



St. Mary's University  
School of Graduate Studies  
Institute of International Economics and Development Studies,  
Department of Economics

*Factors Affecting Adoption of Electronic Banking System: The case of  
Commercial Bank of Ethiopia Sebeta Branch.*

By

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June 1, 2017

Addis Ababa

St. Mary's University  
School of Graduate Studies  
Institute of International Economics and Development Studies,  
Department of Economics

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for the Master of Arts in Economics

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June 1, 2017

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DECLARATION

I, the undersigned, declare that this study is my original work and has not been presented for a degree or Masters program in any other university, and that all sources of materials used for the study have been duly acknowledged.

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**Examiners Approval**

As member of the board of Examiners of the Master of Art thesis open defense examination, we certify that have read and evaluate the thesis prepared by Zelalem Fetene Kassahun and examined the candidate.

We recommend the thesis be accepted as fulfilling the thesis requirement for the Degree of Master of Art in Economics.

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## ACRONYMS AND ABBREVIATION

CBE	Commercial Bank of Ethiopia
POS	Point of Sales
ATM	Automated Teller Machine
SMS	Short Text Message
PIN	Personal Identification Number
TAM	Technology acceptance model
TPB	Theory of planned behavior
PDA	Personal Digital Assistant
PC	Personal Computer

## Abstract

*Electronic banking services are being used with increasing frequency in most countries, including ETHIOPIA. Although previous studies have confirmed the importance for such services for both banks and customers, the level of electronic banking services' adoption in ETHIOPPIA is still low. This study aims to identify and understand factors that affect bank customers' use of electronic banking services. This study integrates technology acceptance model (TAM) with the theory of planned behavior model (TPB) and incorporates dimensions and perceived risk to propose a theoretical model. The primary data were collected from 380 valid questionnaires which were distributed to random banking customers of sebeta branch multiple regression analysis was employed to test the hypotheses. Random sampling methods and descriptive statistics analysis used. The main findings of the study are: uncertainty avoidance has a positive and significant impact on perceived ease of use and perceived usefulness. Perceived risk has the stronger impact on customers' attitude, which in turn influences customers' intention to use electronic banking services areas for further research on the subject matter of service quality, dimension and customer satisfaction. The Commercial bank and its board should work on e-banking adoption of the customer, perceived behavioral control and trust dimension of e-banking. The commercial bank must give attention to brand building strategies as it is reminiscent of their e-banking customer satisfaction and overall bank performance. Bank must come up with strong brand building blocks if they are to harness the power of brand equity and remain competitive in application of e-banking. The study, it has been established that commercial bank of Ethiopia. The study recommends that the regulatory commercial bank must strive towards standardization of the e- banking environment to assure all service equal value irrespective of where they experience the service and its customer. Effort should be exerted to Standardize with bank standard policy guideline; enforcement of these policies must be operational zed. Standardization policies should set out minimum qualification requirement for staff, minimum conditions for deliver e-banking service creating minimum requirement for staff who can work in a bank set up, bank must have a well-stocked technology facility, laboratory to maintain and innovate e better e- banking service delivery system .This promote e-banking service and develop confidence to use e- banking.*

**Keywords:** E-banking adoption TAM, commercial bank of Ethiopia sebeta branch.

## Chapter One: Introduction

### 1.1. Background of the Study

The Commercial Bank of Ethiopia (CBE), being a pioneer in the country's financial market, has been going through transformation processes and technological shifts so as to render services that are modern and up to the expectations of customers. This perpetual transformation is in line with the bank's vision to become a world class bank. To realize this vision, CBE is adopting the latest technologies and introduce new services. ([www.combank.com](http://www.combank.com)).

Electronic banking is spreading quickly in recent years as it leads to much lower costs and greater competition in the financial services. Electronic banking helps to attract un banked individuals in to the banking system allowing them to improve money management with enhanced financial empowerment for financial institutions, it draws cash in to bank accounts which can be translated in to funds for lending and investment. The adoption and growth of e-payment is found very important towards creating a cashless society with its impact on bringing economic transparency, efficiency and growth from customer perspective, the most recognized drivers for growth of e-banking include the convenience, the reliability, the widely availability ,affordability and usefulness of the services. (<https://cbe.portal.com.et>).

Electronic payment is mostly referred to automate payment or banking services in an effective, efficient and convenient way via electronic channels such as automatic tellers machine (ATM), point of sale (POS) terminals, Mobile phones, internet, and personal computers. The CBE is a pioneer to introduce electronic payments in the country when it launched proprietary ATM system in 2002. However, the bank found it important to set up a new solution for electronic payment services which is capable of supporting its business growth requirements. Accordingly, the bank has implemented card payment services, mobile payment and internet banking. The values of Commercial bank of Ethiopia are that Corporate Citizenship, Customer Satisfaction, Quality Service, Innovation, Teamwork, Integrity, and Public Confidence. (<https://cbeportal.com.et>)

CBE provides e-banking service ultimate customers through Mobile banking, POS, Internet banking and ATM and the bank endeavors to satisfy customers by striving to excel their business, by offering quality service to their customers' and aspire to be branded with quality in

the minds of their customers and the general public. Commercial bank of Ethiopia provides Products and services such as: Account Opening (Local currency and foreign currency), Deposit (cash/Negotiable instruments), Payment Check clearance and money transfer (Local currency and foreign currency). ([www.combank.com](http://www.combank.com)).

CBE extends the following credit facilities to its esteemed customers: Overdraft, Merchandise loan facility, Pre-shipment Export Credit facility, Revolving Export Credit Facility, Special Truck Loan Financing, Short term loan, Medium and long term loans, Agricultural Input Loan, Agricultural Investment Loan, Coffee farming Term Loan Financing, Micro-Finance Institution's Loan ([www.combank.com](http://www.combank.com)).

## 1.2 Statement of the problem

The environment of Banking industry have been experiencing a rapid changes reflected by the intense growth of competition between banks and increased expectation of current and potential customers. As a result the usages of e-banking products and maintaining customer have been a major challenge for various banks especially in developing countries. Commercial Bank of Ethiopia (CBE) at this time provides different e-banking products to customer. But the provided e-banking products (services) are not adopted (used) as expected. Due to this most CBE staffs involve to awareness creation to adopt e-banking by the customer the challenge of adoption still continuous. Lots of researches on E-banking system have been done in different countries in the world. Different factors in the adoption of E-banking have been taken as the main factors of the adoption of new technology by different researchers such as environmental factors (like lack of suitable legal and regulatory framework for e-commerce, poor ICT infrastructure, lack of competitive pressure in the industry), organizational factors (Lack of skilled man power, resistance to changes in technology among staff) and technological factors (security risk and functionality), Zhao et al., 2008). However, despite the importance of these adoptions and development of E-banking, very limited number of research has been done on the challenges and opportunities of E-banking in developing countries like Ethiopia By Kassahun Girma (2016).

Therefore, this study attempts to show the factors affecting e-banking adoption in Ethiopia in a case of Commercial Bank of Ethiopia Sebeta branch.

### 1.3. Objectives of the study

The main objective of the research is to identify and analyze factors affecting the adoption of E-banking of customers in CBE. Thus, the specific research objectives of this study were:

- ❖ To identify factors affecting on the adoption of e-banking in the perspectives of customers of CBE.
- ❖ To develop and validate the relationship between factors that affects e-banking customers of the bank.
- ❖ To examine customers perception on e-banking practice of CBE

### 1.4. Research questions

Based on the above stated objectives, the following research questions were answered:

- What are the major factors affecting customers on the adoption of e-banking practices in CBE?
- What is the strength of relationship among factors on customers' e-banking adoption in CBE?
- How do customers perceive about e- banking practice of CBE?
- To What extent the factors are affecting customers on e-banking adoption in CBE Ethiopia

### 1.5. Significance of the study

Introduction of new technologies allowed banking institutions to offer new channels of service outlets like ATM facility, Internet Banking, Telephone Banking, SMS banking and Mobile Banking. Ethiopian consumers recently too have access to many new channels to interact with their bank. Banks race against each other in bringing the latest technology for the benefit of their customers and themselves. But not many studies have been conducted to evaluate the factors affecting on customers electronics banking in Ethiopia, and hence this research would have the following significances:

- This study would provide a significant role to identify the major factors affecting in the adoption of e-banking of customers of the bank and to adjust accordingly.
- The study also would helps to know customers perception and level of e-banking adoption not only CBE but also other similar banks, and
- Finally, this study can be used as a guide line and reference for policy makers, practitioners and would also serve as a spring board for other researchers who want to conduct detailed research on the issue. So apart from providing a useful insight, is strongly expected to instigate other researchers to undertake a meaningful investigation by enlarging the scope of the issue.

#### 1.6. Scope and Limitation of the Study

The study was limited to surveying, interviewing and documentary analysis of the purposely selected bank. There are 3 commercial bank of Ethiopia around sebeta town and 7 others banks. *it excluded other banks and cbe branches and focus on the biggest branch namely commercial bank of Ethiopia sebeta branch.* This branch is selected from the total population based on their familiarity with E-banking technology i.e. long years services in providing E-banking products to public. Hence, the purposive sampling procedure decreases the generalize of findings and this study might not be generalize to all banks. Besides, the study was only to identify the adoption and development of E-banking technology in the Ethiopian banking industry with respect to their

The study was delimited geographically as well as methodologically.

Geographically; there are 10 branches including other commercial banks in sebeta city but this study delimit itself on the biggest commercial bank of Ethiopia which is commercial bank of Ethiopia(CBE). Furthermore, this study focused on the data gathered only from sebeta branch. Methodologically; the desire to keep the questioners simple and brief may limit information

#### 1.7. Research Hypothesis

H1: Perceived Usefulness has positive effect on the attitude toward E-banking use.

H2: Perceived Ease of use has positive effect on the attitude toward using E-banking.

H3. Perceived behavioral control has positive effect

H4: Subjective norms has significant positive effect on Per EOU

H5: Perceived security negatively influence on the attitude toward E-Banking Adoption.

H6: Perceived Risk negatively influence the perceived UF.

H7: Perceived Trust (PT) has a positive impact in the adoption of E-Banking.

H8: infrastructure has positive effect on e banking adoption

H9.percived attitude positively affect e banking adoption

### 1.8. Organization of the thesis

The study is organized into five chapters. Chapter one encompasses the introductory part which covers the background, statement of the problem with research questions, research objectives, significance of the study, scope and limitations of the study. Chapter two presents review of related literature which are related to the research title. Chapter three deal with the research design and methodology. Chapter four is devoted for the presentation of data analysis. Finally, chapter five offers the conclusion and recommendations of the study.

## **Chapter Two: Review of Related literature**

This section both theoretically and empirical reviews related with e-banking adoption of customers and in the subject area of the study about Ethiopian Commercial banks were reviewed and the respective research hypothesis based on the reviews was developed.

