SAINT MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Assessment of Factors Affecting Adoption of Agent Banking and Electronic Banking in Ethiopian Banking Industry:

A case of selected ten banks

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ADVISOR:
ALEM HAGOS (PhD)

June, 2015

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A Thesis Submitted to the School of Graduate Studies of St. Mary's University for the Partial Fulfillment of the Requirements for the Degree of Master of Business Administration (MBA)in Accounting and Finance.

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Declaration

Here with I, declare that, this thesis is prepared for the partial fulfillment of the requirements for MBA. Degree in Accounting and Finance entitled "**Assessment of Factors Affecting Adoption of Agent Banking and Electronic Banking in Ethiopian Banking Industry (Case of Selected Ten Banks in Ethiopia)**" is prepared with my own effort. This work is original in nature and has not presented for a degree in any university. I have made it independently with the close advice and guidance of my advisor and all source of material used for the thesis have been duly acknowledged.

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St. Mary's University   **Date** _____

Endorsement

Here with I, state that, Anuwar Abdulkadir has been carried out this research work on the topic entitled "**Assessment of Factors Affecting Adoption of Agent Banking and Electronic Banking in Ethiopian Banking Industry: (Case of Selected Ten Banks in Ethiopia)**" under my supervision. This thesis paper has been submitted to St. Mary's University, School of Graduate studies for the examination with my approval as a University Advisor.

Advisor: <u>Alem Hagos (P</u>h**<u>D)</u>**   **Signature** _____

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"All praise and thanks is to Allah, the Lord of existence, the most Gracious, the most Merciful" ٱلْحَمْدُ لِلَّهِ رَبِّ ٱلْعَٰلَمِينَ (*Alhamdulilahi Rebil Alemin*).

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Abstract

This is a descriptive study aimed at assessing the factors affecting adoption of agent banking and electronic banking in Ethiopian banking industry. A survey design was employed by use of questionnaires sent out to the respondents. The study population comprised the selected ten banks, namely Commercial Bank of Ethiopia, Awash International Bank, Dashen Bank, Bank of Abyssinia, Wegagen Bank, United Bank, Nib International Bank, Zemen Bank, Birhan International Bank and Abay Bank. The data collected was analyzed using descriptive statistics. A research framework developed based on technology-organization-environment framework.

The findings of the study revealed that the main challenges face the banking industry in adoption of agent banking and e-banking are lack of adequate national ICT infrastructure, Lack of skilled IT personnel's, Lack of government support, Security risk, Lack of legal and regulatory frameworks and lack of competition between local and foreign banks. This study found that the introduction of third party retail agents presents several risk factors with regard to effective regulation and supervision of banks. The study also identified perceived ease of use and perceived usefulness as prospects of adopting agent banking and e-banking system.

The study recommends that Ethio telecom should have to support banking industry by investing on ICT infrastructure developments, government should support the banking industry by introducing financial education program, establishments of a comprehensive legal and regulatory frame works on the use of technological innovation and the use of third party retail agents in banking sector, regulator closely monitors the banking sector and strictly enforces compliance with the agent banking guidelines, while the banks continuously ensure careful vetting of agents.

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List of Acronyms

ATM	Automated Teller Machine
AVR	Automated Voice Response
CBE	Commercial Bank of Ethiopia
ECX	Ethiopian Commodity Exchange
EFT	Electronic Fund Transfer
E-banking	Electronic Banking
E-commerce	Electronic Commerce
E-payment	Electronic Payment
GSM	Global System for Mobile Communication
ICT	Information and Communication Technology
IT	Information Technology
MCR	Magnetic ink Character Reader
NBE	National Bank of Ethiopia
PC	Personal Computer
PIN	Personal Identification Number
POS	Point of Sale
RTGS	Real Time Gross Settlement
SMS	Short Messaging Service
SPSS	Statistical Package for Social Scientists
TA	Technology Association
TAM	Technology Acceptance Model
TOE	Technology-Organization-Environment
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
USA	United State of America

CHAPTER ONE

1. Introduction

1.1. Background of the study

The appearance of E-banking in Ethiopia goes back to the late 2001, when the largest state owned, commercial bank of Ethiopia (CBE) introduced ATM to deliver service to the local users. In addition to eight ATM Located in Addis Ababa, CBE has had Visa membership since November 14, 2005. But, due to lack of appropriate infrastructure it failed to reap the fruit of its membership. Despite being the pioneer in introducing ATM based payment system and acquired visa membership, CBE Lagged behind Dashen bank, which worked aggressively to maintain its lead in E-payment system. As CBE continues to move at a snail's pace in its turnkey solution for Card Based Payment system, Dashen Bank remains so far the sole player in the field of E-Banking since 2006. (Gardachew 2010)

Dashen bank, a forerunner in introducing E-banking in Ethiopia, has installed ATMs at convenient locations for its own cardholders. Dashen ATM is available 24 hours a day, seven days a week and 365 days a year providing service to Debit Cardholders and International Visa Cardholders coming to the country. At the end of June 2009, Dashen bank has installed more than 40 ATMs in its area branches, university compounds, shopping malls, restaurants and hotels. In the year 2011 the payment card services have witnessed significant strides, Dashen ATM service expanded to 105 and 751 POS terminals (Annual report of the bank 2013).

Available services on Dashen Bank ATMs are: Cash withdrawal, Balance Inquiry, Mini statement, Fund transfer between accounts attached to a single card and Personal Identification Number (PIN) change. Expanding its leadership, Dashen Bank has begun accepting MasterCard in addition to Visa cards. Dashen won the membership license from MasterCard in 2008. Harnessing its leadership with advanced banking technology,

Dashen Bank signed an agreement with iVery, a South African E-payment technology company, for the introduction of mobile commerce in April 21, 2009. According to the agreement, iVery Payment Technologies has licensed its Gateway and MiCard E-payment processing solution to Dashen Bank. Dashen Modbirr users can transfer 500 birr to other Modbirr users in 24 hours a day. This would make Dashen Bank the first private bank in Ethiopia to acquire E-commerce and mobile merchant transactions (Amanyehun 2011). Although Dashen new technology is one step ahead in that it allows transfer of funds from one account to others, the first ever E-banking gateway was signed between Ethiopian Commodity Exchange (ECX) and Dashen Bank and CBE. The E-banking system being developed with both banks is designed to give a secure electronic data sharing gateway between clients, banks and ECX, by facilitating a smooth transaction (Abiy 2008)

By the end of 2008 Wegagen Bank has signed an agreement with Technology Associates (TA), a Kenyan based information technology (IT) firm, for the development of the solutions for the payment system and installation of a network of ATMs on December 30, 2008,

Zemen Bank, the only Ethiopian bank anchored in the idea of single branch banking, by launching full-blown internet banking, a service which is new to Ethiopian banking industry in the year 2010. The bank tested the venture through its first phase of the online service, and now it is already started the full-fledged version, which enable customers to make online money transfer freely. Previously, the online banking service, delivered by the bank, only gave access to bank statements and exchange rate information. The new and never-been-tried service proposed by the bank is to include free account money transfer, corporate payroll uploading system where employers could upload payroll to the system and make payments to individual worker accounts online and online utility bill settlement system, when utility companies are ready(Asrat 2010).

The agreement signed by three private commercial banks to launch ATM and POS terminal network, in February 2009 is welcoming strategy to improve electronic card payment system in Ethiopia. Three private commercial banks - Awash International Bank S.C., Nib International Bank S.C. and United Bank S.C. have agreed in principle to establish an ATM network called Fettan ATM network. Fettan ATM was installed over 140 ATM machines and over 340 POSs across Ethiopia. There will be one ATM at every branch of the consortium banks, all domestic airports serviced by Commercial service, shopping complexes and merchants. The agreement is the first significant cooperation between competing banks in Ethiopia, which others should be encouraged to follow as there is no single bank in Ethiopia that can afford to provide Extensive geographical coverage and access (Binyam 2009).

