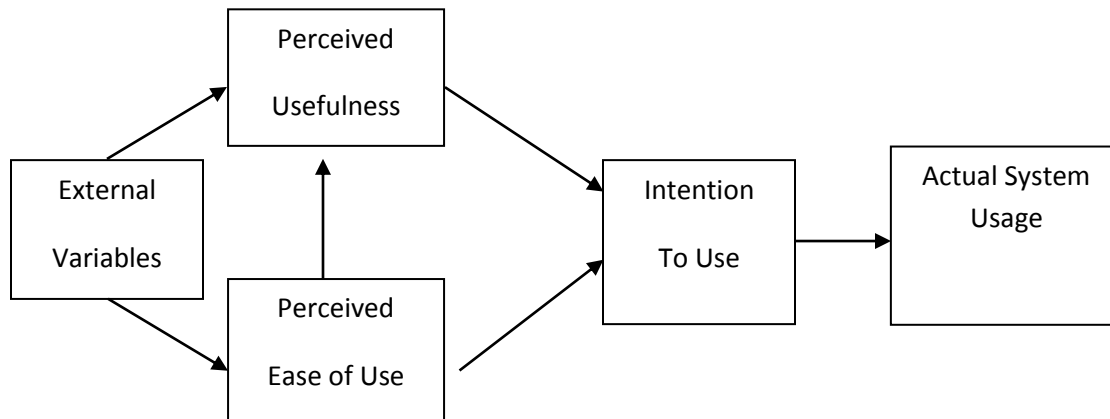
usefulness and perceived ease of use and design features is an external variable hence it affects the attitude and behavior indirectly through perceived usefulness and perceived ease of use.

According to Davis (1985):

- **Use:** refers to an individual's actual direct usage of the given system in the context of his or her job.
- **Attitude:** refers to the degree of evaluative affect that an individual associates with using the target system in his or her job
- **Perceived usefulness:** is defined as the degree to which an individual believes that using a particular system would enhance his or her job performance.
- **Perceived ease of use:** is defined as the degree to which an individual believes that using a particular system would be free of physical and mental effort. Perceived ease of use is hypothesized to have a significant direct effect on perceived usefulness, since all else being equal a system which is easier to use will result in increased job performance (i.e., greater usefulness) for the user.

### **Refined TAM**

Subsequent research by Davis (1989) and Venkatesh (1996) refined the TAM suggesting that the mediating effect of attitude could be excluded as empirical evidence found that the attitude element did not fully mediate the effect of perceived usefulness on intention to use. As result the model is looks like as shown in figure 5 below.



**Figure 5: Refined Technology Acceptance Model Davis (1989) and Venkatesh (1996)**

TAM is widely used popular technology adoption model with regard to information technology. It has proven to be a theoretical model in helping to explain and predict user behavior of information technology (Legris, Ingham, & Collerette, 2003). The TAM suggests that two beliefs – perceived usefulness and perceived ease of use – are instrumental in explaining the variance in users’ intentions. However, Davis (1989) noted, future technology acceptance research must address how other variables affect usefulness, ease of use and user acceptance. Therefore, perceived ease of use and perceived usefulness may not fully explain behavioral intentions towards the use of mobile banking, necessitating a search for additional factors that can better predict the acceptance of mobile banking.

## 2.2 Empirical Literature Review

According to the research conducted by N.G. Karma, 2014 about key factors affecting M-banking adoption among Bank customers in Sudan, customers of banks in Sudan will be more likely to adopt m-banking service if they find it easy to be used with no much required efforts Also; they will intend to use the service if the bank was trustable and provides them confidentiality and protection for their information.

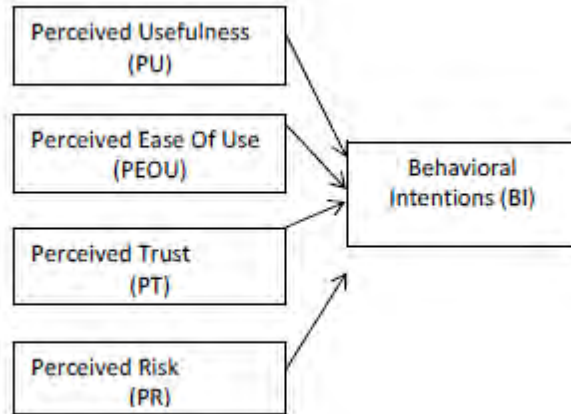
In Kenya challenges affecting adoption and use of mobile banking are researched by N. Solomon et al, (2014. And “it was observed that relative advantage plays an important role in determining consumers’ decision in mobile banking adoption; relative advantage in terms of mobility is an

important trigger in mobile banking adoption; relative advantage causes intention to use mobile banking; economic considerations are a challenge to mobile banking adoption; high payment can dissuade customers from adopting mobile banking; and also that, relative advantage influences attitude that results in behavioral intention to adopt mobile banking .customers from adopting mobile banking; and also that, relative advantage influences attitude that results in behavioral intention to adopt mobile banking”.

In another study conducted by R.A. Oluoch (2012) in Kenya the findings regarding factors which affect the adoption of M-banking in Kenya in the case of Nakuru Municipality “perceived usefulness is the most important significant factor affecting the adoption of M-banking technology perceived risk hinders majority of bank customers from adopting mobile banking Mobile banking service providers should ensure security measures are enforced”.

In a similar study conducted in Tanzania by A.R. Ishengoma (2011), adoption of mobile banking technology by customers is highly influenced by perceived value of the technology to the customers “the intention to use M-Banking service was brought forward by the perceived value of the M-Banking services, most were registered because of the belief in M-Banking that enabled them to access financial services in an easy way Also, the level of education, age and sex were determinants of usage behavior of the M-Banking system.” Mobile banking service allows customers to manage their accounts with ease. (Mols, Bukh, & Neilsen, 1999) stated that the diffusion of electronic banking is more determined by customer acceptance than by seller offerings. Not enough is known regarding how customers perceive and evaluate electronically delivered services. Lee and Lin (2005) have also recently highlighted the need for further research to measure the influence of e-service on customer-perceived service quality and satisfaction (Ibrahim et al, 2006 ).

Karma (2014) in his study to identify key factors affecting the adoption of mobile banking adoption among bank customers in Sudan uses Technology acceptance model, however, like others researches it includes additional variables beyond the two original independent variables of TAM i.e., perceived usefulness and perceived ease of use as shown in figure six below. As result Karma added two additional important variables in the model as determinant variable these are perceived trust and perceived risk.



**Figure 6: Conceptual Framework used by( Karma 2014)**

In similar study conducted in Kenya to examine factors affecting the adoption of mobile banking technology in Kenya by (R.A. Oluoch, 2015) uses TAM as conceptual framework with perceived risk as an added variable.

### **2.3 Conceptual Framework**

After conducting the interviews, completing a literature survey, and defining the problem, one is ready to develop a theoretical framework. A theoretical framework is a conceptual model of how one theorizes or makes logical sense of the relationships among the several factors that have been identified as important to the problem (Sekaran, 2003). This will help the researcher: to understand the relationship among the different variables of interest to the research and to develop testable hypothesis to examine if the theory formulated is valid or not.