### **2.1 Definition of basic terms**

Definition of electronic banking| Banks have used electronic channels to do banking operations with both domestic and international customers. Currently, banks are mostly using electronic channels to receive instructions and deliver their products and services to their customers. Although the ranges of services provided by banks over the electronic channel vary widely in content, this form of banking is generally referred to as electronic banking (Azouzi, 2009).

The definition of electronic banking varies among researchers, because electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999). The definition of electronic banking used in this study is adopted from the Basel committee report which defined it the provision of retail and small value banking products and services through electronic channels as well as a large value electronic payment and other wholesale banking services which are delivered electronically. Such products and services can include deposit taking, lending, account management, the provision of financial device, electronic bill payment, and the provision for other products and services such as electronic money (Basel committee on banking supervision, 2003). Electronic banking services have benefits for both banks and customers. For banks, electronic banking is conceded a strategy weapon; help them to achieve competitive advantage and increase their market share. Furthermore, using electronic services can save the cost of resources, which are needed for traditional banking services (Jayawardhena and Foley, 2000). From the customers' point of view, Aladwani, (2001) found that electronic banking provide faster, easier and more reliable services to customers. However, customers are still hesitant to use electronic banking services, because they are concerned with security issues,

and they may do not have sufficient ability to deal with the applications of electronic banking (Ayriga, 2011).

2.1.1 .E-commerce: is the buying and selling of goods and services over the Internet. E-commerce refers only to online transactions. E-commerce takes place through the application of electronic technology and covers outward-facing processes that touch customers, suppliers and external partners, including sales, marketing, order taking, delivery, customer service, purchasing of raw materials and supplies for production and procurement of indirect operating-expense items, such as office supplies. [www.computerworld.com](http://www.computerworld.com)

2.1.2 E-business - E-business includes e-commerce but also covers internal processes such as production, inventory management, product development, risk management, finance, knowledge management and human resources. [www.computerworld.com](http://www.computerworld.com)

2.1.3.E-banking - is a form of banking service where funds are transferred through an exchange of electronic signal between financial institutions, rather than exchange of cash, checks, or other negotiable instruments (Kamrul, 2009)

The term of E-banking often refers to online banking/Internet banking which is the use of the Internet as a remote delivery channel for banking services (Furst & Nolle 2002). With the help of the internet, banking is no longer bound to time or geography. Consumers all over the world have relatively easy access to their accounts 24 hours per day, seven days a week. Another definition of E-banking is that .`E-banking is the use of a computer to retrieve and process banking data (statements, transaction details, etc.) and to initiate transactions (payments, transfers, requests for services, etc.) directly with a bank or with other financial service provider remotely via a telecommunications network` (Yang 1997). It should be noted that electronic banking is a bigger platform than just banking via the internet.

E-banking can be also defined as a variety of platforms such as internet banking or (online banking), TV-based banking, mobile phone banking, and PC (personal computer) banking (or

offline banking) whereby customers access these services using an intelligent electronic device, like PC, personal digital assistant (PDA), automated teller machine (ATM), point of sale (POS), kiosk, or touch tone telephone (Alagheband 2006, p.11). Different forms of E-banking system were discussed as follows.

1. Automated Teller Machines (ATM) - It is an electronic terminal which gives consumers the opportunity to get banking service at almost any time. To withdraw cash, make deposits or transfer funds between accounts, a consumer needs an ATM card and a personal identification number (PIN).
2. Point-of-Sale Transfer Terminals (POS) - The system allows consumers to pay for retail purchase with a check card, a new name for debit card. This card looks like a credit card but with a significant difference. The money for the purchase is transferred immediately from account of debit card holder to the store's account (Malak 2007).
3. Internet / extranet banking- It is an electronic home banking system using web technology in which Bank customers are able to conduct their business transactions with the bank through personal computers.
4. Mobile banking- Mobile banking is a service that enables customers to conduct some banking services such as account inquiry and funds transfer, by using of short text message (SMS).

Banks offer Internet banking in two main ways. An existing bank with physical offices can establish a Web site and offer Internet banking to its customers in addition to its traditional delivery channels. A second alternative is to establish virtual branchless or Internet-only, Bank almost without physical offices. Virtual banks may offer their customers the ability to make deposits and withdraw funds via ATMs or other remote delivery channels owned by other institutions (Furst & Nolle 2002, p.5). In the context of this study E-banking were not considered as only transferring of service by using internet connection rather it considered as multi-channel service provided through ATM, internet banking, Mobile banking (Modbirr system), point sale terminal and telephone banking.

2.1.5. Adoption -Adoption is the acceptance and continued use of a product, service or idea. According to Rogers and Shoemaker (1971), consumers go through “a process of

knowledge, persuasion, decision and confirmation” before they are ready to adopt a product or service. So the stages through which a technological innovation passes are:

- 1) Knowledge
- 2) Persuasion
- 3) Decision
- 4) Implementation
- 5) Confirmation

A potential adopter passes through certain stages before decision is made on whether to adopt or reject an innovation. Rogers has been one of the number of researchers who has focused upon the adoption process, which he defines as the “the process through which an individual or other decision-maker unit passes from first knowledge of an innovation, to forming an attitude toward the innovation to a decision or rejection to implementation of the new idea, and to confirmation of this decision” (Frambach, 1993).

The innovation adoption process defined by Rogers is the process through which an individual or other decision making unit passes from knowledge of an innovation, to forming an attitude towards the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision (Figure 2-1).

As the Figure 2-1 shows there are five stages in innovation decision process.

These are:

1. Knowledge: Socio-economic characteristics, Personality variables and communication behavior all relate to innovativeness. Innovativeness is the degree to which an individual or other adoption unit is relatively early in adopting new ideas compared to other members of a system (Rogers, 1995). According to Rogers early adopters have more formal education than later adopters and are more likely to be (socio-economic characteristics).
2. Persuasion: The potential adopter’s attitude towards the innovation is formed in this stage. By anticipating and predicting future use satisfaction and risk of adoption, the

potential adopter develop positive or negative attitudes to the innovation, which play important role of modifying the final decision. Perceived attitudes of an innovation as its relative advantage, compatibility and complexity are especially important here (Rogers, 1995).

3. Decision: The decision stage occurs when an individual engages in activities that lead to adoption or rejection of the innovation. In this stage the adopter starts to actively seek out information about the innovation that assists the decision making.
4. Implementation stage: In this stage, mental information processing and decision making come to an end, but the behavioral change begins.
5. Confirmation stage: After the adoption of innovations, the adopter keeps evaluating the results of his / her decision. If the level of satisfaction is significant enough, the use of innovation will continue; however, it is also possible that the rejection occurs after adoption. In the latter case, the reverse of previous decision is called “discontinuance”.

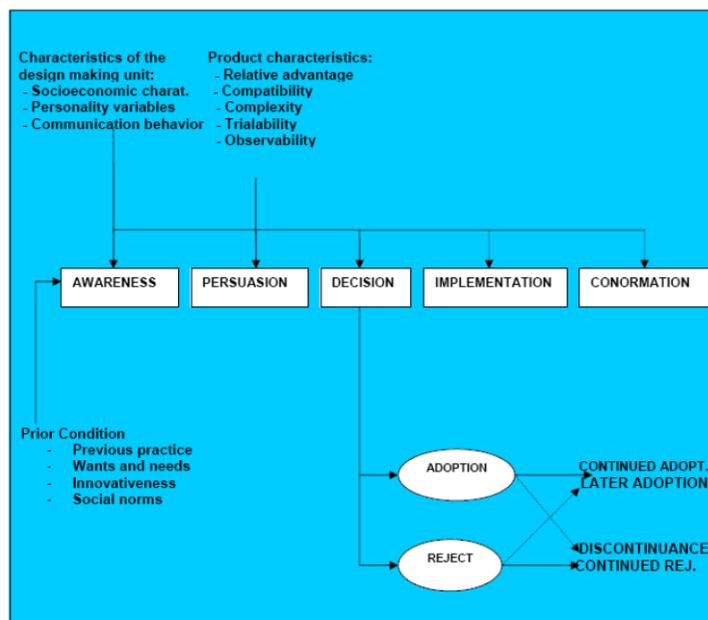


Figure 1: TAM

### **2.1.6. Technology acceptance model (TAM)**

To understand, predict and explain why people accept or reject information systems; researchers have developed and used various models to understand the acceptance of users of the information systems. The technology acceptance model (TAM) that was introduced by Davis, Bagozzi, and Warshaw (1989) is one of the most cited models that researchers used to study underlying factors that motivate users to accept and adopt a new information system (Al Shibly, 2011). The primary goal of TAM is to provide an explanation of factors affecting computer applications' acceptance in general. In addition, this model helps researchers and practitioners to identify why a particular system is unacceptable (Davis, 1989). Davis suggested that using an information system is directly determined by the behavioral intention to use it, which is in turn influenced by the users' attitudes toward using the system and the perceived usefulness of the system. Attitude and perceived usefulness are also affected by the perceived ease of use. According to TAM, greater perceived usefulness and the perceived ease of use of an information system will positively influence the attitude toward this system. The attitude, in turn leads to a greater intention to use the system, which positively affects one's actual use of the system. TAM supposes that, other thing being equal, perceived usefulness is influenced by the perceived ease of use because the easier a technology to use, the more useful it can be. Perceived usefulness (PU) is defined as the degree to which a person believes that using a particular system would enhance his or her job performance. Perceived ease of use (PEU) refers to the degree to which a person believes that using the system will be free of effort. Attitude (ATT) explains a person's favorable or unfavorable assessment regarding the behavior in question. Intention (INT) is a measure of the strength of a person's willingness to use effort while performing a certain behavior. The external variables in the model refer to a set of variables that can influence information system adoption indirectly through perceived ease of use and perceived usefulness (Davis et al., 1989). According to Taylor and Todd (1995), constructs of TAM are almost measured in the same way in every context. Furthermore, TAM is a reliable instrument and empirically sound. Several meta analysis studies have provided sufficient data about TAM to be highly credible and rationally explain up to 40 percent of the behavioral intention to use (King

and He, 2006; Yousafzai, Foxall, and Pallister, 2007). In addition, several studies have applied TAM to evaluate users' adoption in different settings such as electronic commerce (Gefen, Karahanna, and Straub, 2003); electronic learning (Arbaugh, 2000); internet banking (Al Sukkar and Hasan, 2005) and e-government (Alhujran, 2009).