Table 1.1. Branch network and e-banking services as at the Close of June 30, 2014

| Banks | year of Establishment | Branch Network 2013/14 | | | | Electronic Banking and Agent Banking services |
		Regional Branch	Addis Ababa	Total	% Share	
Commercial Bank of Ethiopia	1963	700	156	856	38.8%	➢ **Automated teller machine (ATM)** ➢ **Mobile Banking** ➢ **Point of sale Terminals (POS)** ➢ **Internet Banking** ➢ **Agent banking(acquired license and in preparation work)**
Construction & Business Bank	1983	68	47	115	5.2%	
Development Bank of Ethiopia	1909	31	1	32	1.4%	
Awash International Bank	1994	62	90	152	6.9%	➢ **Automated teller machine (ATM)** ➢ **Point of sale Terminals (POS)**
Dashen Bank	1995	69	73	142	6.4%	➢ **Automated teller machine (ATM)** ➢ **Point of sale Terminals (POS)** ➢ **Internet Banking**

						➢ **Agent banking(acquired license and in preparation work)**
Abyssinia Bank	1996	55	54	109	4.9%	➢ **Automated teller machine (ATM)** ➢ **Point of sale Terminals (POS)** ➢ **Internet Banking** ➢ **Agent banking(acquired license and in preparation work)**
Wegagen Bank	1997	51	49	100	4.5%	➢ **Automated teller machine (ATM)** ➢ **Point of sale Terminals (POS)** ➢ **Mobile Banking (acquired license and in preparation work)** ➢ **Agent banking(acquired license and in preparation work)**
United Bank	1998	44	55	99	4.5%	➢ **Automated teller machine (ATM)** ➢ **Mobile Banking** ➢ **Point of sale Terminals (POS)** ➢ **Internet Banking** ➢ **Agent banking**
Nib International Bank	1999	39	55	94	4.3%	➢ **Automated teller machine (ATM)**
Cooperative Bank of Oromiya	2004	84	21	105	4.8%	
Lion International Bank	2006	35	27	62	2.8%	
Oromia International Bank	2008	80	29	109	4.9%	
Zemen Bank	2009	3	6	9	0.4%	➢ **Automated teller machine (ATM)** ➢ **Mobile Banking** ➢ **Internet Banking**
Buna International Bank	2009	41	22	63	2.9%	
Berhan International Bank	2009	22	26	48	2.2%	➢ **Automated teller machine (ATM)**
Abay Bank	2010	54	16	70	3.2%	➢ **Automated teller machine (ATM)**
Addis International Bank	2011	5	16	21	1.0%	
Debub Global Bank	2012	12	7	19	0.9%	
Enat Bank	2013	0	3	3	0.1%	
Grand Total Banks		1455	753	2208		

Source: Annual Report of National Bank of Ethiopia and Commercial banks (2013-2014)

1.2. Statement of the problem

The modern Agent banking that allows customers conduct a limited range of financial transactions at third party retail outlets including post offices, supermarkets, general and grocery stores, pharmacies, and gas stations, among others, located in remote areas. E-banking is refers to the use of modern technology that allows customers to access banking services electronically whether it is to withdraw cash, transfer funds, and to pay bills, or to obtain commercial information and advices.

The banking industry in Ethiopia is underdeveloped and therefore, there is an all immediate need to embark on capacity building arrangements and modernize the banking system by employing the state of the art of technology being used anywhere in the world. With a growing number of import-export businesses, and increased international trades and international relations, the current banking system is short of providing efficient and dependable services (Gardachew 2010).

One of the major significance of e-banking product and services is improved efficiency and effectiveness of the operations so that, transactions can be processed faster and most conveniently. Thus, it has enhanced customer services, effective distribution, improved operations, faster access to information and improved internal processes. This implies that customers benefit ranges from reduced frequency of going to the banking halls to handling of cash.

However, despite this importance of e–banking, closer observation shows that there are still long queues seen in some banking halls even as customer still handle too much cash, problem of frequent network failure which have adverse effect and inadequate awareness of available e-banking production and services, even as empirical evidence shows that level of understanding of a product and its commensurate benefits determines the reactions of customers to it and patronage (Balanchandler, 2010).

One of the emergent alternative delivery channels, agent banking, is fast gaining momentum in many countries in Latin America (Brazil, Columbia and Peru), Asia (India) and South Africa (Kumar et al. 2006). Agent banking, which leverages heavily on ICT, is a component of branchless banking that allows financial institutions to offer financial services outside the traditional brick and mortar bank premises (Mas and Siedek, 2008).

Agent banking improves the bank's geographical coverage and competitiveness, So that, existing and potential customers can benefit from a greater level of convenience in accessing banking services. This convenience is offered through agents of the bank and when combined with new services can expand the bank's target beyond the traditional markets.

Considering the low extent of development of ICT infrastructure in developing countries, when compared with the developed countries E-banking has not really been able to diffuse into society given the low rate of internet access (Banji & Catherine 2004).

In order to encourage further E-banking adoption in developing countries, a better understanding of the barriers and drivers impacting E-banking adoption is critical (Zhao et al. 2008). By gaining an in-depth understanding of the factors and conditions that influence developing country's ability to fully adopt and realize its benefits, strategic implications can be generated for the researchers and practitioners regarding how to promote the growth of E-banking and Agency Banking in the developing countries. Although agent banking is gaining a lot of interest from the banking industry, but it has not received a lot of attention from the scholars. Agent banking system was not well known for the banking industry of Ethiopian.

Therefore this study is intended to assess factors affecting adoption of Agent banking and Electronic Banking system in Ethiopian Banking industry based on the research problems discussed above.

1.3. Research Questions

To explore and assess the factors affecting adoption of Agency banking and Electronic banking in Ethiopia banking industry, this study targeted employee of selected ten Ethiopian Commercial Banks as survey participants. In order to achieve the intended objectives of the study and to address the research problem properly, certain research questions are designed accordingly.

In light of this, the research was pondered to answer the following research questions:

1) What are the factors affecting adoption of Agent banking and Electronic banking in Ethiopia?
2) What are the benefits of Agency banking and Electronic banking in Ethiopia?

1.4. Objectives of the Study

1.4.1. General objectives

The general objective of this study is to explore the factors affecting adoption of Agent banking and Electronic banking in Ethiopia banking industry.

1.4.2. Specific objectives

The study specifically strives to achieve the following special objectives.

➢ To probe the benefits of adoption of Agency banking and Electronic banking in Ethiopia banking industry.

➢ To analyze and identify the major setback and challenge that faces the banking industry to adopt Agent banking and Electronic banking in Ethiopia banking industry.

➢ To identify the factors that influence adoption of Agent banking and E-banking

1.5. Significance of the Study

Understanding the challenges and prospects related with adoption of new technology and service distribution channels and its advantages in providing service to their customers have potential value to financial institutions, particularly banks. The factors relating to institution's ability to provide the conditions conducive to the introduction and acceptance of innovations could be used to map out an institutional framework for adoption. Consequently, there will be some beneficial application of this research to Ethiopian banks and researchers in Ethiopia. Some of those are as follows:

- ✓ The acceptance of Agent banking and Electronic banking is a new topic in Ethiopia and so it is worthwhile to conduct this study, whose result could be used to improve the banking sector and enhance the quality of E-banking services and Agency service in Ethiopia for the future.
- ✓ It will helps bank managers and National Bank of Ethiopia to identify challenging factors that hinder the adoption of Agent banking and Electronic banking in order to increase the use of service as well as to encourage the general acceptance of new IT services and to monitor the development and growth of agent banking and E-banking.
- ✓ This study will be expected to help other researchers who will be interested to conduct further study regarding the issue under investigated by providing use full information.
- ✓ This research may help the Ethiopian banking industry by recommending possible solutions and strategies to the problems in agent banking and E-banking.

1.6. Scope and Limitation of the Study

The study was focused to investigate the major challenges and prospects of adoption of Agent banking and E-banking in the banking industry of Ethiopia. The study was

limited to selected ten commercial banks and their branches that are located only in Addis Ababa and excluded financial institutions other than bank. The reasons for this are Ethiopia is too large for the researcher to travel all over the country. From the total population ten banks are selected based on banks that are partly implement E-banking products.

1.7. Organization of the Study

The study is organized under four chapters. The introductory part bears background of the study, Statement of the problem, research questions, objectives, significance of the study, Scope and limitation of the study and the methodology used to conduct the study, the second chapter deals with review of related literature. The third chapter presents the findings from the respondents wherein the data gathered are analyzed and interpreted. Finally, the last chapter attempt to generalize and recommend possible solutions to the problems.