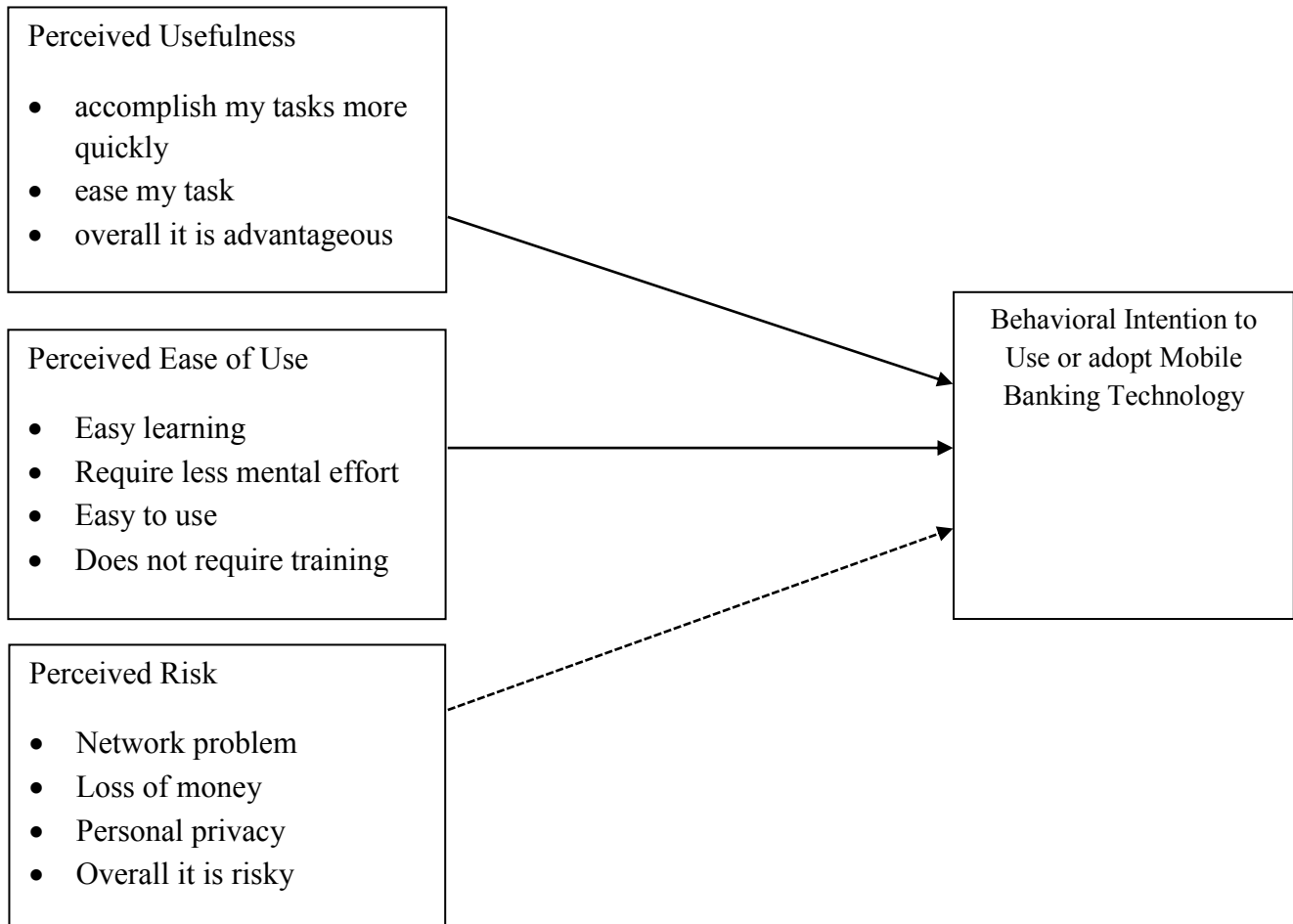
In this research paper since the variables of interest are highly technology related and technology related conceptual frameworks is used. Despite the growing interest by organizations to use technology in their business, user acceptance of the technology becomes a problem. The user technology acceptance has become main research topic in the last three decades. And various researchers develop various technology acceptance models and theories and among this technology acceptance model is one of the most important model.

Technology acceptance model is an information system theory that models how users come to accept and use a technology. According to Chuttur (2009) “Although many models have been proposed to explain and predict the use of a system, the technology acceptance model has been the only one which has captured the most attention of Information Systems Community”. In related research Masinge (2010) stated that TAM has been extensively tested and validated and is widely accepted model, which can be modified and extended using other theories and constructs.

Based on the previous literature and better explanation of the model in relation to technology acceptance both theoretically and empirically this research project used refined Technology acceptance model Davis (1989) and Venkatesh (1996) as stated in figure five of this document in which mediating effect of attitude could be excluded as empirical evidence found that the attitude element did not fully mediate the effect of perceived usefulness on intention to use.

However, as the many empirical research shows the two independent variables perceived ease of use and perceived usefulness are not enough to explain mobile bank adoption behavior of customers. As result many researcher include other factors on top of the basic perceived usefulness and perceived ease of use such as perceived risk, trust, relative advantage etc. In this research paper like other research works reviewed in the empirical literature review Karma (2014) and Oluoch (2015) additional variable namely perceived risk in addition to basic perceived usefulness and perceived ease of use is added.

Therefore, the three independent variables such as perceived usefulness perceived ease of use and perceived risk are included as an independent variables in the model. The dependent variable of the model is behavioral intention to adopt mobile banking.



**Figure 7: Conceptual Framework Adopted for the Research from TAM ( Davis, 1989 and Venkatesh, 1996) with Perceived Risk as an Additional Factor by the Researcher**

**Note to the Conceptual Model Adopted:**

- External factors such as design features as mediating factors of perceived usefulness, perceived ease of use and perceived risk are excluded in the research models since these external variables are exogenous to the model. In addition to that the technology acceptance models tries to analyze for a given technology how will perceived usefulness, perceived ease of use affect users intention to adopt mobile banking technology within the model.
- And refined technology acceptance model by Davis (1989), and Venkatesh (1996) suggest that the mediating effect of attitude could be excluded as empirical evidence found that the attitude element did not fully mediate the effect of perceived usefulness on intention to use.

Other researches reviewed in the paper Karma (2014), Oluoch (2015) also excluded attitude towards using the system as mediating variable toward the behavioral intention to adopt mobile banking technology. In this research work also attitude towards using the system is excluded based on the empirical findings from previous research Davis (1989) and Venkatesh (1996).