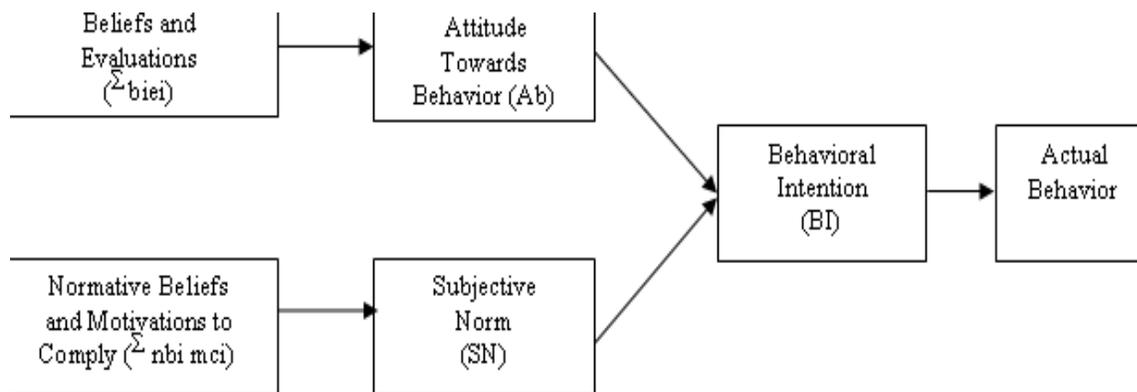


Figure 2: theory of planned behavior

### 2.1.7. Theory of planned behavior (TPB)

The theory of planned behavior (TPB) suggested that human behavior is determined by intention to perform the behavior, which is affected jointly by attitude toward behavior, subjective norm and perceived behavioral control (Ajzen, 1991, 2002). Attitude (ATT) is the general feeling of people about the desirability or undesirability of a specific behavior. Subjective norm (SN) expresses the perceived organizational or social pressure of a person who intends to perform a particular behavior. Perceived behavioral control (PBC) reflects a person's perception of the ease or difficulty of implementing a particular behavior.

The ability of TBP in providing a useful theoretical framework for understanding and predicting the acceptance of new information systems is demonstrated (Ajzen, 2002). Armitage and Conner (2001) analyzed previous studies using the TBP in a meta-analysis study. The major conclusion was support for the efficacy of the TPB and the suggestion that more work on new variables is needed to increase the predictability of the model.

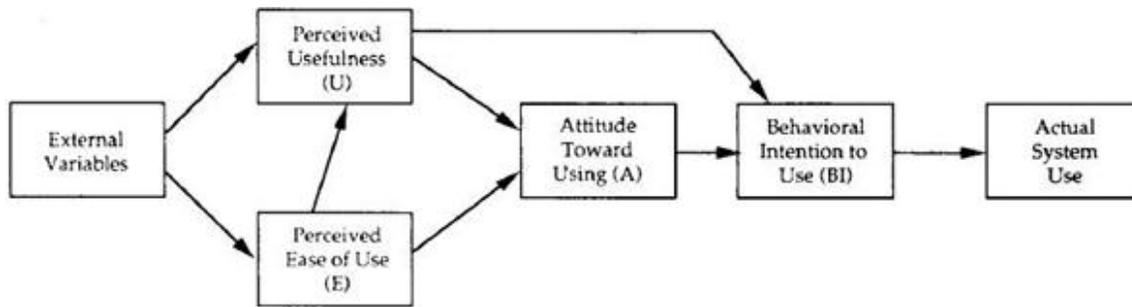


Figure 3: Behavioral Control

### 2.1.8. Culture

Previous studies stressed the importance of culture (CUL) toward a better understanding of information system adoption (Al-Gahtani, Hubona, and Wang, 2007; Veiga, Floyd, and Dechant, 2001). Shore and Venkatachalam, (1996) emphasis the role of culture when transferring information technology applications across culture, before any technology transfer, it is necessary to study user requirements and needs. Those needs and requirement are heavily influenced by culture. Hence, there is a need to explore the role of national culture as one of the factors that is likely to influence the acceptance or resistance of electronic banking services. There is no generally accepted definition for culture. Hofstede (1997) defines culture as the collective programming of the mind which distinguishes the member of one human group from another. Culture can also refer to the variation between values, beliefs and motivation of a diverse group (Goodman and Green, 1992). Shore and Venkatachalam (1996) stated that culture reflectes individual core values and beliefs. These values and beliefs are formed through childhood and reinforced all through their life. Leidner and Kayworth (2006) reviewed national culture studies found that over 60 percent utilized one or more of Hofstede's culture dimensions.

These dimensions are:

Power distance (PD): the extent to which the less powerful member of the institution or organization within a country expects and accepts that power is distributed unequally. McCoy, Galletta, and King (2007) found that the employees of the countries with high-power distance believe that the power is distributed unequally. Hence, they tend to accept and complete duties assigned by them by the superior, even if they are unconfident of the superior's work ethics.

- Uncertainty avoidance (UA): the extent to which the member of a culture feel threatened by uncertain or unknown situation. People with low uncertainty avoidance are willing to take risks and to take individual decisions (McCoy et al., 2007).
- Individualism vs. collectivism (IDV). Individualism stands for a society in which the ties between individuals are loose. Everyone is expected to look after himself or herself and his or her immediate family only. While collectivism stands for a society in which people from birth onwards, are integrated into strong, interrelated in a group which during people's lifetime, continue to protect them in exchange for unquestioning loyalty. In low individualism cultures, people place higher importance on belonging to a group and respect opinion of the other members of the society (McCoy et al., 2007).
- Masculinity vs. femininity (MAS). Masculinity stands for a society in which social gender roles are clearly different. While femininity stands for a society in which social gender roles overlap; both men and women are supposed to be modest, tender and concerned with quality of life. In a culture with high masculinity, men, not women, are socially pressured to excel, whereas in feminine cultures, both men and women may be socialized to be ambitious (McCoy et al., 2007).
- Long term vs. short term orientation (LSO). Long term orientation stands for the encouragement of virtues oriented toward future reward, in particular, perseverance and saving. While short term orientation stands for the encouragement of virtues oriented related to the past and present, specifically, respect for tradition and full filing social obligation. According to Veiga et al. (2001), in culture with a high score of long term orientation, people are considered as future oriented and more forward looking.

#### 2.1.9. Perceived risk

Consumer behavior studies define perceived risk (PR) in terms of the customer's perception of the uncertainty and potential adverse consequences of buying a product or services. The degrees of risk that customers perceive and their own tolerance of risk tacking are factors that influence their purchase decision (Nasri, 2011). On another hand, introducing a new technology may involve both benefits and risks to the user, and before deciding to adopt the technology, the individual may want to weigh risks and benefits. Electronic banking services will not be an

exception to this general rule. A larger perception of risk will reduce the perceived benefit of the technology (Horst, Kuttschreuter, and Gutteling, 2007).

Previous studies mentioned that perceived risk was a major factor that influences the adoption of electronic banking services (Polatoglu and Ekin, 2001; Tan and Teo, 2000). Featherman MS and Pavlou PA (2003) defined perceived risk as the potentiality of loss in the pursuit of a desired outcome of using electronic services. It increases with the higher level of uncertainty or with an increased chance of negative consequences (Lu, Hsu, and Hsu, 2005). Most of the researchers noted that customers' perceived risk was a kind of multi-dimensional construct, and such dimensions may vary according to the product or service type. Five dimensions of perceived risk have been identified in the previous studies (Featherman MS and Pavlou PA, 2003; Kuisma et al., 2007; Lu et al., 2005; Natarajan et al., 2010). These dimensions are: performance risk, social risk, financial risk, privacy risk and time risk.

Performance risk refers to losses incurred deficiencies of electronic services. Customers are often worried that a break down in the system servers will occur while conducting electronic services, because these situations may result in unexpected losses (Kuisma et al., 2007). Littler and Melanthiou (2006) noted that a break down in the system could reduce customers' willingness to use online banking.

Social risk refers to the potential loss of status in one's social group as a result of adopting a product or service (Featherman MS and Pavlou PA, 2003). It is possible that one's social standing may be enhanced or diminished depending on how electronic banking services are viewed. Yang, Park, and Park (2007) found that social risk has a negative impact on attitude for consumers.

Financial risk is defined as the potential for monetary loss due to transaction error or bank account misuse. Many customers resist using online banking because they fear from such losses (Kuisma et al., 2007).

Privacy risk refers to the potential loss of control over personal information which is used without knowledge or permeation (Featherman MS and Pavlou PA, 2003). Horst et al. (2007)

stated that the greatest challenge of the electronic banking sector will be winning the trust of customers over the issue of privacy and security.

Finally, time risk refers to the loss of time in implementing, learning how to use and troubleshooting a new electronic service (Natarajan et al., 2010). consumers are less likely to adopt an electronic service that they consider having high setup and maintenance costs (Featherman MS and Pavlou PA, 2003).

#### 2.1.10. Research model and hypothesis development

Research model Davis et al. (1989) suggested that adding external variables to TAM can influence technology adoption indirectly through perceived ease of use and perceived usefulness. While Fu, Farn, and Chao, (2006) noted that the original TAM was criticized for ignoring the social influence on technology adoption. Therefore, this study integrates culture as an external variable to TAM in order to provide a clearer picture of consumers toward electronic banking services. Furthermore, Armitage and Conner (2001) suggested that new variables need to increase the predictability of TPB. According to Horst et al. (2007), the perception of a risk depends on the actual risk, on previous experiences with the technology, and on the individual's perception to be able to control the consequences of the risk, when the level of experience increases, people may want to accept more risk. From this perspective, the perception of risk of electronic banking services is also related to the concept of perceived behavioral control from TPB. Hence, this study included perceived risk in the proposed research model. Despite that TAM and TPB have been widely to examine information system applications, neither one of them has been found to provide consistently superior explanation or behavior prediction (Taylor and Todd, 1995). Chen, Fan, and Farn (2007) suggested that an integrated model may provide more explanatory power than the individual use of TAM and TPB. However, since the focus of this study is the adoption of electronic banking services, which is an example of the acceptance of innovating information system application intertwined with social influence, this study integrates TAM with TPB and incorporates culture and perceived risk with TAM and TBP to develop the research model which examines factors that affect customers' intentions toward and the acceptance of electronic banking services. Thus, there are 8 construct in the proposed research model which includes culture, perceived ease of use, perceived usefulness, attitude,

subjective norm, perceived behavioral control, perceived risk and intention to use. The proposed research model is presented in Figure Hypotheses development Based on the proposed research model, the following research hypotheses in the context of adopting electronic banking services are formulated.

## 2.2. Empirical Literature

Wondwossen and Tsegai (2005) studied on the challenges and opportunities of E-payments in Ethiopia; their objective was studying of E-payment practices in developing countries, Africa and Ethiopia. The authors found that, the main obstacles to the development of E-payments are lack of customers trust in the initiatives, Unavailability of payment laws and regulations particularly for E-payment, Lack of skilled manpower and frequent power disruption.

Zaribaf and et al (2011) studied behavioral preferences of users of Electronic and traditional banking of Mellat banks across Semnan province. Results of their work showed that the faster the access to new banking is, and the more familiar the customers are with e-banking, and the more dependent the new e-banking is on e-networks, and the better images the customers have about advantages of using E-banking, the higher the tendency customers show to use e-banking.

An empirical investigation conducted by Sathye (1999) on the adoption of Internet Banking by Australian consumers also identified, security concerns as key factor in internet banking adoption. A report on Internet Banking in Australia finds that, security concerns among banks and customers are keeping both away from Internet Banking.