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CHAPTER TWO

2. Literature Review

2.1. Definition of Agent banking and E-banking

Agent banking is a retail or postal outlet contracted by a financial institution or a mobile network operator to process client's transactions. Rather than a branch teller, it is the owner or an employee of the retail outlet who conducts the transaction and lets clients deposit, withdraw, and transfer funds, pay their bills, inquire about an account balance, or receive government benefits or a direct deposit from their employer. Banking agents can be pharmacies, supermarkets, convenience stores, lottery outlets, post offices and many more. (Kumar et al, 2006).

Agent banking is the provision of financial services to customers by a third party (agent) on behalf of a licensed deposit taking financial institution and/or mobile money operator (principal). (Central Bank of Nigeria, 2013)

Agent banking, which leverages heavily on ICT, is a component of branchless banking that allows financial institutions to offer financial services outside the traditional brick and mortar bank premises (Mas, 2008; Mas and Siedek, 2008).

Electronic Banking is a delivery of banking services to customers at their office or home with the help of electronic technology is termed as e-banking. Daniel (1999) defines electronic banking as the delivery of bank's information and services by banks to customers via different delivery platforms that can be used with different terminal devices such as a personal computer and a mobile phone with browser or desktop software, telephone or digital television. E-banking is a brew of services that embody Internet banking, Mobile banking, ATM kiosks, Fund Transfer System, Real Time Gross Settlement RTGS (payment & allotment system), Credit/ Debit/Smart/Kisan Cards. Electronic funds transfer (EFT), is simply the use of electronic means to transfer funds directly from one account to another, rather than by check or cash (Malak 2007). 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).

2.2.   E-Banking Devices in Modern Day Economy

ATM: Automated teller machine is a computer controlled device that dispenses and provides other services to customers who identify them with a personal identification number (PIN). The physical carriage of cash as well as frequent visit to the banks is being reduced. The principal advantage of ATM is that it dispenses cash at anytime of the day even as it needs not to be located within the banking premises but in stores, shopping malls, fuel stations etc. unlike the traditional method where customers have to queue for a very long period of time to withdraw cash or transfer funds.

GSM/Mobile banking: This mode of e-banking primarily uses mobile phones as the electronic devices. Mobile phone gives customer the opportunity to operate their account with bank as long as their phones and network services provider support the SMS (short messaging service) which would enable the customer check account balance.

Point Of Sale Terminals: This mode of e-banking handles cheque verification, credit authorization, cash deposit and withdrawal and cash payment. It enhances electronic fund transfer at the point of sales. Thus customers account would be debited immediately with the cost of purchase in an outlet such as a petrol station or supermarket. The implication of this is that customers can make payment for goods and services without necessarily coming in contact with physical cash as the purchase price would be debited on the buyer's card and credited on the seller's account.

Bankers automated clearing services: The automation focus of the instrument is to reduce the number of clearing days and improve on security arrangement in the course of settlement and collection of cheques. it involves the use of magnetic ink character reader (MCR) for cheque processing which makes it capable to encode, read and sort out changes even as request for cheque books can be made via electronic devices.

Card System: it is a unique electronic payment type which involves the use of smart cards. Smart cards are devices with embedded integrated circuit being used for settlement of financial obligations. It can be used as credit card, debit card and even ATM cards. The power of these cards lies in its sophistication and acceptability to store and manipulate data as well as handling of multiple applications on one card securely

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.

2.3. Adoption

Adoption is the acceptance and continued use of a product, service or idea. Consumers go through a process of knowledge, persuasion, decision, implementation and confirmation before they are ready to adopt a product or services Rogers and Shoemaker (1971).

A potential adopters passes through certain stages before decision is made on whether to adopt or reject an innovation. The innovation process defined by Rogers is the process through which an individual or other decision making unit passes from knowledge of innovation, to forming an attitude towards the innovation, to a decision to adopt or reject, to implementation of the new idea, to confirmation of the decision. These stages typically follow each other in a time-ordered manner. This process is shown in Figure 2.1.

Figure 2.1 a Model of Five Stages in the Innovation-Decision Process
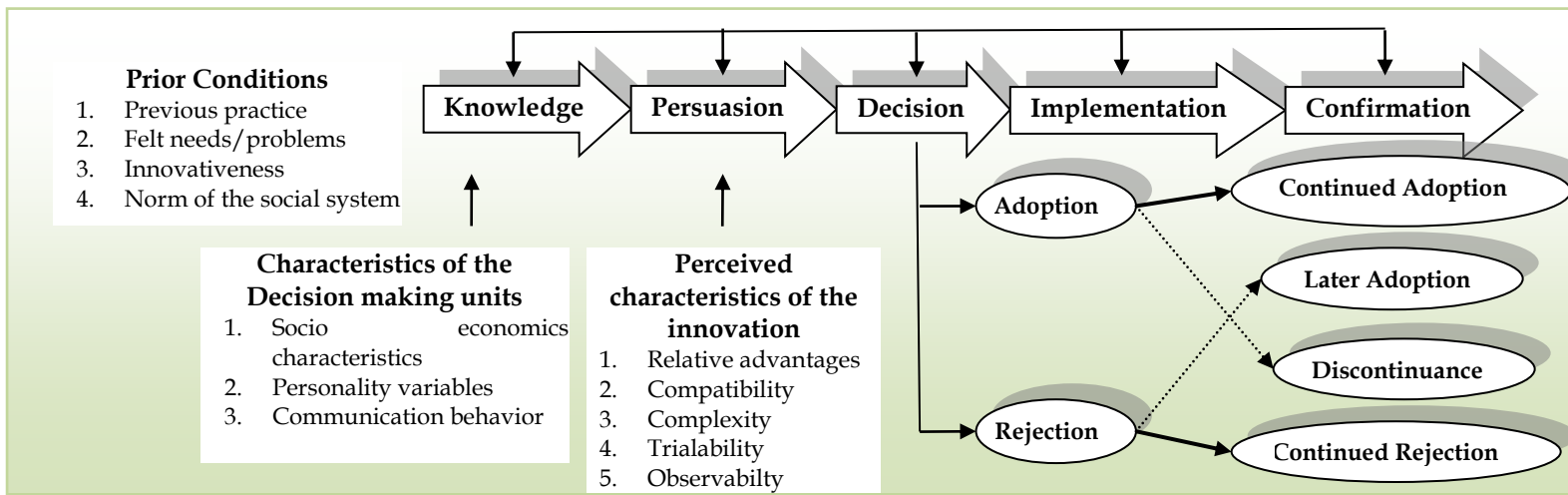
Source: Rogers 1995

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:** In this stage, mental information processing and decision making come to an end, but the behavioral change begins.

5. **Confirmation:** 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". The time frames for adopting an innovation can be compressed or fairly lengthy. For example, awareness of an innovation may precede the decision to adopt by months or years.

2.4. The evolution of E- banking and Agent banking system

The banking industry is constantly responding to changes in customer preferences and needs; increasing competition from non-banks, changes in demographic and social trends, information technology advances, channel strategies, and government deregulations of the financial service sector (Byers & Lederer, 2001).

Electronic innovation in banking industry can be traced back to 1970, when the computerization of financial institutions gained momentum (Malak 2007), However; a visible presence of this was evident to the customers since 1980, with the introduction of ATM. Innovative banking has grown since then, aided by technological developments in the telecommunications and information technology industry. The early decade of the 1990s witnessed the emergence of automated voice response (AVR) technology. By using the AVR Technology, banks could offer telephone banking facilities for financial services. With further advancements in technology, banks were able to offer services, through PC owned and operated by costumers at their convenience, through the use of intranet propriety software. The users of these services were, however, mainly corporate customers rather than retail ones (Sohail & shanmugham 2003). The security first network bank was the first e-banking in the world that was built in 1995 in USA.

After that some famous banks introduced their internet banking one after another, such as Citibank and bank of America.