- Actual system use is variable outside the model as can be seen from figure four of the TAM model. Besides the actual usage of the mobile banking technology is affected through behavioral intention to adopt mobile banking technology which is included in the model.
- On top of the basic Technology Acceptance Model variables i.e., perceived usefulness, perceived ease of use many researchers include additional variables as an independent variables in technology adoption among these perceived risk is included in previous research works by Karma (2014), Oluoch (2015). Since risk perception by potential users of a technology may influence the users' intention to use the technology. In this research work like the previous research works perceived risk is believed to affect users' intention to adopt the technology in Ethiopia since the technology is at early stage in Ethiopia. For instance perceived risk related to network problems, loss of money as result of operation mobile banking, personal privacy etc. is critical risk factors in Ethiopia like other developing countries.
- Accomplishment of task more quickly, eases my task, and overall it is advantageous are factors that make up the variable perceived usefulness.
- Easy learning, require less mental effort, easy to use and does not require training are factors that make up the variable perceived ease of use.
- Network problem, loss of money, personal privacy, overall it is risky are factors that make up the variable perceived risk. Besides the perceived risks are connected to the dependent variable in broken line since the variable is an added variable on top of the basic TAM model.

## **Chapter Three**

### **Research Methodology**

#### **3.1 Research Approach and Type**

The research approach is predominantly quantitative in nature which involves the use of primary and secondary data in order to answer the research questions and achieve its research objective. And this research is a case based analysis about the factors that affect mobile banking technology adoption in the case of Commercial Bank of Ethiopia Addis Ababa customers. CBE is the largest commercial bank in the country as well as the pioneer in the m-banking service delivery in the country. The research work is mainly explanatory type of researches which looks for the relationship among the different factors as per the conceptual model.

#### **3.2 Target Population and Sample Design**

The population of interest for this research is Commercial Bank of Ethiopia customers in Addis Ababa. The sampling design applied for the research is two level sampling. Initially Purposive sampling is used to select bank branches based on the size of the branches and their level of business activities. The reason behind such sampling design is to get higher number of customers in a single place within short period of time, since the type of customers across all banks are assumed to be homogenous (no segmentation geographically or at branch level).

Accordingly: Addis Ababa, Arat Killo, Arada Ghiorgis, Selassie and Theodros branches are selected using purposive sampling. Then convenience sampling is used to select sample respondents from selected branches by way of approaching customers visiting the branch banks with the help of branch managers and their staffs. Sample size for the study is determined using the formula described below as stated used by Isreal G.P. (1992) and used by Olouch (2012).

According to the MIS report of CBE as of March 31 2015, the total customers in Addis Ababa (includes 150 km outside Addis Ababa as per the CBE organizational Structure) is 3.15 million. From this population using the formula stated below sample size required for the study is 400 bank customers in Addis Ababa and 80 questionnaires are distributed for each five branches.

$$n = N / (1 + N (E^2))$$

Where: N = the population size,

n = sample size

E = the level of precision

Variables	$n = N / (1 + N (E^2))$
N	3158591
E	0.05
E*E	0.0025
	7896.5
	7897.5
n	<b>400</b>

**Table 1:** Sample Size Determination

### 3.3 Data Type and Source

In order to address the research objectives properly and effectively the researcher gathered data based on the questionnaire generated from the conceptual model adopted for the research project, namely Technology Acceptance Model (TAM). Data types for the research are: personal profile of sample customers, their perception about mobile bank usefulness, ease of use and risk associated with the adoption of mobile banking. Hence, the main sources of data for this research are Commercial Bank of Ethiopia Customers, and commercial bank of Ethiopia itself through primary and secondary sources.

### 3.4 Data Collection Method

The research work used primary and secondary data. Secondary data is used mainly to have data about m-banking customers, bank customers, and mobile telephone subscribers. As result secondary data are collected using different sources such as Commercial Bank of Ethiopia, ethio telecom, National Bank of Ethiopia, and other publications.

Regarding the primary data the researcher used questionnaire as an instrument to collect data from CBE sample branches and their customers to gather the information needed for the research. The questionnaire has two parts first part focuses mainly about the personal profiles of sample respondents such as age, gender, income, education status etc. Whereas part two of the questionnaire deals with different factors based on TAM and the variable added perceived risk. The questionnaire is prepared in English and translated in to Amharic so that sample respondents will have options to fill the questionnaire. To test the data internal consistency a Cronbach's alpha test is conducted and the finding of the test indicates Cronbach alpha statistics of 0.807 which implies high reliability because it is higher than 0.7 which is the standard. According to Hair, et al., (2006), if  $\alpha$  is greater than 0.7, it means that it has high reliability. The questionnaire is administered by the researcher with the voluntary involvement and support of Commercial Bank of Ethiopia branch managers and staff.

### **3.5 Data Analysis and Presentation**

The data analysis of this research paper is based on descriptive statistics such as frequency, percentage, mean, mode, and median and inferential statistics specifically binary simple and multiple logistics regression. The descriptive statistics used mainly to understand the customers' profiles and the perception of customers towards the usefulness, ease of use and risk of mobile banking adoption which will help us to answer the research questions related to customers' perception.

For the inferential statistical analysis, binary logistics regression is chosen since the dependent variable of the research (-m-banking adoption) is dichotomous variable where the value of response is binary (either 0 or 1 or yes or no only) which cannot be treated using the normal regression analysis. Besides the dichotomous nature of the dependent variable the model assumes there is one or more independent variable which can be continuous or categorical, independence of observations, and linear relationship between any continuous independent variables.

Simple regression is applied for this research to address the objectives of the research especially objective one and two which deals with one independent variable relationship with the dependent

variable mobile banking adoption. On the other hand multiple regression analysis is also applied for the research to address research objective three which includes all variables together.

And the inferential statistics is used to examine the relationship and the direction of the relationship between perceived usefulness and m-banking adoption, perceived ease of use and m-banking adoption and perceived risk and m-banking adoption which are part of the main objectives of the research.

Both the descriptive and inferential analysis is conducted using statistical software called Statistical Package for Social Science V16 (SPSS 16) and the statistical results are presented using tables, charts and figures.

## **Chapter Four**

### **Data Analysis and Discussion**

#### **4.1 Introduction**

In this section analysis and discussion of the data gathered based on the research methodology designed for the research is conducted. For this purpose, statistical instruments called descriptive statistics such as: mean, mode, median, and frequency, standard deviation to perform data analysis is used. Besides the descriptive analysis inferential statistics is applied to find out the relationship of mobile banking adoption with determinant factors hypothesized in the research model.

In order to make the data analysis data was collected using questionnaire designed and prepared both in English and Amharic. From the 400 questionnaires distributed 294 questionnaires are returned or 73.5 percent return.

In the following topics various demographic variables such as age, gender, income, education status, etc. of the sample respondents are analyzed. Then after data related to adoption factors of mobile banking as per conceptual model: perceived usefulness (PU), perceived risk (PR), perceived ease of use are analyzed and discussed using descriptive and inferential statistics.

#### **4.2 Demographic Profile of Respondents**

##### **4.2.1 Gender of Respondents**

The respondent's gender profile indicates, as shown in the table two below, the majority of the respondents are male which accounts 68 percent of the sample respondents whereas female respondents account for 32 percent of the sample respondents. This shows that women lag behind men in using banking services which may also affect adoption of mobile banking adoption since the base for mobile banking adoption in the bank led model of m-banking is bank customers.