According to Sathye (1999) Security was identified as the biggest obstacle in adoption; it was found that 78 percent of personal and 73 percent of business respondents had security concerns when it comes to the use of Internet Banking.

Mahmoudi Meimand and et al (2009) studied adoption pattern of internet banking of Tehran Melli bank. Results showed that perceptions of usefulness and ease of use, and also security have the most effect on E-banking adoption by customers.

Polatoglu & Ekin (2001) conducted a research on an empirical investigation of Turkish consumer acceptance of internet banking and mention reliability as the prime factor in their finding for the adoption of new technological innovations, reliability consists of security and privacy in Internet Banking transactions. They go on to state that risks (security concern) include financial, physical or social risks associated when trying an innovation.

Gilaninia and Mousavian (2009) identified factors influencing customers' tendency to use E-banking services in this industry on the basis of Davis model. Results showed that different factors influence customer's tendencies (perceived ease, perceived usefulness, and perceived security) to use e-banking services differently.

Krauter and Faullant (2008) examined factors influencing E-banking adoption by Australian customers. Result indicated that confidence with internet has some effects on perceived risks and attitude toward using internet banking and finally,

Clik (2008) studied factors affecting in adopting E-banking by Turkish customers.

Results indicated that perceptions of easy use and of usefulness determine customer's attitudes toward using internet banking.

Similarly, Moughli (2008) addressed adoption of E-banking among customers of Shiraz city bank. Results indicated that easy use, usefulness, and customer trust are effective in adopting E-banking. Also, he noted that education level of customers has an important effect on E-banking adoption, but no relationship was found between demographic characteristics and e-banking adoption.

In general, Review of Empirical studies shows that understanding the critical success factors (CSFs) in E-banking is important for banking industries because it would potentially help them improve the technology adoption rate there by accordingly changing the strategic planning process of banks.

As the empirical review, the main factors influencing E-banking adoption are security, trust, privacy of information, infrastructure and others factors related to the behavior of customers. Besides this, the theoretical review indicates that in the perspective of customers there are

different factors that influence the adoption of E-banking such as, perceived usefulness. Ease of use, security, perceived risk, infrastructure, trust and many others. However, the level of acceptance and e-banking usage by the customers differ from country to country, reflecting the different economic, socio-cultural, legal, political and technological development of the country.

## **Chapter Three: Research Methodology**

### **3.1. Research Design**

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. In fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data (Kothari, 2004).

According to Robson (2002), the three purposes of conducting research are generally the following: explorative, descriptive and explanative. Explorative research is characterized as the seeking of new insights, the looking around, and the asking of questions or the bringing of some phenomenon into new light. Explanative research aims at gaining an explanation of a specific situation or problem, generally in the form of causal relationships. Finally, Descriptive research is a type of research that is mainly concerned with describing the nature or condition and the degree in detail of the present situation. Creswell (2003) stated that the descriptive method of research is used to gather information about the present or existing condition.

This study was focused on describing the current situation of the problem and answer the research questions which are in the form of “what”, and to highlight the most important factors that can negatively or positively affect the adoption and development of E-banking in Ethiopia. Moreover, this research aims to explain the phenomenon and assess the current practice of E-banking. Therefore, Descriptive research is being used to achieve the research objectives.

In order to attain the objective of the study and answer the research questions, the researcher was adopted mixed research approach. The rationale of using a mixed approach is to gather data that could not be obtained by adopting a single method (Creswell, 2003). Hence, the basis of such approach helps to neutralize the limitations of applying a single approach in connection with the qualitative and quantitative nature of the research questions also this study used deductive approach.

### 3.2. Study Area

The area chosen for this study is sebeta town because the observation and the accessibility to collect data is easily track at working place since my working place is at sebeta branch.

### 3.3. Population

In research methods, population is the entire aggregation of items from which samples can be drawn (Yahiya, 2011). The population of the present study customers of sebeta branch total card holders(visa) is 7601.

Table 3.1 E- Banking status at May 17-2017 Sebeta Branch

Number of account holders	Number of card holders (visa)	Number of Mobile banking users	Number of internet users	Number of pos terminal users
33121	7601	776	2	7

Source .waad may 2017 report

### 3.4. Sources of Data

The study was conducted by collecting data from both primary and secondary sources. Primary data was collected from customers of the commercial banks based on a structurally designed questionnaire. It included both closed ended and open-ended questions, which gives the respondents an opportunity for adequate expression of their view on the questions. Secondary data: different documents, records and reports of the industry, Regulatory organ reports, from web site, books, annual reports and magazines, articles and journals were also analyzed.

### 3.5. Data Collection Instruments

In order to collect sufficient data so as to answer the research questions, that was a questionnaire to get quantified results.

#### 3.5.1. Questionnaires

According to Yin (2003), structured questioners are important method for collecting primary data and that it further allows the researcher to be well focused on the specific research topic. The questionnaire was used because the researcher considered it to be more convenient as respondents could answer at their convenience. The questionnaire was developed by the researcher based on the research questions and the literature. The researcher used open and closed-ended type of questionnaires, which gives the respondents an opportunity for adequate expression of their view on the questions. The questionnaire began with an introductory statement, which specified the purpose of the research as purely academic. Respondents were encouraged being objective in their responses since they were assured of confidentiality.

To determine the probable usefulness of the questionnaire and whether further revision is needed prior to conducting the survey, the questionnaire was pilot tested. The researcher circulated the questionnaire to 3 postgraduate students and 4 professional staffs of commercial bank of Ethiopia sebeta branch directly engaged in E-banking service user technology. The subjects were asked if they had any problems understanding the questionnaire or have specific comments regarding the questionnaire. The format for responding was through both open-ended and close-ended questions. The subjects were encouraged to be very free with their responses, make suggestions for improvement and outline any difficulties they found. After each questionnaire was accomplished, every question was asked what he/she meant in checking various answers. Comments were solicited on the intelligibility of the questions and what the changes should be done in order to make the questions simpler.

These respondents also gave their comments on understanding the instructions about the scaling and the time taken to answer the questions. The test found no grave problem and minor modifications were made to the survey questions based on the response obtained. In addition, the pilot study was conducted to ensure the validity, sequence and relevance of the questionnaire to this study

A questionnaire is floated to 380 Randomly selected CBE-sebeta branch customers.

The respondents are considered as they are deemed to be knowledgeable in due course of implementing and running E-banking system in their line of work and could provide important perspectives on its adoption as they are involved in implementation of the project. The survey is to be used through distributing self-administered questionnaires. Random sampling technique is employed to select respondent from sebeta branch.

Questions present in the form of affirmative statements, relating to the concepts on E- banking and to identify their intention on the factors that affect the adoption of e banking for adoption, in such a way to enable measurement of the respondent's opinions. The respondents were asked to indicate their level of agreement on a five point likert scale with the following ratings. Strongly agree (SA; or 5), agree (A; or 4), neutral (N; or 3), disagree (DA; or 2), and strongly disagree (SD; or 1). The numbers were indicated in the questionnaires to provide a feel of ordinal scale measurement and to generate data suitable for quantitative analysis. The questionnaire was a close ended questionnaire to elicit guided responses and for easy analysis and to obtain additional information, the respondents were requested to provide open-ended responses if they have opinions which they feel the researcher would find useful.

### 3.6. Sample size

To get appropriate sample size the researcher used Slovin's formula which is developed by Michael Slovin. (F.Calderon and C.Gonzales, 1993) That is:

$$n = \frac{N}{\frac{1+N(e)^2}{7601/1+7601(.005)^2}} = \underline{\underline{380}}$$

Where;

n = Sample of Target Population

N = Target Population

e = 0.05 or allowance for random error  
(to get 95% confidence level)

Once the total sample size from each population is determined, possible techniques were employed, that are both primary and secondary methods in order to gather relevant information.

The questionnaires were distributed to the total sample of 380 respondents based on random sampling. The researcher chose the respondents based on their knowledge and linkage to visa card usage. In addition to the primary data collected the researcher gathered secondary data from books, internet, manuals journals, and annual reports, proclamation, research papers and various website.

The primary data was collected through a structured questionnaire. Collecting information through questionnaire has several advantages; Kumar (2011), states that it is less expensive as the researcher do not interview respondents, save time, human and financial resources and it offers greater anonymity as there is no face-to-face interaction between respondents and interviewer, it also help to increase the likelihood of obtaining accurate information when sensitive questions are asked.

### 3.6.3. Method of Data Analysis

The researcher used descriptive statistical tools like tables, percentages and figures to analyze data gathered via questionnaires.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9$$

$$Y = .004 + -.007 X_1 + -.018 X_2 + -.005 X_3 + .003 X_4 + .298 X_5 + .621 X_6 + .012 X_7 + .015 X_8 + .080 X_9$$

Y=Dependent Variable: E-banking In adoption.

Independent variable: perceived risk, infrastructure, perceived ease of use, perceived usefulness, e- banking adoption of the customers, subjective norms, security, trust, perceived behavioral control

## Chapter Four

### Results and Discussion

This section of the study deals with results and discussion. The data collected through questionnaire .Questionnaire was used to collect data from customer of the bank. The study was about factor affecting adoption of electronic banking system, in the case of commercial bank of Ethiopia Sebeta branch. A total of 380 questionnaires were distributed to respondents and the entire questionnaire was filled and returned back. The results presented as follows.

Table 4.1: Socio Demographic Characteristics Respondents

Item	Category	Frequency	Percent
Sex	Male	210	55.3
	Female	170	44.74
	Total	380	100
Age	18-29 years	216	58.37
	29-40 years	70	18.92
	40-50 years	45	12.16
	50-60 years	35	9.46
	65 years and above	370	1.08
Education	Primary school	73	19.31
	Secondary school	190	50.26
	Diploma	76	20.11
	First degree	37	9.79
	Master and above	2	0.53
	Total	378	100
Income	>3000 birr per month	186	49.21
	300 – 5000 birr per month	110	29.10
	5001-8000 birr per month	51	13.49
	8000 – 10,000 birr per month	25	6.61

	10,000 – 15,000 birr per month Above 15000 birr	6	1.59
	Total	378	100
Occupation	Government employee	89	23.42
	Private employee	166	43.68
	Business	66	17.37
	Self employee	44	11.58
	Student	5	1.32
	House wife	10	2.63
	Total	380	100

Source: survey questionnaire

Table 4.1 showed that socio – demographic characteristics of respondents. Regarding to this, 4 items were included in the study questionnaire .The first item was sex. Thus, sex 210(55.26%) of the respondents were in the sex category of male while 170(44.74%) of the respondents were in the sex category of female. Thus, from the above finding it is possible to suggest that the majority of the respondents were male sex category.

The second item was age. Regarding to age, 216 (58.37%) of the respondents categorized under the age category of 18-29 years, 70(18.92%) of the respondents were categorized in the age range of 29-40 years, 45(12.16%) of the respondents were categorized under the age group of 40-50 years while 35(9.46%) of the respondents were categorized in the age group of 50-65 years. From the above finding it is possible to suggest that the majority of the participant of the study were 18-29 years. Thus, e-banking was mostly used by youth age group.