In the search for sustainable competitive advantages in the competitive and technological financial service industry, banks have recognized the importance to differentiate themselves from other financial institutions through distributions channels. This has resulted in banks developing, and utilizing new alternative distribution channels to reach their customers (Daniel, 1999). Literature also points to the fact that agent banking is a more convenient and efficient way of extending financial services to the poor, unbanked and marginalized communities (Lyman, Ivatury & Staschen, 2006). For example, in 2001, agent banking (also referred to as correspondent banking) was introduced in Brazil. In a short span of 9 years, this alternative delivery channel has radically transformed access to financial services in the Latin American country.

2.5. Factors influencing Banks to adopt E-banking system

Electronic banking adoption has gained special attention in academic studies during the past years to investigate factors of adoption. Many researchers have been used different frame works in the study of adopting new technological innovation. Among frameworks that have been developed based on the past studies includes,

> ➢ Davis et al, (1989) Technology Acceptance Model (TAM) (Pikkarainen et al,2004; Cheng et al, 2006),
> ➢ Theory of Reasoned Action (TRA) originally proposed by Fishbein and Ajzen (1975)(Gefen et al., 2003) and
> ➢ Theory of Planned Behavior (TPB) (Shih and Fang, 2004) originally proposed by Ajzen (1991).
> ➢ Technology-organization-Environment framework (TOE) Tornatzky & Fleischer 1990

1/ The Theory of Reasoned Action (TRA) is probably one of the most influential theories used to explain human behavior. According to this theory, the behavioral intention can be explained by the attitude towards behavior and subjective norm. The attitude towards behavior is defined as an individual's positive or negative feelings about performing the target behavior (Fishbein and Ajzen, 1975). Subjective norm refers to perception that most people who really matter to the individual think that he either should or should not perform the behavior in question" (Fishbein and Ajzen, 1975).

2/ The Theory of Planned Behavior (TPB) were proposed by Ajzen (1991) as an extension of TRA (Fishbein and Ajzen, 1975) for situations where people have incomplete volitional control. This suggests that a central factor in human behavior is behavioral intention, which is affected by attitude toward behavior, subjective norm, and perceived behavioral control (Ajzen, 1991). This construct reflects how people perceive the internal and external limitations to their behavior. It refers to how easy or difficult people believe it would be to perform certain behaviors (Ajzen, 1985).

3/ The Technology Acceptance Model introduced by Davis (1985) is one of the most cited theoretical frameworks to predict the acceptance and use of new information technology within organizations. This model derives from the TRA. The Technology Acceptance Model hypothesizes that system use is directly determined by behavioral intention to use, which is in turn influenced by users' attitudes toward using the system and the perceived usefulness of the system. Attitudes and perceived usefulness are also affected by perceived ease of use.

4/ Technology-organization-Environment framework (TOE) which identifies three basic Factors for the adoption of technological innovation, i.e., technological factors, organizational and environmental factors. TOE framework was proposed by Tornatzky and Fleischer; (1990) it is designed for studying the likelihood of adoption success of technology innovations. This framework is a comprehensive and well received framework in the context of innovation adoption by organizations and has been used in

many studies (Salwani, et al, & Ellis 2009; Chang et al 2007, Zhu & Kraemer 2006). According to Tornatzky and Fleischer (1990), technology adoption within an organization is influenced by factors pertaining to the technological context, the organizational context, and the external environment.

Figure 2.2. Technology-organization-Environment framework (TOE)
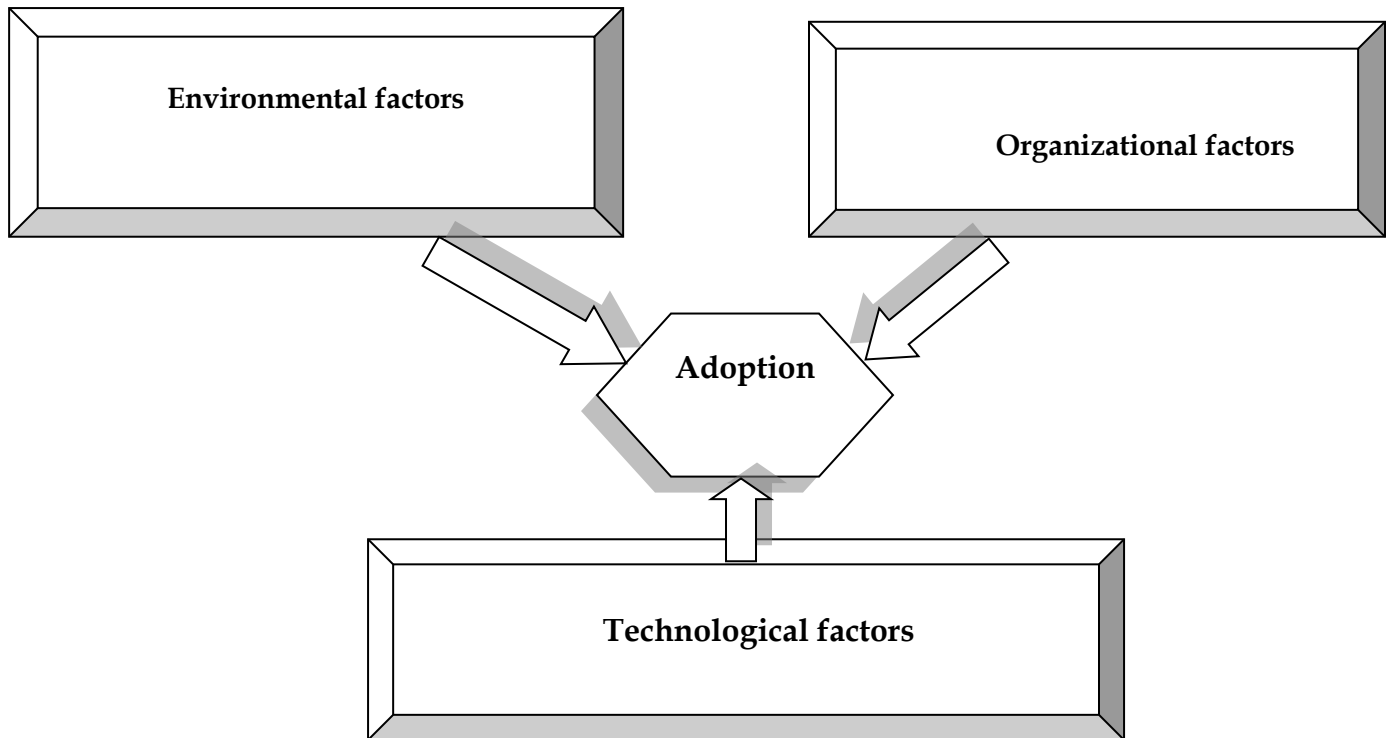
Source: Tornatzky and Fleischer (1990)

2.6.   Benefits of E-banking and Agent banking for Banks and customers

2.6.1.   Benefits of E-banking

It should be noted that E-banking can bring about various benefits for banks and their customers as well. It is obvious that cost savings, efficiency, gaining new segments of customers, improvement of the banks reputation and better customer services and satisfaction are primary benefits to banks (Jayawardhena & Foley, 2000).

Under the view of Robinson (2000), relevant costs for conducting a banking transaction via online are much lower than via a brick and mortar branch. Moreover, Sheshunoff

(2000) contends that one of the most important factors influencing the adoption of E-banking by banks is the need to build up strong barriers to customer exiting. Under the view of the author, once customers become familiar with the utilization of full service E-banking, it is unlikely that they will change to another financial institution.

Such an argument can be supported by the consumer behavior theory that switching costs are often very high in terms of time and efforts by consumers. Finally, the author emphasizes that the implementation of E-banking can bring about many competitive advantages for banks in today's highly competitive banking market.

A research on E-banking has been carried out in Denmark by Mols (1998). The author argues that E-banking can play an important role in enhancing cross-selling and price differentiation. E-banking can make favorable conditions for banks to provide customers numerous services 24 hours a day and 7 days a week. E-banking can improve customer satisfaction with the bank due to the fact that it makes customers less price sensitive, and improve their intention to repurchase, and more loyalty to the bank via providing more positive words of mouth about the bank than other bank customer.

It should be noted that E-banking is not only brings about benefits to banks but also to their customers. Thanks to the emergence of the Internet, banking transactions are no longer limited to time and geography. It is very easy for consumers throughout the world to access to their bank accounts 24 hours per day and seven days a week. Customers can enjoy a variety of services, especially services which are not provided by traditional bank branches (Pham 2010).