**Table 2: Gender of Respondents (Source: Research Data, 2015)**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	200	68.0
Female	94	32.0
Total	294	100.0

#### **4.2.2 Age of Respondents**

The age of majority of the respondents as shown from table three is between 18-29 years of age numerically 58.8 percent. Whereas 31.3 percent falls between the ages of 30-39 that means more than 90 percent of the customers are within the age of 18- 49 years. The fact that the majority of the respondents are young and adult implies it is an opportunity for mobile banking adoption in the coming periods.

**Table 3: Age of Respondents (Source: Research Data, 2015)**

<b>Age Category</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
18 -29	173	58.8	58.8
30 -39	92	31.3	90.1
40 – 49	21	7.1	97.3
50 – 59	6	2.0	99.3
Above 59	2	.7	100.0
Total	294	100.0	

#### **4.2.3 Education Level Attained**

Education level attained by respondents as indicated by the table four below majority of the respondents were first degree holders which is 69 percent of the total respondents which is followed by TVET/diploma holders 12.9 percent. That means most of CBE customers in Addis (in the branches where data is collected) have higher educational status which is an opportunity

to CBE to provide advanced services such as m-banking since ease of use of the service will be better.

**Table 4: Education Level of Respondents (Source: Research Data, 2015)**

Education Level	Frequency	Percent	Cumulative Percent
Secondary Education	19	6.5	6.5
TVET/Diploma	38	12.9	19.4
First Degree	204	69.0	88.4
Master's Degree	32	10.9	99.3
PHD	1	.3	99.7
Total	294	100.0	

#### 4.2.4 Work Status of Respondents

Looking at the table five below about the work status of the respondents, most of them are employed which is above 82.7 percent of the total respondents. And 10.9 percent are students as can be seen from the table below.

This is a good opportunity for m-banking adoptions because those who are employed have time constraint since most of them are at work place when the bank branches are operational (have less time freedom). Hence, m-banking will give them time saving advantage by enabling customers to make banking transactions and payments such as payment of utilities and other bills, money transfer etc. without traveling to the bank branches.

**Table 5: Work Status of Respondents (Source: Research Data, 2015)**

Work Status	Frequency	Percent	Cumulative Percent
Employed	243	82.7	82.7
House Wife	6	2.0	84.7
Student	32	10.9	95.6
Self Employed	13	4.4	100.0
Total	294	100.0	

#### 4.2.5 Monthly Income Level in Ethiopian Birr

Referring to the table six below among the sample respondents 42.9 percent earn monthly income between 3000-6999 birr. Whereas 20.1 percent of the respondents earn monthly income between 1000-2999 birr. In terms of cumulative percent the 73.00 percent of respondents earn less than 6999.00 birr monthly. Hence most of the customers in the selected branches have income above the poverty line which is (1311 ETB) by international standard (World Bank, 2015). This implies that the sample customers have disposable income to make economic transactions using mobile banking.

**Table 6: Monthly Income of Respondents in ETB (Source: Research Data, 2015)**

Monthly Income	Frequency	Percent	Cumulative Percent
No Income	14	4.8	4.8
Between: 1 - 999	12	4.1	8.8
Between: 1000 - 2999	60	20.4	29.2
Between: 3000 - 6999	126	42.9	72.0
Between: 7000 - 14999	59	20.1	92.1
Between: 15000 - 19999	17	5.8	97.9
Above: 20000	6	2	100.0
Total	294	100.0	

#### 4.2.6 Time to Get to The Nearest Bank

Among the sample respondents 78.6 percent need less than 20 minutes to access their bank branch physically as shown in table seven below. And 13.83 percent of the respondents replied that it will take them less than 45 minutes to access their bank branch and get banking services.

This shows us that bank customers in Addis Ababa have better access to bank branches and their outlets thanks to the aggressive branch expansions by commercial banks in Addis Ababa especially by CBE. However, this does not mean that importance of m-banking is less in Addis Ababa because the m-banking has lots of advantages as can be referred from the literature part

of this study m-banking is an alternative bank channel to the traditional banking channel with lots of advantage ( R. Chandra , 2014).

**Table 7: Time to Get to the Nearest Bank of Respondents (Source: Research Data, 2015)**

<b>Time to get Nearest Bank</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Less than 20 minutes	231	78.6	78.6
Less than 45 minutes	39	13.3	91.8
More than 1 hour	18	8.2	100.0
Total	294	100.0	

#### **4.2.7 Cellphone Ownership and Usage**

With regard to cellphone ownership and usage as shown below in table eight 85.7 percent of the sample respondents replied that they have cellphone and use it. On the other hand 14.2 percent of the respondents replied that they do not have cellphone personally.

The implication of this finding is that cellphone ownership is not bottleneck for mobile banking adoption since the majority of bank customers in Addis Ababa have cellphone. And in fact this finding will lead us to raise the question why are people not adopting mobile banking when most of them higher have cellphone?

**Table 8: Cell Phone Ownership and Usage of Respondents (Source: Research Data, 2015)**

<b>Cell Phone ownership</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Yes	252	85.7	85.7
No	42	14.2	99.9
Total	294	100.0	

#### **4.2.8 Awareness of the Existence of Mobile Banking**

The sample respondents' response with regard to the awareness of customers about the existence of mobile banking services as stated below in table nine, 88.4 percent of respondents are aware of the existence of mobile banking service in the country whereas only 11.6 percent of the respondents lack awareness about the existence of mobile banking service.

This implies that most CBE customers in Addis know the existence of m-banking but this does not mean that customers have adequate information about m-banking as can be referred from table ten which says that among those who respond that they know the existence of the services they need additional information about its usefulness, ease of use and risk.

**Table 9: Awareness of the Existence of M- Banking of Respondents (Source: Research Data, 2015)**

<b>M-Banking Awareness</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Yes	260	88.4	88.4
No	34	11.6	100
Total	294	100.0	

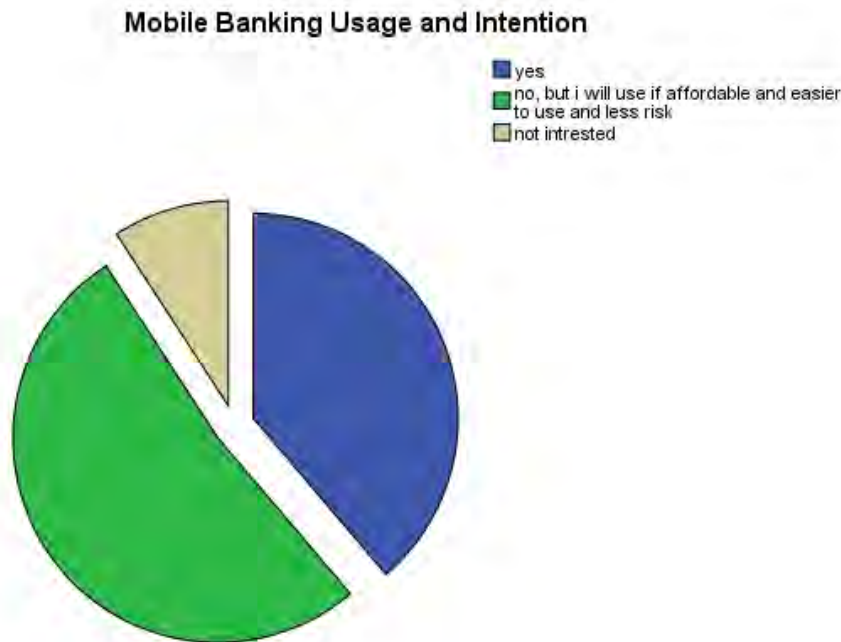
#### **4.2.9 Usage Status of M- Banking**