The third item was education. Regarding to education 190(50.26%) of the respondents were at educational level of secondary school, 73(19.31%) of the respondents were at educational level of primary school, 76(20.11%) of the respondents were at education level of diploma, 37(9.79%) of the respondents were at education level of first degree. Thus, from the above information it is possible to suggest that the majority of the respondents were at educational level of secondary school.

The fourth item was income. Regarding to income 186(49.21%) of the respondents has income of less than 30,000 birr per month while 110(29.10%) of the respondents were has income of 3000 – 5000 birr per month and 51(13.49%) of the respondents has income of 50001-8000 birr per month. Thus, form the above findings it is possible to suggest that the majority of the participant of the study per month. Thus, to reduce long queue to service effort was need to be done to individuals has monthly income 3000-5000 birr per month.

The fifth item was occupation. Regarding to occupation 166 (43.68%) of the respondents were private employee while 89(33.42%) of the respondents were government employee. Furthermore, 66(17.37%) of the respondents were business and 44(11.58%) of the respondents were self-employee. Form the above finding it is possible to conclude that the majority of the respondents were private employee. Factors of adopting E- Baking .Below are lists of statements pertaining to adoption of E-banking. The result presented as follows.

Table 4.2: Respondents Report on Basic Questions

Item	Response	F	%
Do you have bank account at CBE	Yes	373	373
	No	-	-
	Total	373	100
Experience of E-banking services provided to the customers	ATM		
	POS		
	Tale banking		
	Mobile banking	73	19.57
	Internet banking		
	Total	373	100
How do your rate the level of customer services with respect to e-banking services of CBE	Very high	70	18.77
	High	180	48.26
	Medium	45	12.06
	Low	46	12.33
	Very low	32	8.58
	Total	373	100

Source: survey questionnaire

Table 4.2 deals with basic questions related basic questions related to factors of adopting e-banking the first question was do you have bank account at CBE. Against this questions, 373 (100%) of the respondents have bank account at CBE. Furthermore, 300(80.43%) of the respondents have experience of e-banking service provided to the customer. Still the respondents were report that the rate of level of customer services with respect to E-banking services of CBE 18(48.26%) of them reported that high rate, while 70(18.77%) of them said very high rate. Thus form the above finding it is possible to suggest that the rate of the level of customer services with respect to e-banking services of CBE.

The reliability of statistics is determined by cronbach`s alpha method. According to Bryman and Bell (2003) the cronbach`s alpha result of 0.7 and above implies acceptable level of reliability.

Table 4.3: Reliability statistics

Dimensions	Cronbach's Alpha	No of Items
attitude	.778	7
Perceived behavioral control	.941	4
Trust	.842	3
Perceived usefulness	.942	7
Perceived ease of use	.789	7
Subjective norms	.889	4
Infrastructure	.803	5
Security	.704	4
Perceived risk	.701	4

Source: survey questionnaire

Table 4.3 deals with reliability statistics of dimension of E-banking. The first dimension was attitude adoption of customers has Cronbach's alpha with 7 items, perceived behaviors control has reliability at .941 with 4 items, trust has Cronbach alpha coefficient result .842 with 3 items, perceived usefulness has reliability at .942 with 7 items, perceived ease of use was .789 with 7 items, subjective norms has Cronbach alpha coefficient result of .889 with 4 items, infrastructure has Cronbach alpha coefficient result at .803 with 5 items, security has Cronbach's alpha coefficient result at .704 with 4 items and perceived risk has Cronach's alpha coefficient result at .701 with 4 items. Thus, from the above finding it is possible to suggest that the dimension has strong reliability because the Cranach's alpha coefficient above .70. Moreover, to the Cronbachs' alpha result ranges 0-1. If it is above .70 it is said to be strong reliability.

The theoretical value of alpha varies from zero to 1, since it is the ratio of two variances. However, depending on the estimation procedure used, estimates of alpha can take on any value less than or equal to 1, including negative values, although only positive values make sense. Higher values of alpha are more desirable. Some professionals, as a rule of thumb, require a reliability of 0.70 or higher (obtained on a substantial sample) before they will use an instrument. Although Nunnally (1978) is often cited when it comes to this rule, he has actually never stated that 0.7 is a reasonable threshold in advanced research projects. [ A commonly accepted rule for describing internal consistency using Cronbach's alpha is as follows, though a greater number of items in the test can artificially inflate the value of alpha and a sample with a narrow range can deflate it, so this rule should be used with caution.

Cronbach's alpha Internal consistency  $\alpha \geq 0.9$  Excellent  $0.9 > \alpha \geq 0.8$  Good  $0.8 > \alpha \geq 0.7$  Acceptable  $0.7 > \alpha \geq 0.6$  Questionable  $0.6 > \alpha \geq 0.5$  Poor  $0.5 > \alpha$  Unacceptable Generalizability theory

## E- Banking Adoption of Customers

E- Banking refers to transaction using internet, ATM ,and mobile banking, POS terminal .List of statement were designed pertaining to adoption of E- banking. To assess and describe E-banking adoption of customers the designed statement with result presented as follows

Table 4.4: Respondents Report on E-Banking Adoption to Customers

	Statement	SA	A	N	D	SD
		F(%)	F(%)	F(%)	F(%)	F(%)
	I intend to use e- banking in the near future	52(13.7)	67(17.6)	90(23.7)	81(21.3)	90(23.7)
	I plan to use e - banking such as Mobile, internet ,POS and ATM	117(30.8)	83(21.8)	61(16.1)	81(21.3)	38(10)
	I determined to use e- banking soon	112(29.5)	83(21.8)	91(23.9)	74(19.5)	20(5.3)
	I expect to use e- banking in the future	134(36.1)	80(21.6)	64(17.3)	46(12.4)	47(12.7)
	I like to use e- banking than others	80(21.2)	76(20.2)	60(15.9)	70(18.6)	91(24.1)
	I feel using e- banking is a good idea	100(26.5)	87(23.1)	80(21.2)	64(17.0)	46(12.2)
	Using internet banking site is a pleasant idea	111(29.2)	120(31.6)	64(16.8)	45(11.8)	40(10.5)

Source: own survey

Table 4.4 deal with E-banking adoption of customers. Regarding to adoption of customers hypothetical statement were designed and the result presented as follows.

I intend to use E-banking in the near future. Against this hypothetical statement 11 (31.3%) of the respondents reported that agreement to the statement while 179(44.0) of the respondents reported that disagreement to the statement. The calculated mean were 3.34 which were greater than the likert scale mean (3). The standard deviation was 1.354 which is far from the mean was 3.34. This implies that the respondents have an intention to use e-banking in the near future.

I plan to use e-banking such as mobile, internet, POS and ATM. Regarding to this 200(52.6%) of the respondents agreed the statement while 119(31.3%) of the respondents disagreed to the statement. The calculated mean were 3.421 which was less than the liker scale mean (3). The

standard deviation was 1.376 which was concentrated far from the mean. This implies that the respondents were planned to use p-banking such as mobile, in ternate, POS and ATM.

I determined to use e-banking soon. Regarding to this statement, 195(41.3%) of the respondents were agreed to the statement while 94(14.8%) of the respondents were disagreed to the statement. Moreover, 3.508 which were greater than the liker scale mean (3). The standard deviation 1.244 which was concentrated far from the mean this implies that respondents were determined to use e-banking soon.

I expect to use E-banking in the future. Regarding to this statement, 214(57.7%) of the respondents were agreed to the statement while 93(35.1%) of the respondents were disagreed to the statement the collected mean was 3.561 which was less than the likert scale point (3). The standard devotion was 1.408 which was concentrated far from the mean. This implies that respondents expect to use banking in the future.

I like to use e-banking than others with regard to this statement 156(41.3%) of the respondents were agreed to the statement while 161(42.7%) of the respondents were disagreed to the statement. The calculated mean was 2.958 which was less than the linker scale mean (3). The standard deviation was concentrated half of the mean. This implies that respondents not like to use e-banking than others.

I feel using e-banking is a good idea. Regarding to this 187(49.6%) of the respondents were agreed to the statement while 100(29.2%) of the respondents were disagreed to the statement. The calculated mean were 3.48 which were greater than likert scale mean (3). The standard deviation 1.354 was concentrated far from the mean. This implies that respondents feel using e-banking is a good idea.

using internet banking site is a pleasant idea. Regarding to this statement, 231(60.8%) of the respondents were reported that agreement to the statement while 85(22.3) of the respondents were reported that was 3.571 which was greater than the likes scale mean (3). The standard deviation was 1.305 which was concentrated far from the mean. This implies that using internet banking site is a pleasant idea.

## Perceived Behavioral Control

Perceived behavioral control is second dimension designed to assess e - banking .to describe and assess perceived behavioral control statements were designed and the result presented as follows.

Table 4.5: Respondents Report on Perceived Behavioral Control

Statement	SA	A	N	D	SD
	F(%)	F(%)	F(%)	F(%)	F(%)
I would be able to operate e- banking	45(12.0)	74(19.7)	80(21.3)	87(23.1)	90(23.9)
I have the resource to use internet banking	6(1.6)	5(1.3)	38(10.0)	150(39.6)	180(47.5)
I feel better when using e-banking service than through personal contact with officer of the bank	84(22.3)	90(23.9)	74(19.7)	58(15.4)	70(18.6)
Educational status affect decision to use e-banking service of the bank	91(24.0)	89(23.5)	87(23.0)	70(18.5)	42(11.1)

Source: own survey

Table 4.5 showed that perceived behavioral control. To assess the perceived behavioral control statement were designed. The following are the statement the result presented as follows.

I would be able to operate e-banking. With regard to this statement, 119(31.7%) of the respondents reported that agreement to the statement while 177(47.0%) of the respondents reported that disagreement to the statement. The clouted mean was 2.726 which was less than the likert scale mean (3) the standard deviation was concentrated far from the mean. This implies that respondents would not be able to operate e-banking.

I have the resource to use integrate banking 330(87.1%) of the respondents disagreed to the statement while the clouted mean was 1.699 which was less than the likert sale mean (3). Moreover,11(2.90%) of the respondents. Agreement to the statement. This implies respondent would not have the resources to use in ternate banking.

I feel better when using e-banking service than through personal contract with officer of the bank. Regarding to this statement 174(46.2%) of the respondents reported that agreement to the statement while (112(19.6). the calculated mean was 3.309 which was less than likert scale mean (3). The standard deviation was 1.316 which was concentrated far from the mean. This implies that respondents feel better when using e-banking service than through personal contract with officer of the bank.

Educational status affect decision to use e-banking service of the bank. Regarding to this statement, 180(47.5%) of the respondents agreed to the statement while 112(29.6%) of the respondents disagreed to the statement. The calculated mean was 3.309 which were greater than the likert scale mean. The standard deviation was concentrated from the mean. This implies that educational status affect decision to use e-banking service of the bank

## Trust

Trust was the dimension of e-banking. Trust was assessed by designed three hypothetic statements. The result presented as follows.