It is argued that one of the greatest benefits that E-banking brings about is that it is not expensive or even free for customers to utilize E-banking products/services. However, some people believe that prices appear to be one factor that is impedimental to the distribution of E-banking (Sathye 1999).

E-banking can bring about convenience and accessibility, which will have positive effects on customer satisfaction and loyalty (Pham 2010). It is totally possible for customers to manage their banking transactions whenever they want and to enjoy improved privacy in their interactions with the bank.

It is contend by Turban (2008), that E-banking is really beneficial to customers in terms of cost savings, no limit on time and space, quick response to customer complaints, and better services/products. Such benefits are believed to elevate customer satisfaction.

2.6.2. Benefits of Agent banking

In many developing countries, banks have expanded their network through trusted local "agents" or "correspondents" to offer their services. For instance, whereas previously many banks focused on traditional banking, agents in a number of countries are now authorized to offer a many of the traditional products offered by banks. Banks have, therefore, moved up the ladder of product range to offer more sophisticated banking products such as bank supported insurance and asset financing products.

Cost of Banking

Agency banking represents a significant opportunity to reduce transaction costs such as travel for clients by bringing financial services to hard-to-reach and geographically dispersed areas. This is especially true in Africa where some areas are sparsely populated leaving long distances between the customer and the bank. Moreover, in these areas overall literacy levels are fairly low. Also, banks and other financial institutions often do not have sufficient incentive or capacity to establish formal branches in these areas. Obviously, the set-up of agent banks is less costly and more flexible than for traditional bank branches since it reduces the need to invest in staff and physical infrastructure. These views are supported by Kithaka (2001) and Kasekende (2008) among other researchers.

Enhanced Accessibility to Banking Services

According to Berger (1998), agent banks offer similar services as a real bank. This ranges from cash deposits and withdrawals, disbursement and repayment of loans, payment of salaries, pension, transfer of funds, and issuance of mini-bank statements, among others. Berger further argues that, the agent also facilitates new account opening, credit and debit card application, cheque book request, hence eliminating the need for the commercial bank to have branches all over. This is being replicated across the country, especially in rural areas.

Wider Market Coverage and Customer Loyalty

According to Christopher (2002) the process of loyalty building can be seen in the form of a ladder in which the customer has to be converted into a client then into a supporter, an advocate and ultimately to a partner. Finding loyal entrepreneurs requires targeting those segments to which the bank can deliver superior value. The economic benefits of customer loyalty often explain why one bank is more profitable than its competitors.

Therefore, building a highly loyal customer base cannot be done as an add-on; it must be integral to a bank's basic business strategy. The agency banking model has played this role in a great way.

According to Cohen (2002) the ongoing global expansion of a high-tech telecommunications infrastructure, coupled with the increased availability of advanced information technology services, is having an impact on almost every emerging industry. Emerging industries are newly formed or reformed industries that have been created by technological innovations, shifts in relative cost relationships, emergence of new consumer needs or other economic and sociological changes that evaluate a new product or service to the level of a potentially viable business opportunity. The agency banking model is expected to continue playing a catalytic role in expanding the reach of banks within a rapidly changing technological environment.

2.7. Empirical Literature Review

Some related studies are conducted by different researchers in different parts of the world. However, there are limited numbers of studies conducted in Ethiopia on the adoption of technological innovation. Specifically, Gardachew (2010) conducted research on the opportunities and challenges of E-banking in Ethiopia. The aim of his study was focused on analyzing the status of electronic banking in Ethiopia and investigates the main challenges and opportunities of implementing E-banking system. The author conducted a survey on the existing operating style of banks and identifies some challenges of using E-banking system, such as, lack of suitable legal and regulatory frame works for E-commerce and E- payments, political instability in neighboring countries, high rates of illiteracy and absence of financial networks that links different banks. According to Gardachew (2010), Opportunities offered by ICT through e-learning programs and Commitment of the governments on development of ICT infrastructures is considered as drivers of using E-commerce and E-payment systems.

Wondwossen and Tsegai (2005) also 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 employs interview and on site observation to investigate challenges to E-payment in Ethiopia and 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. According to Wondwossen and Tsegai (2005), an adequate legal structure and security framework could foster the use of E-payments, which is contradicting with the finding of the previous study.

Ayana (2014) conducted research to identify factors that affect adoption of E-banking in Ethiopian banking industry. the Author conducted a Survey, interviews and document analysis in order to identify factors that affect adoption of E-Banking and found that,

security risk, lack of trust, lack of legal and regulatory frame work, Lack of ICT infrastructure and absence of competition between local and foreign banks as major barrier that face Ethiopian Banking industry in adoption of E-Banking and suggest that Establishing a clear set of legal framework on the use of technology in banking industry, supporting banking industry by investing on ICT infrastructure and banks needs to be focused on technological innovation competition rather than traditional bases of retail bank competition as a series of measures which could be taken by the banking industry and by government to address various challenge.

The other descriptive case study analysis conducted by Khalfan et al (2006) on „Factors influencing the adoption of internet banking in Oman, aimed to identify the main potential factors or impediments that are currently inhibiting the incorporation or adoption of E-commerce applications in the Omani Banking sector. Data, used in their study were collected using semi structured interviews and survey questionnaire as well as reviewing some bank documents. The results of their study provide a Pragmatic picture about the adoption of E-Commerce applications in the core financial sector domain of Oman. One of the main findings is that security and data confidentiality issues have been a major barrier. The banking sector was reluctant to use E-commerce applications as they felt that transactions conducted electronically were open to hackers and viruses, which are beyond their control. Lack of top management support is the other inhibiting factor in the adoption of electronic commerce applications as per their finding. Similarly the study of Ghazi and Khalid (2012), found that, the most important barriers for E-business growth are technological issues, such as, security risk, quality of internet and cost of implementation to be the most prominent.

On the other hand the descriptive study conducted by Daisy Kanini (2011) that aimed at determining the factors affecting adoption of agent banking amongst commercial banks in Kenya. The author used a census survey design by use of questionnaires sent out to the respondents. The findings of the study revealed that the main factors influencing

the adoption of agent banking among commercial banks in Kenya are, (I) Cost reduction (ii) Enhancement of customer service (iii) Expanded presence by banks particularly in remote areas. The most important factor was cost reduction in the provision of banking services. Another key factor was the prospect of customer service enhancement owing to a greater level of convenience that comes with the presence of retail agent outlets. The study found that the introduction of third party retail agents presents several risk factors with regard to effective regulation and supervision of banks, and therefore recommends that the regulator closely monitors the banking sector and strictly enforces compliance with the agent banking guidelines, while the banks continuously ensure careful vetting of agents.

According to Chaia et. al. 2011 agent banking has become one of the most promising strategies for offering financial services in emerging markets. In this model, financial institutions work with networks of existing nonbank retail outlets such as convenience stores, gas stations, and post offices to deliver financial services. This approach can be especially powerful when serving the unbanked poor because of its ability to reduce banks costs and reach low income workers where they live. Agent banking benefits a range of stakeholders. The poor gain convenient access to financial services in their own communities. Financial institutions reach a vast new customer segment. Agents increase their sales volumes and have an opportunity to develop deeper relationships with the customer. However implementing correspondent strategies can be tough. It may be hard to build networks of partners that can fulfill the correspondent role.

2.8. Conceptual Framework

To explore the key prospects and challenges to agent banking and e-banking adoption in Ethiopia, this study is guided by the technology–organization–environment (TOE) framework proposed by Tornatzky and Fleischer (1990) which is designed for studying the likelihood of adoption success of technology innovations. This framework is a comprehensive and well received framework in the context of innovation adoption by

organizations and has been used in many studies. According to Tornatzky and Fleischer (1990), technology adoption within an organization is influenced by factors pertaining to the technological context, the organizational context, and the external environment.