In terms of usage of mobile banking services the respondents reply indicate that among respondents who have cellphone ownership 38.8 percent of respondents' use mobile banking as can be seen from the table ten below. Whereas 52 percent do not use mobile banking services but they will use if they find out that the service is affordable, easier to use and less risk in the same table. And 9.2 percent of respondents replied that they totally not interested to use mobile banking service. In general 61.2 of the sample respondents do not use mobile banking as per the data from table ten below.

The finding implies that customers do not have adequate information about the usefulness, ease of use and risk related factors of mobile banking, because as can be seen from the finding 52 percent are willing to use the service but needs further detailed information and understanding about the service. This shows us commercial banks specifically CBE needs to work hard to make customers understand m-banking advantages in detail.

**Table 10: Usage Status of M- Banking of Respondents (source Research Data, 2015)**

Mobile Banking Adoption	Frequency	Percent	Cumulative Percent
Yes	114	38.8	38.8
No, But I will use if affordable, easier to use, and less risky	153	52	90.8
Not interested	27	9.2	100
Total	294	100.0	



**Figure 8 Pie Chart Mobile Banking Usage Status and Intention**

#### 4.2.10 Mobile Banking Service in Use

Among sample respondents who adopt mobile banking service 43 percent respond that they use all mobile banking service provided by Commercial Bank of Ethiopia as shown below in table eleven. In the same table the highest used services are money transfer and account balance

checking and only 4 percent of the sample respondents believe that mobile banking services provided by the Commercial Bank of Ethiopia is not applicable to their needs.

As can be seen the finding m-banking services the frequently used services are money transfer and account balance checking which are the traditional banking services and this implies that new services such payment using mobile banking needs to be pushed so that customers will exploit the benefit of m-banking services by effecting payment wherever they are without incurring transportation and time cost.

**Table 11: Mobile Banking Service in Use (source Research Data, 2015)**

<b>M-banking services</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative Percent</b>
Check Account Balance	26	23	23
Transfer Money	30	26	49
Make payment	4	4	53
Other information	7	6	59
Not Applicable	4	4	62
All	43	38	100
Total	114	100.0	

### **4.3 Perceived Usefulness (PU) of M-Banking**

One of the objectives of this research project is to understand customers' perception with regard the usefulness of mobile banking and its adoption.

A five point likert scale is used to measure respondents' response concerning the perceived usefulness of mobile banking. Where: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

**Table 12: Descriptive Statistics on Perceived Usefulness of M-Banking (source Research Data, 2015)**

<b>Statistics</b>	<b>Quickly Accomplish Task</b>	<b>Ease My Task</b>	<b>M-Banking Advantageous</b>	<b>Combined Average</b>
Mean	4.15	4.18	4.35	4.23
Median	4.00	4.00	4.00	4
Mode	4	4	4	4
Std. Deviation	.937	.841	.832	

As shown from the table twelve above the descriptive statistics such as mean, median and mode are four and above that means (as per the likert scale applied for the research 4= agree) the respondents agree with the statement that mobile banking is useful. However the standard deviation statistics tell there is significant deviation form the mean on both sides.

Despite the constraint of the mean the result of the mean implies that mobile banking will help them accomplish their task quickly, make their task easy and overall mobile banking is advantages. Besides, based on the empirical evidence from technology acceptance model (Mohammad et al. (2014), if mobile banking is perceived to be useful then it will have positive effect on the adoption of mobile banking among users.

#### **4.4 Perceived Ease of Use (PEU) of M-Banking**

A five point likert scale is used to measure respondents' response concerning the perceived usefulness of mobile banking. Where: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

**Table 13: Descriptive Statistics on Perceived Ease of Use of M-Banking (Source: Research Data, 2015)**

<b>Statistics</b>	<b>Easy Learning</b>	<b>Less Mental Effort</b>	<b>Easy to Use</b>	<b>Doesn't Require Training</b>	<b>Combined Average</b>
Mean	4.15	3.80	4.00	3.38	3.83
Median	4.00	4.00	4.00	4.00	4
Mode	4	4	4	4	4
Std. Deviation	.801	1.008	.914	1.207	

With regard to perceived ease of use of mobile Banking, table thirteen indicates that combined mean of the perceived ease of use determinant elements is 3.83 can be round up to 4 that means the respondents agree that mobile banking is easy to use. However the standard deviation statistics tell there is significant deviation from the mean on both sides.

Despite the standard deviation constraint, the means, the mode and median is four that means most of the respondents agree that the mobile banking is ease to learn, require less mental effort, easy to use and doesn't require training. Besides, based on the empirical evidence from technology acceptance model (Mohammad et al. (2014), if mobile banking is perceived to be easy to use then users will have intention to adopt and use m-banking.

#### 4.5 Perceived Risk (PR) of M-Banking

A five point likert scale is used to measure respondents' response concerning the perceived usefulness of mobile banking. Where: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

**Table 14: Descriptive Statistics on Perceived Risk of M-Banking (Source: Research Data, 2015)**

Statistics	Network Problem	Fear of Loss of Money	Personal Privacy	M-Banking is Risky	Combined Average
Mean	3.82	3.31	3.01	2.72	3.21=3
Median	4.00	3.00	3.00	2.00	3
Mode	4	4	2	2	3
Std. Deviation	1.035	1.211	1.252	1.288	

With regard to perceived risk of adopting mobile banking technology respondents' response indicates the combined average of the perceived risk determinant factors is 3.2 as shown from table fourteen above which can be taken as 3 ( as per the likeret scale applied for the research 3 defined as risk neutral) that means customers are indifferent about the risk of mobile banking technology. However the standard deviation statistics tell there is significant deviation form the mean on both sides. And when we consider each factor separately we can see from the data that network problem is perceived to be risky for mobile banking service.

Therefore, from the descriptive analysis with regard to the perception of bank customers about the usefulness and ease of use and risk of mobile banking, it can be inferred that bank customers have favorable perception to mobile banking. And this finding is similar to the finding of Oluochu(2015) in Kenya. And this implies that if bank customers have favorable attitude towards mobile banking in terms of usefulness and ease of use then customers will have propensity to use the services (Mohammed et al, 2014). On the other hand the descriptive analysis shows as m-banking is perceived as risky from mobile network problem element of risk factors which by implication will lead to lack of confidence by customers to use the mobile banking (Mohammed et al, 2014).