Table 4.6: Respondent’s Response on trust

Statement	SA	A	N	D	SD
	F(%)	F(%)	F(%)	F(%)	F(%)
Payments made through CBE e-banking are trustable	56(14.9)	62(16.5)	76(20.2)	73(19.4)	109(29)
E - Banking keeps customers best interest in mind.	74(19.6)	80(21.2)	64(16.9)	73(19.3)	87(23)
I feel confidence while using e-banking services on the bank website	64(16.9)	73(19.3)	84(22.2)	67(17.7)	90(23.8)

Source: survey questionnaire

Table 4.6 showed that respondents report on trust to e-banking regarding to this hypothetical statement designed and the result presented as follows.

payment made thorough CBE e-banking are trustable against this statement, 109(29.0%) of the respondent disagreed to the statement while 56(14.9%) of the respondents agreed to the statement. The clouted mean were 2.689 which was less than the likert scale mean (3). The standard deviation was 1.423 which was concentrated almost half of the mean. This implies that payments made through CBE e-bank are not trustable.

E-banking keeps customers best interest in mind. Regarding to this statement, 160(42.3%) of the respondents were disagreed to the statement while 154(38.1%) of the respondents reported agreement to the statement. The calculated mean was 2.949 which was less than likert scale mean. The standard deviation was 1.4531 which concentrated almost half distance of the mean (3) this implies that E-banking do not keeps customers best interest in mind. Statement 3: I feel confidence while suing e-banking services of the bank website. Regarding to this statement 157(41.5%) of the respondents reported that disagreement of the statement while 137(36.2%) of the respondents reported that agreement to the statement. The collected mean were 2.878 which was less than the likert scale mean (3). The standard deviation was 1.41 which was concentrated far from the mean. This implies that respondents not feel confidence while suing e-banking service of the bank website

### Perceived usefulness

To assess perceived usefulness statements were designed and the result presented as follows.

Table 4.7: Respondents report on Perceived usefulness

Statement	SA	A	N	D	SD
	F(%)	F(%)	F(%)	F(%)	F(%)
E- banking improves my performance of banking activities or operation	94(24.9)	87(23.1)	69(18.3)	71(18.8)	56(14.9)

	Using e- banking would increase the quality of banking transaction	101(27.0)	99(26.5)	91(24.3)	51(13.6)	32(8.6)
	E-banking makes easier of doing banking transactions	98(25.9)	89(23.5)	77(20.4)	57(15.1)	57(15.1)
	E- banking enables me to accomplish banking activities more quickly	96(25.3)	86(22.7)	93(24.5)	61(16.1)	43(11.3)
	E- Banking such as internet, ATM, POS and Mobile banking are convenient.	86(22.8)	84(22.3)	72(19.1)	74(19.6)	61(16.2)
	Using e - banking helps to perform banking tasks at lower cost	56(14.8)	60(15.8)	91(24.0)	82(21.6)	90(23.7)
	I feel Using e-banking improves customer service	96(25.5)	87(23.1)	84(22.3)	70(18.6)	40(10.6)

Source: survey questionnaire

Table 4.7 deal with respondents report on Perceived usefulness.

E-banking improves my performance of banking activities. Regarding to this statement, 181(48.0%) of the respondents reported that agreement to the statement while 127(33.7%) of the respondents agreed to the statement. The calculated mean was 3.244 which was greater than the likert scale mean (3). The standard deviation was 1.398 which was concentrated for form the mean. This implies that respondents confirmed that e-banking improves their performance of banking activities.

using e-banking would increase the quality of banking transaction .Regarding to this, 200(53.5%) of the respondents reported that agreement to the statement while 114(30.2%) of the respondents reported disagreement to the statement. The calculated mean was 3.47 which were greater than likert scale mean. The standard deviation was 1.365 which was concentrated far

from the mean. This implies that using e-banking would increase the quality of banking transaction.

E-banking enables me to accomplish banking activity more quickly. Against this statement 192(47.0%) of the respondents reported that agreed to the statement while 104(27.4%) of the respondents reported that disagreed to the statement. The calculated mean was 3.346 which was greater than the liker scale mean(3). The standard deviation was 1.319 which was concentrated far from the mean. This implies that e-banks enable the respondents to accomplish activities.

E- banking such as citrate ATM, POS and Mobil banking are convent it regarding to the statement 182(48.0) & responded reported that agreement to the statement while 104 (27.47) &the respondent reported that dis argument to the statement while the calculated mean was 3.346 which was serrate tithe liker scale mean the standard division was 1.319 which was concentrated tar from the mean this lap lies at E banker such as internet ATM POS and Mobil banking are convenient .

Using e banking helps to performer banking treks at lower cost argentite this statement while 172(45.3%) & the respondent reported agreement to the statement the calculated mean was 2.762 which was less than the likert scale mean the standard deviation was 1.365 which was concentrated far from the mean. This implies that respondents reported that using e- banking no helps to perform banking tasks at lower cost

I feel using e-banking improves customer service. Regarding to this statement ,183(48.6%) of the respondents reported that agreement to the statement while 110(29.2%) of respondents reported that disagreement to the statement .The calculated mean was 3.42 which was greater than the likert scale mean.The standard deviation was 1.322 which was concentrated far from the mean. This implies that the respondents feel that using e-banking improves customer services.

### Perceived Ease of Use

To assess ease of use statement was designed. The result presented as follows.

Table 4.7 : Respondents report on Perceived Ease of Use

Statement	SA	A	N	D	SD
	F(%)	F(%)	F(%)	F(%)	F(%)
My interaction with using e- banking is clear and understandable	45(11.9)	78(20.6)	76(20.1)	89(23.5)	90(23.8)
The website of the bank is comfortable for users	47(12.4)	65(17.2)	68(18.0)	96(25.4)	102(27.0)
The website of the bank is easy to understand for majority of customers	36(9.5)	45(11.9)	57(15.0)	70(18.5)	171(45.1)
The bank interference language in the website is user friendly and directs customers appropriately	89(23.6)	97(25.7)	67(17.8)	64(17.0)	60(15.9)
It is easy to use e- banking	86(22.8)	74(19.6)	84(22.2)	79(20.9)	55(14.6)
I find easy to do what I want to do in e- banking	76(20.2)	82(21.8)	71(18.9)	69(18.4)	78(20.7)
Learning to use e- banking is easy for me	92(24.3)	86(22.7)	77(20.3)	73(19.3)	51(13.5)

Source: survey questionnaire

Table 4.7 showed that customer ease of use of e-banking. The result of the designed statement presented as follows.

My interaction with using e-banking is clear and understandable. Against this,123(40.7%) of the respondents reported that agreement to the statement while 179(47.3%) of the respondents reported to disagreement to the statement .The calculated mean was 2.733 which was less than the likert scale mean. The standard deviation was 1.343 was concentrated far from the mean .This implies that respondents interaction with using e-banking not clear and understandable.

The website of e banking is comfortable for users .with regard to this statement 112(32,59%) and the respondents reported that agreement to statement while 1198(47.3%) of the respondents reported that disagreement to the statement .The calculated mean was 2.627 which was less than the likert scale mean(3). The standard deviation was 1.367 which was concentrated far the mean. This implies that the website and the bank is no comfortable.

The website and the bank is easy to understand for the majority customers. Regarding to this statement 198(52.4 %) of the respondents disagreed to the statement while 81(21.4%) of the respondents agreed to the statement .The calculated mean was 2.22 which was less than likert scale mean. The standard deviation was 1.374 which was concentrated almost half far from the mean. This implies that the website of the is no easy to understand for the majority of customer.

The bank interference language in the website is user friendly and direct customers appropriately.186(49.3%) of the respondents were agreed to the statement while 124(32.9%) of the respondents disagreed to the statement. The calculated mean was 3.241 which was greater than likert scale mean. The standard deviation was 1.398 which was concentrated far from mean. This implies that the bank interference in the bank is user friendly and direct customers appropriately.

It is easy to use e- banking .regarding to this 160(42.4%) of the respondents were agreed to the statement while 134(35.5%) of the respondents disagreed to the statement. The calculated mean was 3.150 which was greater than likert scale mean. The standard deviation was 1.371 which was concentrated far from mean. This implies that it is easy to use e- banking.

I find easy to do what I want to do in e- banking. Regarding to this statement 158(42%) of the respondents were agreed to the statement while 147 (39.1%) of the respondents disagreed to the statement. The calculated mean was 3.024 which was greater than likert scale mean. The standard deviation was which was concentrated far from mean. This implies that respondents find easy to do what they want to do in e- banking.

Learning to use e- banking is easy for me. Regarding to this statement 178(47%) of the respondents were agreed to the statement while 124 (32.8%) of the respondents disagreed to the statement. The calculated mean was 3.251 which was greater than likert scale mean. The

standard deviation was which was concentrated far from mean. This implies that respondents Learning to use e- banking is easy for respondents .

### Subjective Norms

The asses the subjective norms statement was designed and the result presented as follows.

Table 4.8: Respondents report on subjective norms

Statement	SA	A	N	D	SD
	F(%)	F(%)	F(%)	F(%)	F(%)
My decision to use e- banking is influenced by: friends, media and family	86(22 .7)	89(2 3.5)	78(2 0.6)	81(2 1.4)	45(1 1.9)
Employees support to use e –banking service of the bank	78(20 .7)	96(2 5.5)	84(2 2.3)	64(1 7.0)	55(1 4.6)
Peoples who use e- banking service are more of prestigious than who do not	89(23 .6)	85(2 2.5)	76(2 0.2)	67(1 7.8)	60(1 5.9)
The bank uses influential/opinion leaders to promote e- banking services	45(11 .8)	54(1 4.2)	89(2 3.4)	94(2 4.7)	98(2 5.8)

Source: survey questionnaire

Table 4.8 showed that subjective norms and its statement presented as follows.

My decision to use e-banking is influenced by friends, media and family. Regarding to this statement ,175(46.3%) of the respondents reported that agreed to the statement the calculated mean was 3.237 which was greater than likert scale mean. The standard deviation was 1.333

which was concentrated far from the mean. This implies that the respondent's decision to use e-banking is influenced by friends, media and family.

Employees support to use e-banking service of the bank. Regarding to this statement 174(42.2%) of the respondents agreed to the statement while 119(31.6%) of the respondents disagreed to the statement. The calculated mean was 3.206 which was greater than likert scale mean. The standard deviation was 1.341 which was concentrated far from the mean. This implies that employees support use e-banking service of the bank.

Peoples who use e-banking service are more of prestigious than who do not. Regarding to this statement,174(46.1%) of the respondents were disagreed to the statement while 127(33.7%) of the respondents were agreed to the statement. The calculated mean were agreed to the statement. The calculated mean was 3.201 which was greater than likert scale mean. The standard deviation was 1.396 which was concentrated far from the mean. This implies that peoples who use e-banking service are more of prestigious than who do not.