Based on this, the researcher developed research framework to summarize possible challenges and prospects of agent banking and e-banking adoption as shown in Figure 2.3. The environmental context refers to the external environment in which an organization operates and its condition for supporting the development of agent banking and e-banking services, while the organizational context refers to the organization's characteristics that influence its ability to adopt and use agent banking and e-banking. The technological context refers to adopter's perception of agent banking and e-banking attributes. Typical characteristics of technology considered in technology adoption studies are based on Roger's (1995) diffusion of innovation theory which include relative advantages (perceived benefits), compatibility, trialability, complexity and perceived risks. For each context, various factors have been identified from the literature but only those that are considered relevant for agent banking and e-banking adoption are included in the framework. Details of factors considered in this study are discussed below.

Figure 2.3 Conceptual Framework
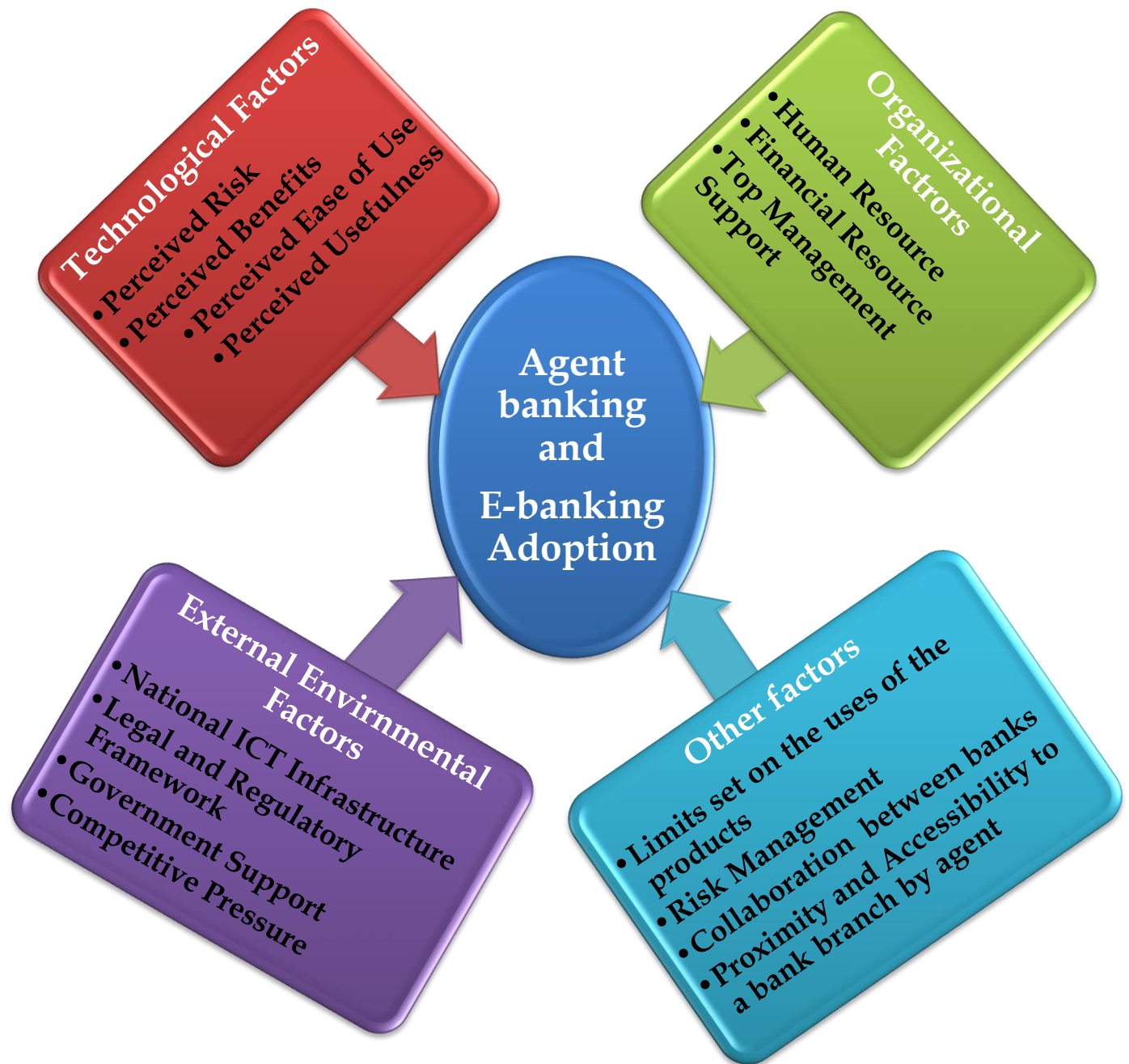
Technological Factors
- Perceived Risk
- Perceived Benefits
- Perceived Ease of Use
- Perceived Usefulness

Organizational Factors
- Human Resource
- Financial Resource
- Top Management Support

External Envirnmental Factors
- National ICT Infrastructure
- Legal and Regulatory Framework
- Government Support
- Competitive Pressure

Other factors
- Limits set on the uses of the products
- Risk Management
- Collaboration between banks
- Proximity and Accessibility to a bank branch by agent

Agent banking and E-banking Adoption

2.8.1. The National ICT infrastructure:

National ICT infrastructure is a major factor that supports the adoption of E-banking as the case for other E-commerce initiatives. Without an adequate development level and quality of a nations ICT infrastructure, E-banking adoption and use cannot do well (Efendioghu 2004 & Scupola 2003). There are many technological and operational challenges in employing a successful agent banking strategy. Technology should be in place to enable banks and their customers to interact remotely in a trusted way through existing local retail outlets. Agent banking requires a generally good infrastructure in terms of road network, communication and information technology. CBK (2009)

2.8.2. Legal and Regulatory Frameworks

The existence and maturity of E-commerce legal frameworks within a country influence the diffusion of online transactions including E-banking as demonstrated in various studies (Tan Z. & Wu 2002; Martinson Trappey 2001).

2.8.3. Government Support

Government can either directly or indirectly affect the adoption of E-banking in terms of creating a favorable environment and impetus for banking institutions and their customers so that the services can be diffused with the community (Kuan 2001 & Iacovou 1995)

2.8.4. Competitive pressure

Competitive pressure can strongly influence any bank to develop and adopt E-banking initiatives and it may affect the banks perception towards E-banking system. As implied in previous studies (Quaddus & Hofmeyer 2007; Gibbs, Kraemer & Dedrick 2003). The competition amongst commercial banks to offer banking services to the population has increased greatly, thus increasing efficiency and access.

2.8.5. Financial and human resources

Financial resources are an important factor in facilitating innovation adoption for any organization and they are often correlated with the firm size (Kuan 2001 & Iacovou 1995).Therefore, it is expected that the availability of financial resources within the adopting firms is important for E-banking adoption. These resources enable banking institutions to obtain human related resources including the required skills and expertise to develop and support provision of E-banking services.

2.8.6. Top management support

Top management of an organization is also commonly identified as an important factor for any technology adoption within an organization. If top management is assertive in their decision making regarding e-banking adoption and committed to it, the adoption is likely to take place. In addition, with the top management support through the provision of the required resources, organization's inclination to adopt e-banking or any new technology will be improved

2.8.7. Perceived ease of use

Several researchers including Pikkarainen et al., (2004) and Hosein (2010) concur on the definition of perceived ease of use as the extent to which a person accepts that using a certain method would be free of effort and at no cost to him or her. Ramayah and Lo (2007) affirmed it as a term that represents the degree to which an innovation is perceived as easy to understand, learn or operate. AC Nielsen Consult (2002) noted that the drivers of growth in electronic banking are determined by the perceived ease of use, thereby making perceived ease of use a major factor affecting the acceptance of any information system. Moon and Kim (2000) buttressed this point when they revealed that ease of use and usefulness are believed to be essential in determining the acceptance and the use of a number of corporate information technology. Determinants of ease of use have been noted to be closely associated with individual perceptions of complexity and, design of e-banking technology such as aesthetics and the ability of the

component parts of a system to operate successfully together (Lichtenstein and Williamson, 2006). In a number of instances, complexity and design issues were found to have discouraged consumers from pursuing internet banking prompting Pikkarainen et al., (2004) to argue that any novelty perceived to be easier to use than another is more likely to be accepted by users. Thus how Ethiopian customers perceive the ease with which e-banking products and agency banking are used could impact on their acceptance of e-banking and agency banking as alternative delivery channels.