#### 4.6 Relationship between Perceived Usefulness (PU) and Mobile Banking Adoption

In order to examine the relationship between perceived usefulness and intention to adopt mobile banking, regression analysis is used. And for this research model binary logistic regression is an appropriate model because the nature of the dependent variable response is binary (only two responses). Simple regression analysis is applied i to test the first hypothesis (single variable case) with relationship of perceived usefulness as independent variable and mobile banking adoption as dependent variable. The result of the regression is indicated in the table fifteen below.

Ha1: There is a relationship between mobile banking adoption and perceived usefulness.

**Table 15: Regression analysis of Mobile Banking adoption and Perceived usefulness (Source: Research Data, 2015)**

Variables in the Equation	B	S.E.	Wald	df	Sig.	Exp(B)
PU	.352	.165	4.568	1	.033	1.422
Constant	-1.903	.691	7.573	1	.006	.149

As shown in table 15 above the probability of the Wald statistics is 0.033 less than or equal to the level of significance of 0.05. Thus, the null hypothesis that the b coefficient for perceived usefulness is equal to zero is rejected. Besides the Wald statistics results implies the overall the

model is fit. And the coefficient of perceived usefulness is 0.352 which is positive that means perceived usefulness and mobile banking adoption has positive relationship. And the standard error figure tells us there are no numeric problems in the data.

The finding of this research is consistent with past studies conducted on the relationship of m-banking with perceived usefulness (R.A. Oluoch, 2012, N. Solomon et al, 204). And commercial banks specifically CBE will be able to attract customers to mobile banking services if they can work on improving the perception of customers towards the usefulness of mobile banking.

#### 4.7 Relationship between Perceived Ease of Use (PEU) and Mobile Banking Adoption

Ha2: There is a relationship between mobile banking adoption and perceived ease of use.

**Table 16: Regression analysis of Mobile Banking adoption and Perceived ease of use(Source: Research Data, 2015)**

Variables in the Equation	B	S.E.	Wald	df	Sig.	Exp(B)
PEU	.469	.176	7.064	1	.008	1.598
Constant	-2.280	.701	10.573	1	.001	.102

As shown in table 16 above the probability of the Wald statistics is 0.008 less than or equal to the level of significance of 0.05. Thus the null hypothesis that the b coefficient for perceived ease of use is equal to zero is rejected. Besides the Wald statistics results implies the overall the model is fit. And the coefficient of perceived usefulness is 0.469 which is positive that means perceived ease of use and mobile banking adoption has positive relationship. And the standard error figure tells us there are no numeric problems in the data since it is less than 2.

In this case the finding is consistent with past studies conducted on the relationship of m-banking with perceived ease of use (Karma, 2014; R.A. Oluoch, 2012, N. Solomon et al, 204). Therefore, customers who perceive mobile banking easy to use will likely adopt mobile banking technology. Hence, commercial banks like CBE shall work towards making customers perceive

mobile banking easy to use. This is due to the fact technology to be adopted needs to be perceived as easy to use by the user as hypothesized by, and tested by TAM (Davis, 1985).

#### 4.8 Relationship between Perceived Risk (PR) and Mobile Banking Adoption

Ha3: There is a relationship between mobile banking adoption and perceived risk.

**Table 17: Regression analysis of Mobile Banking adoption and Perceived Risk**  
(Source: Research Data, 2015)

Variables in the Equation	B	S.E.	Wald	Df	Sig.	Exp(B)
PR	-.354	.159	4.927	1	.026	.702
Constant	.666	.516	1.664	1	.197	1.946

In the Table 17 above the probability of the Wald statistics is 0.026 which is less than the level of significance of 0.05. Thus the null hypothesis that the b coefficient for perceived risk is equal to zero is rejected. Besides the Wald statistics results implies the overall the model is fit. whereas the coefficient of perceived risk is negative 0.354 hence, perceived risk and mobile banking adoption has negative relationship. And the standard error figure tells us there are no numeric problems in the data since it is less than 2.

The result is of h is consistent with past studies conducted on the relationship of m-banking with perceived risk (Karma, 2014; R.A. Oluoch, 2012,). Therefore, customers who perceive mobile banking as risky are afraid of adopting the technology. Hence, commercial banks specifically CBE shall work towards minimizing the risk factors specifically network problem in the case of CBE to reduce the risk perception of customers towards the technology and increase the probability of mobile technology adoption by customers.

#### 4.9 Relationship among Perceived Usefulness (PU), Perceived Ease of Usefulness (PEU), Perceived Risk (PR) and Mobile Banking Adoption

Ha4: All independent variables have significant relationship with adoption of mobile banking adoption.

**Table 18: Regression analysis of Mobile Banking adoption with Perceived usefulness, Perceived ease of use and Perceived Risk (Source: Research Data, 2015)**

Variables in the Equation	B	S.E.	Wald	df	Sig.	Exp(B)
PU	.245	.175	1.971	1	.160	1.278
PEU	.357	.190	3.542	1	.060	1.429
PR	-.340	.160	4.526	1	.033	.711
Constant	-1.768	.990	3.188	1	.074	.171

**Table 19: Over All Relation Ship Between Independent and Dependent Variables**

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	13.660	3	.003
	Block	13.660	3	.003
	Model	13.660	3	.003

**P = 0.003 < 0.005 the level of significance**

In addition to the single variable regression analysis multiple regression analysis is applied in this research to test if all independent variables do not affect adoption of mobile banking technology. And as shown from table 18 above perceived usefulness and perceived ease of use has positive relationship with adoption of mobile banking technology and on the other hand perceived risk has negative relationship with adoption of mobile banking technology. Omnibus test is applied to gauge the model fitness and as result the model chi square is 13.66 (table 19) which means statistically significant at  $P=0.003 < 0.005$  the level of significance. Hence, the

overall relationship between independent and dependent variables is supported in the model. The finding of this research is similar to other developing countries like Kenya and Sudan as can be referred from the empirical review (Karma, 2014; R.A. Oluoch, 2012,) in part two of this research.

To sum up the finding of research and its implication, perceived usefulness, perceived ease of use and affect mobile banking adoption positively whereas perceived risk affect mobile banking adoption negatively. An improvement in the perception of customers about its usefulness, ease of use will increase the probability of mobile banking adoption. And activities which will reduce customers' perception about the riskiness of mobile banking will lead to better probability of customers' adoption of mobile banking.

## **Chapter Five**

### **Summary, Conclusion and Recommendation**

#### **5.1 Summary and Conclusion**

The research paper uses refined TAM model with additional variable perceived risk to understand customers' perception of the factors that affect adoption of mobile bank technology in the case of commercial bank of Ethiopia Addis Ababa city customers and following are the summary of the findings of the research and its implication.