The bank uses influential /opinion leaders to promote e-banking service. Regarding to this statement 99(26.0%) of the respondents agreed to the statement while 192(50.5%) disagreed to the statement. The calculated mean was 2.616 which was less than the likert scale mean. This implies that the bank do not use influential /opinion leaders to promote e-banking.

## Infrastructure

Infrastructure was the other dimension in which this study attempted to assess .The result presented as follows.

Table 4.9 : Respondents Report On Infrastructure

Statement	SA	A	N	D	SD
	F(%)	F(%)	F(%)	F(%)	F(%)

	There is stable and fast internet and uninterrupted power connection to access e-banking of CBE	169(4 4.7)	46(1 2.2)	60(1 5.9)	56(1 4.8)	4791 2.4)
	e-banking services are easily available from the bank	85(22 .5)	87(2 3.0)	76(2 0.1)	56(1 4.8)	7491 9.6)
	I had got e-banking service within short period of time dated up on application on service	49(13 .0)	54(1 4.3)	60(1 5.9)	106( 28.0)	109( 28.8)
	I have the technical skill on the operation of e-banking service provided by CBE	74(19 .5)	56(1 4.8)	76(2 0.1)	86(2 2.7)	87(2 3.0)
	CBE provides necessary orientation/training on how to use e banking services provided to customers	55(14 .5)	56(1 4.8)	87(2 3.0)	101( 26.6)	80(2 1.1)

Source: survey questionnaire

Table 4.9 showed that infrastructure dimension. Regarding to infrastructure the above statement was presented and the result described as follows. There is stable and fast internet and uninterrupted power connection to access e- banking of CBE .Moreover, the respondents agreed that e-banking service are easily available from the bank, the respondents had not got e-banking service with in short period of time dated up on application on service, there have no technical skill on the operation of e-banking service provided by CBE provides necessary orientation/training on how to use. CBE is not providing necessary orientation /training on how to use e- banking services provided to customers.

## Security

Security was the dimension of e-banking. The result presented as follows.

Table 4.10: Respondents Report on Security

Statement	SA	A	N	D	SD
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		F(%)	F(%)	F(%)	F(%)	F(%)
	I feel CBE e-banking service is secure from any threat/fraud during using services provided.	55(14 .6)	64(1 6.9)	86(2 2.8)	87(2 3.0)	86(2 2.8)
	I feel all personal and transaction information is secure while using e-banking service of the bank	66(17 .4)	76(2 0.0)	88(2 3.2)	73(9 9.2)	77(2 0.3)
	The bank website offers various popup windows to assure security while transacting on using e-banking service of the bank.	55(14 .6)	77(2 0.4)	65(1 7.2)	91(2 4.1)	89(2 3.6)
	I feel certain while making e-payment to others using e- banking such as Mobile and ATM service of the bank	48(12 .7)	56(1 4.8)	78(2 0.6)	94(2 4.9)	102(27 27.0)

Source: survey questionnaire

Table 4.10 showed that respondents do not feel CBE e- banking service is secure from any threat/fraud during using services provided, respondents did not feel confidence while using e-banking services on the bank websites, the bank websites do not offers various popup to assure security. Finally, the respondents do not feel certain while making e- payment to others using e-banking.

### Perceived risks

Perceived risk was the final dimension which was designed in this study was perceived risk. The result presented as follows.

Table 4.11: Respondents Report on Perceived Risks

Statement	SA	A	N	D	SD
	F(%)	F(%)	F(%)	F(%)	F(%)

	Using e-banking in CBE is risky as poor internet and un interrupted power connection	90(23 .7)	80(2 1.1)	84(2 2.2)	80(2 1.1)	45(1 1.9)
	In using e-banking at CBE, there is no guarantee for financial loss	81(21 .3)	86(2 2.6)	79(2 0.8)	100( 26.3)	34(8. 9)
	While using e-banking at CBE, I was confused, create many errors and feel full of risk	89(23 .4)	80(2 1.1)	78(2 0.5)	73(1 9.2)	60(1 5.8)
	CBE website is not frequently updated thereby obtaining risk from non updated information to the viewers/users	70(18 .5)	71(1 8.7)	98(2 5.9)	71(1 8.7)	69(1 8.2)

Source: survey questionnaire

Table 4.11 showed that Perceived Risks. The result presented as follows. Respondents reported that using e- banking in CBE is risky as poor internet and interrupted connection and using e- banking at CBE ,there is no guarantee for financial loss, while using e- banking at CBE ,respondents were not confused, create money Lastly websites of CBE is not frequently updated thereby obtaining .

## Regression Analysis

Table 4.12: Test of model of factors (dimension) of E-Banking

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.988 <sup>a</sup>	.976	.976	.21890
a. Predictors: (Constant), perceived risk , infrastructure , perceived ease of use , perceived usefulness , e- banking adoption of the customers, subjective norms , security , trust , perceived behavioral control				

Table 4.12 showed that test of model of factors of e-banking. The R= .988 indicate the relationship between dimension of E-banking to perceived risk , infrastructure , perceived ease of use , perceived usefulness , e- banking adoption of the customers, subjective norms , security , trust , perceived behavioral control The R<sup>2</sup> is .976 which means that 97.6% of the variation to e-

banking to dimension of e-banking is explained by other dimension that are not within the control of this study.

Regression analysis allows us to examine the substantive impact of one or more variables on another by using the components of the equation for the "best-fitting" regression line. Once again, while the calculations of these components can be tedious by hand, they are lightning fast with SPSS.

The "Model Summary" and "Anova" boxes give goodness of fit measures and measures of significance for the entire model.

The "Coefficients" box gives information about the independent variable(s). First, the "B" column under "Unstandardized Coefficients" in the "Coefficients" box provides the value of the Y-intercept [labeled "(Constant)"] and the slope representing the effect of on the dependent variable, of the respondents. This least squares regression line is the straight line for which the sum of the squared prediction errors are minimized.

Table 4.13: ANOVA Result

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.(p-Value)
1	Regression	730.150	9	81.128	1693.108	.000 <sup>b</sup>
	Residual	17.681	369	.048		
	Total	747.831	378			
a. Dependent Variable: factors (Dimension) of E-banking						
b. Predictors: (Constant), perceived risk , infrastructure , perceived ease of use , perceived usefulness , e- banking adoption of the customers, subjective norms , security , trust , perceived behavioral control						

Table 4.13 shows that output of the ANOVA analysis and is used to test if there is a significant difference statistically between the group means in regard to dimension of e-banking. It is confirmed that the significant value is  $F(9, 369) = 1693.108$  ,  $P = .000$  is less than 0.05. Therefore, there is statistical substantial difference in the dimension of e- banking to e-banking services and the degree of association between the different dimensions at 95% confidence interval.

Table 4.14: Regression analysis

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.004	.352		.011	.992
	e- banking adoption of the customers(attitude)	-.007	.058	-.007	-.117	.907
	perceived behavioral control	-.018	.073	-.018	-.244	.807
	Trust	-.005	.065	-.005	-.077	.939
	perceived usefulness	.003	.041	.003	.062	.950
	perceived ease of use	.298	.062	.303	4.845	.000
	subjective norms	.621	.051	.605	12.221	.000
	Infrastructure	.012	.053	.012	.228	.820
	Security	.015	.060	.014	.245	.807
	perceived risk	.080	.058	.078	1.386	.166

a. Dependent Variable: factors (Dimension) of E-banking

Source: survey questionnaire

In statistics, standardized coefficients or beta coefficients are the estimates resulting from a regression analysis that have been standardized so that the variances of dependent and independent variables are equal. Therefore, standardized coefficients refer to how many standard deviations a dependent variable will change, per standard deviation increase in the predictor variable. Standardization of the coefficient is usually done to answer the question of which of the independent variables have a greater effect on the dependent variable in a multiple regression analysis, when the variables are measured in different units of measurement (for example, income measured in dollars and family size measured in number of individuals).

Some statistical software packages like PSPP, SPSS and SYSTAT label the standardized regression coefficients as "Beta" while the unstandardized coefficients are labeled "B". Others like DAP/SAS label them "Standardized Coefficient". Sometimes the unstandardized variables are also labeled as "b".

A regression carried out on original (unstandardized) variables produces unstandardized coefficients. A regression carried out on standardized variables produces standardized coefficients. Values for standardized and unstandardized coefficients can also be derived subsequent to either type of analysis.

Before solving a multiple regression problem, all variables (independent and dependent) can be standardized. Each variable can be standardized by subtracting its mean from each of its values and then dividing these new values by the standard deviation of the variable. Standardizing all variables in a multiple regression yields standardized regression coefficients that show the change in the dependent variable measured in standard deviations. Advantages Standard coefficients' advocates note that the coefficients ignore the independent variable's scale of units, which makes comparisons easy. Disadvantages Critics voice concerns that such standardization can be misleading. Since standardizing a variable removes the unit of measurement from its value, a standardized coefficient for a given relationship only represents its strength relative to the variation in the distributions. This invites bias due to sampling error when one standardizes variables using means and standard deviations based on small samples. Furthermore, a change of one standard deviation in one variable is only equivalent to a change of one standard deviation in another predictor insofar as the shapes of the two variables' distributions resemble one another. The meaning of a standard deviation may vary markedly between non-normal distributions (e.g., when skewed or otherwise asymmetrical). This underscores the importance of normality assumptions in parametric statistics, and poses an additional problem when interpreting standardized coefficient estimates that even nonparametric regression does not solve when dealing with non-normal distributions

Table 4.14 showed that regression analysis. To this study important part is un standardized coefficients ( $\beta$ ), t test and sign (P-value). UN standardized  $\beta$  coefficients represent the effect of an independent variable on the dependent variable net of the effect of the other independent variables. This regression analysis the causal effect of each indifferent variable can be sorted out and estimated by solving the following.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9$$

$$Y = .004 + -.007 X_1 + -.018 X_2 + -.005 X_3 + .003 X_4 + .298 X_5 + .621 X_6 + .012 X_7 + .015 X_8 + .080 X_9$$

Y=Dependent Variable: E-banking In adoption.

**Independent variable:** perceived risk, infrastructure, perceived ease of use, perceived usefulness, e- banking adoption of the customers, subjective norms, security, trust, perceived behavioral control

In the above equation is seen to have substantial dimension of e- banking to E-banking service subjective norms ( $\beta=0.621$ ,  $t= 4.845$ ,  $P= .000$ ). Hence subjective norms are a significant predictor of dimension of E- banking. The other dimension which has great importance was perceived ease of use ( $\beta=0.298$ ,  $t= .062$ ,  $P= .950$ ).