2.8.8. Perceived usefulness

Perceived usefulness has long been found to have a significant influence on attitude and intention to use or adopt an innovation (Yuttapong et al., 2009; Sheikhshoaei and Oloumi, 2011; Zhou, 2011). It is the extent to which a user believes that a particular system would improve their performance (Hosein, 2010). Under the TAM, perceived usefulness has been found to significantly affect the acceptance of an information system (Pikkarainen et al., 2004). Zahid et al., (2010) observed that people who adopt a particular technology presume that the use of the technology and information system in question would enhance their performance. They hence asserted that perceived usefulness was a very strong determinant of a customer's decision to adopt e-banking. In a study conducted in Singapore, Liao and Cheung (2002) sought to measure consumer attitudes towards the usefulness of and willingness to use internet retail banking and found that expectations of accuracy, security, network speed, user involvement, and convenience and user friendliness were the major quality attributes underlying perceived usefulness. Similarly, using the TAM model, Al-Somali et al., (2004) also found that security, quality of Internet connection and awareness about Internet banking and its benefits have significant effects on the perceived usefulness and perceived ease of use in Internet banking acceptance.

2.8.9.   Perceived risks

One of the important risks faced by banking institutions in offering E-banking services is the customers resistance to use the services which significantly hinder the growth of E-banking (Zhao et al. 2008 & Laforet 2005). Issues related to security have always been a concern when dealing with technologies related to online transactions such as E-banking (Chang 2007 & Rogers 2003).

Appropriate customer protection against risks of fraud, loss of privacy, and loss of service is needed for establishing trust among consumers as trust and customer confidence is the single most necessary ingredient for growth of any branchless banking model. Therefore, the perception of the risks regarding Agent banking and Electronic banking is expected to influence its adoption and further growth.

CHAPTER THREE

3. Research Methodology

This section presents the detail methodology that was applied to obtain representative data from sampled banks and shows the logical frame work that discusses research design, definition of the target population, sampling technique, method of data collection, research instrument, inclusive and exclusive criteria and data analysis method.

3.1. Research Design

Research design is a conceptual structure with in which the research would be conducted. The starting point of the research purpose is the research problem, what are the challenging factors and prospects that influence the adoption of Agent banking and Electronic banking in Ethiopia banking industry, depending on the research problem literature review is conducted in order to specify the research question and construct framework. The research purpose and research question reveal that this study was used primarily descriptive method of research design. Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way. It sets out to collect, organize, and summarize information about the matter being studied (punch, 2006).

In order to achieve the objective of this study, quantitative research approach was used. The data was collected through questionnaires that are self administered. A questionnaire was developed and pre-tested in order to obtain the information required. Quantitative data collection methods are centered on the quantification of relationship between variables. Quantitative approach is useful as it helps the researcher to prevent bias in gathering and presenting research data (Creswell, 2003).

3.2.   Definition of Target Population

The target population of this study was all banks that are registered under National Bank of Ethiopia (NBE). There are 16 private commercial banks and 3 public banks that are registered under National Bank of Ethiopia (NBE).

3.3.   Sample Design

Sampling is the process of choosing, from a much large population, a group about which wish to make generalized statements so that the selected part represent the total group (Leedy, 1989).

The appropriateness of any sample design feature can be evaluated only in the context of the overall study objectives. The important point for the researcher is to be aware of the potential costs and benefits of the options and weigh them in terms of the main purpose of the study.

The Sample size is determined by time and budget of the researcher. This study was used purposive sampling method to draw the sample from the population. Because of time and budget constraint, the samples were restricted purposely to select ten bank head offices, and their branches residing in Addis Ababa. Those banks are Commercial Bank of Ethiopia, Awash International Bank, Dashen Bank, Bank of Abyssinia, Wegagen Bank, United Bank, Nib International Bank, Birhan International Bank, Zemen Bank and Abay Bank. Those banks that are taken as a sample from the total populations have 76% share of branch network. The procedure used for drawing the sample from the population is based on their familiarity with technological innovation, which means banks that are implemented at least one of Electronic banking product.

 The questionnaires were distributed to all targeted categories of employees of ten banks head office and branches operating in Addis Ababa, and the sample size for self-administered questionnaires were 450 employees. The numbers of bank branches were

purposively selected according to the number of branches found in Addis Ababa (the bank which had more branches was getting more chances to study).

3.4.   Method of data Collection

According to Kothari (2004) a researcher should consider two types of data, primary and secondary data. The researcher was used primary sources of data in order to gather relevant information. The primary data were collected using questionnaires. The questionnaires were structured in close-ended type and responses to the questions was measured on a five Likert rating scale where: Strongly Agree (SA) = 5; Agree (A) = 4; Neutral (N) = 3, Disagree (D) = 2; and Strongly Disagree (SD) = 1. The questionnaires were distributed physically in person to the survey participants and follow-up call was made to provide feedback, clarification and remainder.

3.5.   Inclusion and Exclusion Criteria

Inclusion: the study covered the banking industry of Ethiopia and includes all banks that are registered by National Bank of Ethiopia (NBE).

Exclusion: this study excludes from the sample banks that are not implement at least one electronic banking product and financial institutions other than bank.

3.6.   Data Analysis

The data that was collected through questionnaires are analyzed with descriptive statistics using statistical package for social scientists (SPSS). A descriptive analysis is used to present and interpret the data collected on various variables affecting adoption of Agent banking and electronic banking. Frequency tables and charts along with Percentages, mean and standard deviation were also employed to analyze the responses of the respondents.

3.7.   Ethical Considerations

Ethical clearance was primarily obtained from St. Marry University and then permission from each target organization. Finally informed written and verbal consent

were obtained from the study subjects and data collection was undertaken on the basis of their voluntarily participation. Participating respondents was ensured that information obtained will be strictly confidential.

CHAPTER FOUR

4. Result and Discussion

4.1. Introduction

This chapter presents the results and discussions of the prospects and challenges of adoption of Agent banking and Electronic banking in Ethiopian banking industry.

A descriptive statistical analysis were used to present and interpret the data collected on various variables of factors affecting adoption of Agent banking and electronic banking. Frequency tables and charts along with Percentages, mean and standard deviation are also employed to analyze the responses of the respondents.

A total of four hundred fifty (450) questionnaires were distributed to ten purposely sampled commercial bank staffs, one state owned bank (Commercial bank of Ethiopia) and nine private banks (Awash International Bank, Dashen Bank, Bank of Abyssinia, Wegagen Bank, United Bank, Nib International Bank, Birhan International Bank, Zemen Bank and Abay Bank) and the researcher received four hundred ten (410) responses from a total of four hundred fifty (450) questionnaires distributed, which represents ninety one percent (91%) response rate, thus enabling meaningful data analysis.

4.2. Respondent demographic profile

The study participants on survey questionnaire have different personal information; besides these differences they introduce different responses towards Agent banking and E-banking usage, and the factors that influence E-banking adoption. The following discussion shows these differences. The demographic profile of respondents, participated in this study was shown this section.

4.2.1. Gender

As reflected in Figure 4.1, sixty four percent of the study participants were male and thirty six percent were female. This shows that most of the study participants are male.