The responses of the sample respondents indicate most of the respondents 88.4 percent of the respondents are aware of the existence of mobile banking. On the other hand even if most of the respondents are aware of the existence of mobile banking service only 38.8 percent of respondents use mobile banking services. Whereas, 52 percent of sample respondents do not use mobile banking but they are ready to use it if they found out that the service is perceived as useful, easy to use and free of risk. These indicates that even if people are aware of the existence of mobile technology significant number of customers among the sample respondents do not have adequate information about its usefulness, ease of use and risk.

The main objectives of this research are to understand the relationship of perceived usefulness, perceived ease of use and perceived risk independently and together with mobile banking technology adoption. The first objective of this research work is to understand the relationship between perceived use of mobile banking and adoption of mobile banking technology. The finding of the research shows that perceived usefulness has positive relationship with mobile banking adoption and customers also perceive mobile banking as useful. And if mobile technology is perceived as useful then based on the empirical evidences about research model used in this paper and potential customer are ready adopt the technology.

The second objective of this research is to understand the relationship between perceived ease of use of mobile banking and adoption of mobile banking technology. The finding of the research shows that perceived ease of use has positive relationship with mobile banking adoption and customers perceive mobile banking is easy to use. And if mobile technology is perceived as easy to use then based on empirical evidences about the research model used in this paper potential customer are ready to adopt the technology.

The third objective of this research work is to understand the relationship of between perceived risk of mobile banking and adoption of mobile banking technology. The finding of the research shows that perceived risk of mobile banking has negative relationship with mobile banking adoption. The source of customers' perceived risk of mobile banking as per the finding of the research is network problem. However, other risk factors considered in the research work are not perceived as risky in the use of mobile banking. And if mobile technology is perceived as risky then potential customers will be refrained from adopting the technology.

The multiple regression analysis conducted in the research shows as perceived usefulness and perceived ease of use has positive relationship with mobile banking technology adoption. And perceived risk has negative relationship with mobile banking technology adoption but perceived risk is not significant.

## 4.2 Recommendation

- Commercial bank of Ethiopia shall deploy reliable network infrastructure and system to ensure mobile banking services operate smoothly so that it can reduce the perceived risk by customers regarding mobile banking technology.
- Ethio telecom as mobile network service provider shall give special attention to mobile banking technology from its side to provide reliable network to commercial banks specifically Commercial Bank of Ethiopia as the customers perceive the mobile network risky to adopt mobile banking.
- Commercial Bank of Ethiopia in general and its Addis Ababa branches in particular shall promote mobile banking services to its customers using various promotional tools appropriate to the target market so that it can increase the awareness and perception of potential customers about the technology's usefulness, ease of use as well as its risk.
- Commercial bank of Ethiopia shall broaden the service portfolio under mobile banking technology to make the service more useful and as well to be perceived useful in the minds of its customers.
- Commercial bank of Ethiopia shall produce user guide for mobile banking services using various means such as booklets, flyers, and in electronic means such as website based electronic documents to make use of mobile banking easier for existing and potential customers.
- And finally although, this research is conducted based on the case of Commercial Bank of Ethiopia Customers the researcher believes that the finding and the recommendation of the research can be applied to other commercial banks taking in to account the specific context of the organizations.

### **4.3 Future Research**

- The main objective of this research is to understand factors that affect the adoption of mobile banking. This research focus in Commercial bank of Ethiopia Addis Ababa customers and in order to increase the research generalizability power the researcher recommend other researchers to broaden the scope of the research outside Addis Ababa and including other Commercial banks.
- Besides other factors in addition to perceived usefulness, perceived ease of use and perceived risk which may affect mobile banking adoption shall be considered by future researchers to better understand factors that affect the adoption of mobile banking technology.

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## Appendix:

### Questionnaire in English and Amharic

**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF BUSINESS AND ECONOMICS**  
**DEPARTMENT OF MANAGEMENT**  
**EXECUTIVE MBA PROGRAM**

This questionnaire is designed by the final year Executive MBA student of AAU for research project entitled “**Factors Affecting the Adoption of Mobile Banking Among Bank Customers in Ethiopia the Case of Commercial Bank of Ethiopia**”. The information supplied by you is strictly held confidential and used for academic purpose only.

Thank you in Advance for your kind cooperation in filling up this questionnaire.

#### Section I: Demographic Details

No.	User Demographics	Categories	Mark Applicable with Cross (X)
1	<b>Gender</b>	Male	
		Female	
2	<b>Age</b>	18 -29	
		30 -39	
		40 – 49	
		50 – 59	
		Above 59	
3	<b>Highest Level of Education Attained</b>	Secondary Education	
		TVET/Diploma	
		First Degree	
		Master’s Degree	

		PHD	
4	<b>Work Status</b>	Employed/Working	
		House Wife	
		Student	
		Self Employed	
		Unemployed	
		Pensioner/Retired	
5	<b>Monthly Income Level in Ethiopian Birr</b>	No Income	
		Between: 1 - 999	
		Between: 1000 - 1999	
		Between: 2000 - 3999	
		Between: 4000 - 5999	
		Between: 6000 - 9999	
		Above: 10000	
6	<b>Do you have cell or use cell phone?</b>	Yes	
		No	
7	<b>Time to get to the nearest bank</b>	Less than 20 minutes	
		Less than 45 minutes	
		More than 1 hour	
8	<b>Are you aware of the existence of Mobile Banking</b>	Yes	
		No	
9	<b>If yes to question number 8 Do you use mobile Banking?</b>	Yes	

		No, But I will use if affordable, easier to use, and less risky	
		Not interested	
11	<b>If yes to question number 9 what do you use mobile banking for?</b>	Check Account Balance	
		Transfer Money	
		Pay bill	
		Others	
		Not Applicable	

## Section II: Five Point Likers Scale

Please complete the following questionnaire on scale of 1 to 5. 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, and 5-strongly agree

1. What is your statement on Statement on perceived usefulness (PU)

No	Construct	strongly disagree	disagree	neutral	agree	strongly agree
12	Using Mobile Banking would enable me to accomplish my tasks more quickly					
13	Using Mobile Banking would make it easier for me to carry out my tasks					
14	Overall using mobile banking is advantageous					

2. What is your statement on perceived ease of use (PEU)

No	Construct	strongly disagree	disagree	neutral	agree	strongly agree
15	Learning to use mobile banking would be easy					
16	Interaction with mobile banking does not require a lot of mental effort					
17	It is easy to use mobile banking to accomplish my banking task					
18	Using mobile banking does not require training					

3. What is your statement on perceived risk

No	Construct	strongly disagree	disagree	neutral	agree	strongly agree
19	Mobile banking may not perform well because of network problem					
20	When transferring money through mobile banking I am afraid I will lose money due careless mistakes such as wrong input of account number and wrong input of amount of money					
21	I would not feel totally safe providing personal privacy information over mobile banking					
22	Overall using mobile Banking is risky					