Thus, subjective norms, perceived ease of use, perceived risk, security, infrastructure, perceived usefulness were the major factors or dimension of e- banking that have influence on e- banking services. The following observations can be made from the table:

The coefficient of attitude was negative ( $B=-0.007$ ).this means that when attitude level increase by 1 then the e-banking adoption decreased by 7%. the coefficient of perceived ease use was positive(0.298).this mean that perceived ease use increase by 1 level then the e banking adoption increases by 29%. the coefficient of perceived usefulness was positive ( $\beta = 0.003$ ).this mean that when usefulness increases by 1 level then the E-banking adoption increases by 0.3%.the coefficient of subjective norms was positive( $B=0.621$ ).this mean that subjective norms increase by 1 level then the e banking adoption increases by 62%. the coefficient of infrastructure was positive(0.012).this mean that infrastructure increase by 1 level then the e banking adoption increases by 1.2%. the coefficient of security was positive(0.015).this mean that security increase by 1 level then the e banking adoption increases by 1.5%. the coefficient of perceived risk was positive(0.080).this mean that perceived risk increase by 1 level then the e banking adoption increases by 8%. the coefficient of behavioral control was negative(-0.018).this mean that perceived behavioral control increase by 1 level then the e banking adoption decrease by 1.8%. the coefficient of trust was negative(-0.005).this mean that trust increase by 1 level then the e banking adoption decrease by 0.5%.

## CHAPTER FIVE

### Conclusion and Recommendation

#### 5.1. Conclusion

The purpose of this study was to investigate the factor affecting adoption of electronic banking system, in the case of commercial bank of Ethiopia Sebeta branch. A total of 380 questionnaires were distributed to respondents and the entire questionnaire was filled and returned back. The results showed that all the factors considered.

(perceived usefulness, perceived ease of use, subject norm, attitude, and perceived risk, trust behavioral, infrastructure ,security) have significant effects e banking. The majority of the respondents were male sex category. the participant of the study were 18-29 years. The majority of the respondents were at educational level of secondary school. The majority of the participant of the study income less than 3000 birr per month. The majority of the respondents were private employee. The rate of the level of customer services with respect to e-banking services of CBE. the respondents have an intention to use e-banking in the near future. The respondents were planned to use p-banking such as mobile, in ternate, POS and ATM. Respondents were determined to use e-banking soon.

*Based* on the statistical analysis and the results of the study, a number of conclusions can be drawn. First: the results of the study revealed that perceived usefulness and perceived ease of use, subject norm, infrastructure, risk, and security has a positive and significant impact on e banking services adoption. This means ease use, subject norm and usefulness are the main determinants on e banking service

Second: the results revealed a negative and significant impact of, attitude, perceived behavioral and trust on the e banking adoption. This means customers will have a Bad attitude to e banking services and have no trust to use e banking. Also the customer has no good perceived behavioral to adopt e banking.

Third: the results showed that infrastructure, security has a positive and slightly influence on e banking adoption.

## 5.2. Recommendation

The researcher based on the findings recommend the following points:

The Commercial bank and its board should work on e-banking adoption of the customer (attitude), perceived behavioral control and trust dimension of e-banking.

Since perceived risk, no trust and perceived behavioral has negative influence the adoption of e banking .banks need to develop risk reducing strategies that could reduce the customers' concerns about such services. These can be either done by devising security policies to improve the security issue or convince customers it is not risky which may assist in inspiring high confidence in e banking adoption

The commercial bank must give attention to brand building strategies as it is reminiscent of their e- banking customer satisfaction and overall bank performance. Bank must come up with strong brand building blocks if they are to harness the power of brand equity and remain competitive in application of e-banking.

The study recommends that the regulatory commercial bank must strive towards standardization of the e- banking environment to assure all service equal value irrespective of where they experience the service and its customer. Effort should be exerted to Standardize with bank standard policy guideline; enforcement of these policies must be operational zed. Standardization policies should set out minimum qualification requirement for staff, minimum conditions for deliver e- banking service creating minimum requirement for staff who can work in a bank set up, bank must have a well-stocked technology facility, laboratory to maintain and innovate e better e- banking service delivery system .This promote e-banking service and develop confidence to use e- banking .

Government should also improve ICT infrastructure because e banking services cannot be used unless there is good and reliable e banking infrastructure.

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## Appendix

### CUSTOMER'S QUESTIONNAIRE

Dear Sir/ madam,

Electronic banking is a system where banking services are provided electronically to Bank customers and it has changed the way banking business is done. E-Banking means delivering of banking service, through the use of electronic channels like ; Mobiles, ATM s, Television and other Electronic devices.

In this context, I am conducting research on

Factors Affecting Adoption Electronic Banking System -in case of commercial bank of Ethiopia sebeta branch Ethiopia, For the partial fulfillment of the requirements of the degree of Masters of economics

Please provide your responses to the questions based on the instructions under

Each section. If you have comments or if you want to provide further explanations, please use the space

provided at the end of the questionnaire

, I kindly request your contribution in filling the questionnaire honestly and responsibly.

Finally, I would like to confirm you that all the information you provide in this Questionnaire will be

strictly confidential and will exclusively be used for academic research purpose.

Thank you for time and your responses

Zelalemfetene..0918243191

Section I: Demographic profile of respondents

1. Gender:  Male  Female
2. Age:  less than 18  between 18 – 29 years old  
 30 – 40 years old  41 – 50 years old  
 51 - 65 years old  older than 65 years
3. Education:  Primary school  Secondary school  
 Diploma  1<sup>st</sup> degree  
 Master and above

If any other different from these please specify -----

4. Income:  less than 3000 birr per month  3000 – 5000 birr  
per month   
 5001 – 8000 birr per month  8001 – 10,000 birr  
per month  
 10,001 – 15,000 birr per month  above 15000 birr

5. Occupation

- A. Govt Employee B. Private Employee C. Business D. Self Employee  
E. Student F. House Wife G. Others (please specify)
- 

Section II: Questionnaires related with factors of adopting Electronic banking

Instruction: Below are lists of statements pertaining to Adoption of E-banking. Please indicate whether

you agree or disagree with each statement by ticking (√) on the spaces that specify your choice from the

options that range from "strongly agree" to "strongly disagree" and circle statements from list of choices provided.

NOT: E-banking refers in this study transaction using internet, ATM and mobile banking, POS terminal.

□ CEBA= customers e-banking adoption, PBC = perceived behavioral control, T= trust, PU= perceived usefulness, PEU = perceived ease of use, SN= subjective norms, INF = infrastructure, SC= security and PR= perceived risk.

## 2.1. Basic questions

1. Do you have bank account at CBE? A/ Yes B/ No
2. If "yes", do you have an experience of using either of the following e-banking services

provided to the customers?

- A/ ATM      B/ through POS terminal      C/ Tele banking  
D/ Mobile banking      E/ Internet banking

F/ if any -----

3. If No, what is the possible reason of not using e-banking services available to customers?

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4. How do you rate the level of customer services with respect to e-banking services of

CBE?

A/ very high

B/ high

C/ medium

D/ low

F/ very low

5. If your answer is “low “or “very low”, what should be done to enhance e-banking services of

the bank?

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✚ T3.the following questions are statements about e-banking. Please ticking each of (√) the questions for

expressing your level of agreement of the statements. Each choice was identified by numbers ranged

from 1 to 5 which stands: DA- Disagree, SD- Strongly Disagree, UN, undecided, A- Agree, SA-

Strongly Agree.

NO	Variables	Questionnaires	Scales					
			SA	A	N	DA	SD	
			5	4	3	2	1	
		<b>E-banking adoption of customers</b>						
1	EBA1	I feel my decision of using e- banking was a wise idea						
2	EBA2	I intend to use e- banking in the near future						
3	EBA3	I plan to use e - banking such as Mobile, internet ,POS and ATM						
4	EBA4	I determined to use e- banking soon						
5	EBA5	I expect to use e- banking in the future						
6	EBA6	I like to use e- banking than others						
7	EBA7	I feel using e- banking is a good idea						
8	EBA8	Using internet banking site is a pleasant idea						
		<b>Perceived behavioral control</b>						
9	PBC 1	I would be able to operate e- banking						
10	PBC 2	I have the resource to use internet banking						
11	PBC 3	I feel better when using e-banking service than through personal contact with officer of the bank						

12	PBC 4	Educational status affect decision to use e-banking service of the bank							
<b>Trust</b>									
13	T 1	Payments made through CBE e-banking are trustable							
15	T 2	E - Banking keeps customers best interest in mind.							
17	T 3	I feel confidence while using e-banking services on the bank website							
<b>Perceived usefulness</b>									
18	PU 1	E- banking improves my performance of banking activities or operation							
19	PU2	Using e- banking would increase the quality of banking transaction							
20	PU3	E-banking makes easier of doing banking transactions							
21	PU4	E- banking enables me to accomplish banking activities more quickly							
22	PU5	E- Banking such as internet, ATM, POS and Mobile banking are convenient.							
23	PU6	Using e - banking helps to perform banking tasks at lower cost							
24	PU7	I feel Using e-banking improves customer service							
<b>Perceived ease of use</b>									
25	PEU1	My interaction with using e- banking is clear and understandable							
26	PEU 2	The website of the bank is comfortable for users							
27	PEU3	The website of the bank is easy to understand for majority of customers							
28	PEU4	The bank interference language in the website is user friendly and directs customers appropriately							
29	PEU6	It is easy to use e- banking							
30	PEU7	I find easy to do what I want to do in e- banking							
31	PEU8	Learning to use e- banking is easy for me							
<b>Subjective norms</b>									
32	SN 1	My decision to use e- banking is influenced by: friends, media and family							
33	SN 2	Employees support to use e –banking service of the bank							
34	SN 3	Peoples who use e- banking service are more of prestigious than who do not							
35	SN 4	The bank uses influential/opinion leaders to promote e-banking services							
<b>Infrastructure</b>									

36	INF 1	There is stable and fast internet and uninterrupted power connection to access e-banking of CBE						
37	INF 2	e-banking services are easily available from the bank						
38	INF 3	I had got e-banking service within short period of time dated up on application on service						
39	INF 4	I have the technical skill on the operation of e-banking service provided by CBE						
40	INF 5	CBE provides necessary orientation/training on how to use e banking services provided to customers						
<b>Security</b>								
41	SEC1	I feel CBE e-banking service is secure from any threat/fraud during using services provided.						
42	SEC2	I feel all personal and transaction information is secure while using e-banking service of the bank						
43	SEC3	The bank website offers various popup windows to assure security while transacting on using e-banking service of the bank.						
44	SEC4	I feel certain while making e-payment to others using e-banking such as Mobile and ATM service of the bank						
<b>Perceived risk</b>								
45	PR1	Using e-banking in CBE is risky as poor internet and un interrupted power connection						
46	PR2	In using e-banking at CBE, there is no guarantee for financial loss						
47	PR3	While using e-banking at CBE, I was confused, create many errors and feel full of risk						
48	PR4	CBE website is not frequently updated thereby obtaining risk from non updated information to the viewers/users						

47. Finally, If you have any opinions/suggestions/problems pertaining to the use of e-banking, please specify/explain to the space provided -----

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Thank you in advance for your cooperation!!

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