**Thank you Very Much**

**አዲስ አበባ ዩኒቨርሲቲ - የቢዝነስና ኢኮኖሚክስ ኮሌጅ**  
**ማኔጅምንት የትምህርት ክፍል - ኤግዝኩቲቭ ማሰተርሰ አፍ ቢዝነስ አደሚንስተሬሽን**

ይህ መጠይቅ የተዘጋጀው የኢትዮጵያ ንግድ ባንክ ደንበኞች የሞባይል ባንክ አገልግሎትን ለመጠቀም በደንበኞች እየታ አንጻር ተፅኖ የሚፈጥሩ ምክኒያቶችን ለመረዳት የሚደረግ ጥናት ነው። ጥናቱም የሚከናወነው በአዲስ አበባ ዩኒቨርሲቲ የኤግዝኩቲቭ ማሰተርሰ አፍ ቢዝነስ አደሚንስተሬሽን ተመራቂ ተማሪ ነው። እርስዎ የሚሰጡን መረጃ ለጥናት ብቻ የሚወል መሆኑንና የመረጃው ሚስጠራዊነት የተጠበቀ መሆኑን ለማረጋገጥ እንፈልጋለን። በመሆኑም ውድ ግዜዎትን በመሰዋት ለሚሰጡን መረጃ እጅግ አናመሰግናለን።

**እባክዎን መልሰዎን በቀኝ በኩል ባለው ከአያንዳንዱ ጥያቄ ትይዩ ቦታዎች የ (X) ምልክትን በመሙላት ይግለፁ። እንዲሁም ስምዎን መግለፅ አያስፈልግም።**

**ክፍል I: አጠቃላይ መረጃዎች**

No.	አጠቃላይ መረጃዎች	አማራጮች	(X)
1	ፆታ	ወንድ	
		ሴት	
2	ዕድሜ	18 -29	
		30 -39	
		40 – 49	
		50 – 59	
		59 በላይ	
3	የትምህርት ደረጃ	ሁለተኛ ደረጃ	
		ዲፕሎማ	
		መጀመሪያ ዲግሪ	
		ሁለተኛ ዲግሪ	
		ዶክተሬት	
4	የስራ ሁኔታ	ተቀጣሪ	
		ተማሪ	
		የግል ስራ	
		ስራ ፈላጊ	
		ጥሮተኛ	
5	ወርሀዊ ገቢ	ገቢ የሌለው	
		ከብር: 1 - 999	
		ከብር: 1000 - 2999	

		ከ-ብር:3000 - 6999	
		ከ-ብር: 7000 - 14999	
		ከ-ብር:15000 - 19999	
		ከ-ብር 20000 በላይ	
6	በአቅረቢያ ወደ አለው የባንክ ቅርንጫፍ ለመሄድ ምን ያህል ጊዜ ይወስድታል?	ከ20 ደቂቃ በታች	
		ከ45 ደቂቃ በታች	
		ከአንድ ሰዓት በላይ	
7	የሞባይል አገልግሎት ተጠቃሚ ነዎት?	አወ	
		አይደለሁም	
8	የኢትዮጵያ ንግድ ባንክ የሞባይል ባንክ አገልግሎት እንደሚሰጥ ያውቃሉ?	አውቃለሁ	
		አላውቀም	
9	የኢትዮጵያ ንግድ ባንክ የሞባይል ባንክ አገልግሎት ተጠቃሚ ነዎት?	አዎ	
		አይደለም ነገር ግን የአገልግሎት ክፍያው ተመጣጣኝ ከሆነ፤ ለመጠቀም ቀላል ከሆነ፤ እንዲሁም ጉዳት የማያመጣ ከሆነ አገልግሎቱን ለመጠቀም ዝግጁ ነኝ	
		ፍላጎት የለኝም	
10	የኢትዮጵያ ንግድ ባንክ የሞባይል ባንክ አገልግሎት ተጠቃሚ ከሆኑ የትኞቹን አገልግሎቶች ይጠቀማሉ?	የባንክ ሂሳብ ለማውጣት	
		ገንዘብ ለማስተላለፍ	
		ክፍያ ለመፈፀም	
		ሌሎች	

**ክፍል II: የሞባይል ባንክ አገልግሎት ጠቀሜታ፤ አጠቃቀምና ስጋቶችን በተመለከተ**

እባክዎትን የሚከተሉትን ጥያቄዎች በሰንጠረዥ ለመልስ በተዘጋጀው ክፍት ቦታ የ “X” ምልክት በመሙላት መልስዎን ያስቀምጡ

4. ስለአገልግሎቱ ጠቃሚነት ምን ያስባሉ?

ተ.ቁ.	ጥያቄ	በፍፁም አልሰማም	አልሰማም	ገለልተኛ ነኝ	እሰማለሁ	ፍፁም እሰማለሁ
12	የሞባይል ባንክ አገልግሎት መጠቀም ሰራዊን በቅልጥፍና ለማከናወን ይረዳኛል					
13	የሞባይል ባንክ አገልግሎት መጠቀም ሰራዊን ያቀልኛል					
14	በአጠቃላይ የሞባይል ባንክ አገልግሎት ጠቃሚ ነው					

1. ስለአገልግሎቱ አጠቃቀም ቀላልነት ምን ያስባሉ?

ተ.ቁ.	ጥያቄ	በፍፁም አልሰማም	አልሰማም	ገለልተኛ ነኝ	እሰማለሁ፤	ፍፁም እሰማለሁ
16	የሞባይል ባንክ አገልግሎት ለመጠቀም በቀላሉ መረዳት ይቻላል					
17	የሞባይል ባንክ አገልግሎት ለመጠቀም ብዙ ማሳብ አይፈልግም					
18	የባንክ አገልግሎት ለመጠቀም የሞባይል ባንክ ቀላል ነው					
19	የሞባይል ባንክ አገልግሎት ለመጠቀም ስልጠና አይፈልግም					

2. የሞባይል ባንክ አገልግሎት በተመለከተ የሚሰማዎት ስጋት

ተ.ቁ.	ጥያቄ	በፍፁም አልሰማም	አልሰማም	ገለልተኛ ነኝ	እሰማለሁ፤	ፍፁም እሰማለሁ
20	የሞባይል ባንክ አገልግሎት በኔትዎርክ ችግር ምክኒያት በአግባቡ አይሰራም					
21	በሞባይል ባንክ አገልግሎት ገንዘብ ሳስተላለፍ በስህተት የተሳሳተ መረጃ ለምሳሌ የተሳሳተ የገንዘብ መጠን ወይም መሰል መረጃዎች ከሞላሁ ችግር ይፍጠርብኛል ብዬ አሰጋለሁ					
22	የግል መረጃዎችን የሞባይል ባንክ አገልግሎት ለመጠቀም መስጠቴ ስጋት ይፈጥርብኛል					
23	በአጠቃላይ የሞባይል ባንክ አገልግሎት መጠቀም ችግር ሊኖረው ይችላል የሚል ስጋት አለ					

**ውድ ግዜዎትን መሰዋት አርገው መጠይቁን በመሙላትዎት በጣም አመሰግናለሁ!**