Figure 4.1 Gender of respondents
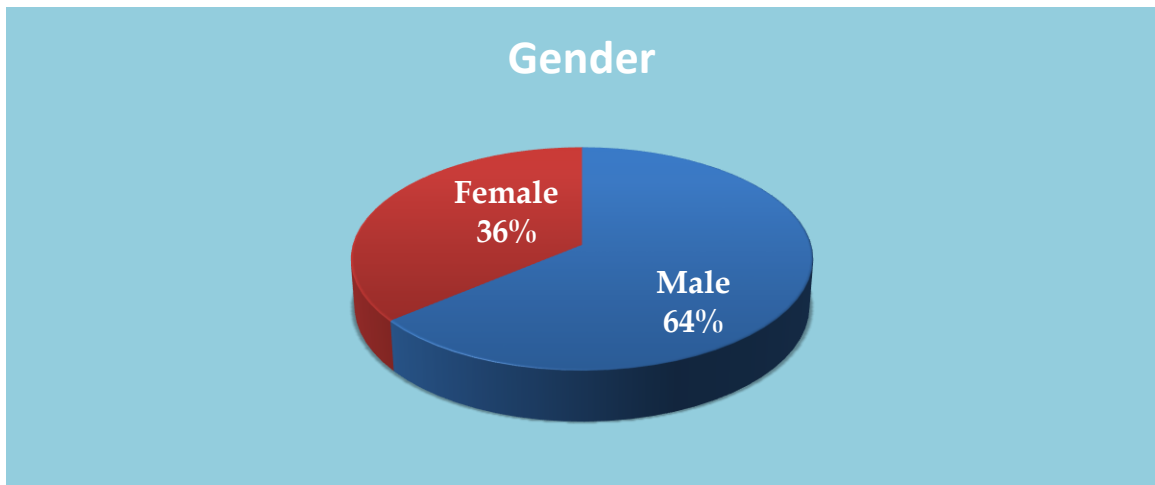
4.2.2.   Age

Figure 4.2 shows the age groups into which respondents fell. 84.4 percent of the respondents fall into the 20 to 30 age group, 14.1 percent of them in the 31 to 40 age group, 1.2 percent in the 51 to 60 age group and only 0.2 percent in the over 41 to 50 age group. The demographic age profile of the study participants shows that the 20 to 30 age group is dominant.

Figure 4.2 Age of respondents
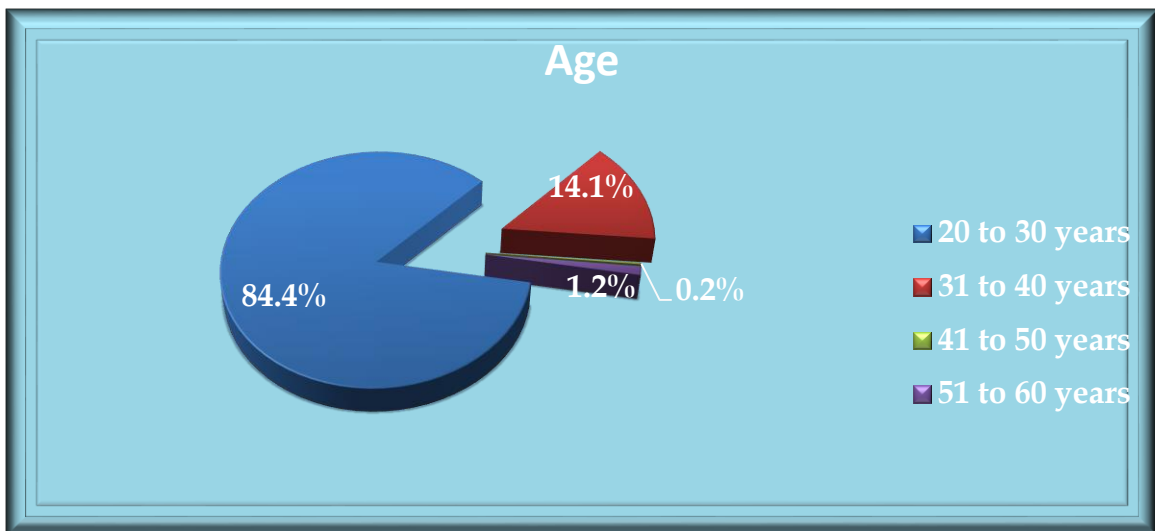
4.2.3. Education levels of Respondents

The education level of the participants varied widely. Figure 4.3 indicates that 87 percent of the respondents have a first degree, 8 percent have a master's degree, and only 5 percent have a collage diploma. This shows that the majority of respondents are first degree holders.

Figure 4.3 Educational Levels of respondents
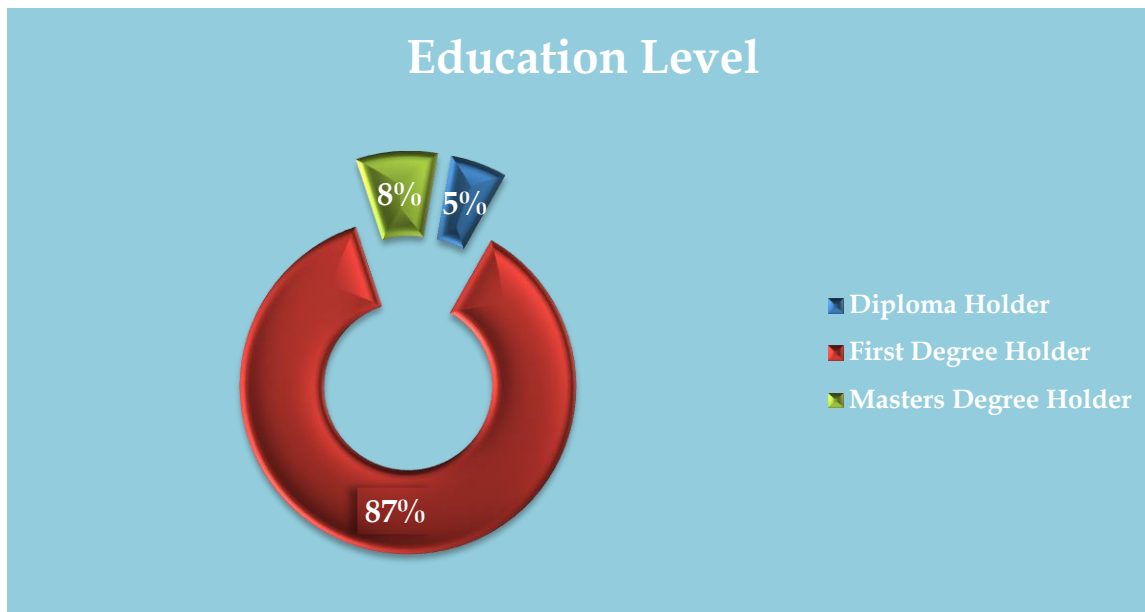
4.2.4. Employers of Respondents

As figure 4.4 shows the 72 percent of the participants are taken for sample from selected nine private banks and the rest 28 percents of respondents are from state owned bank (Commercial Bank of Ethiopia).

Figure 4.4 Employers of respondents
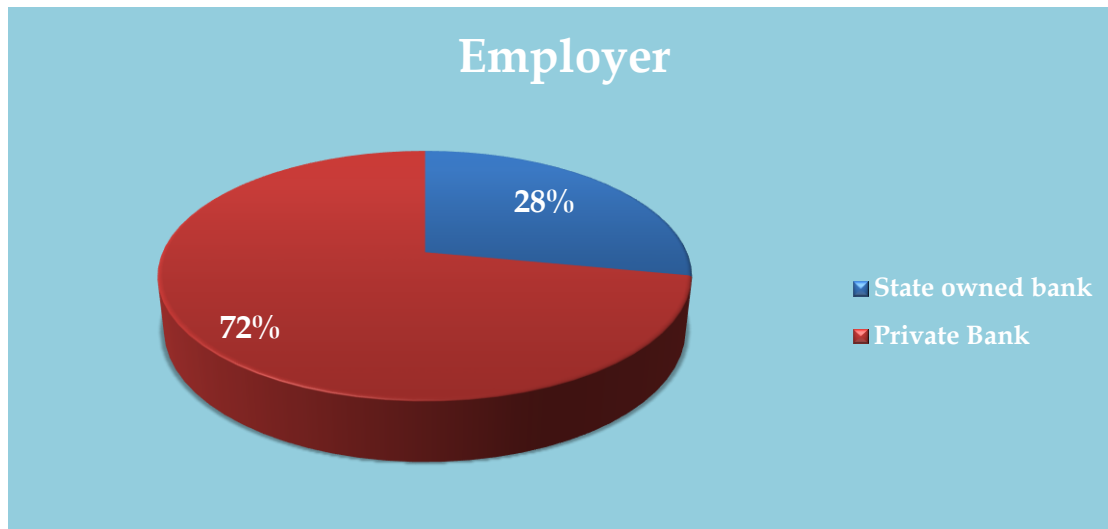
4.2.5.   Monthly Income

Figure 4.5 displays the monthly income of respondents. 47.8 percent of the respondents have monthly income ranges between ETB 4,000 to ETB 4,999, while 28.5 percent were in the ETB 5,000 to ETB 9,999 bracket.

Figure 4.5 Monthly incomes of respondents
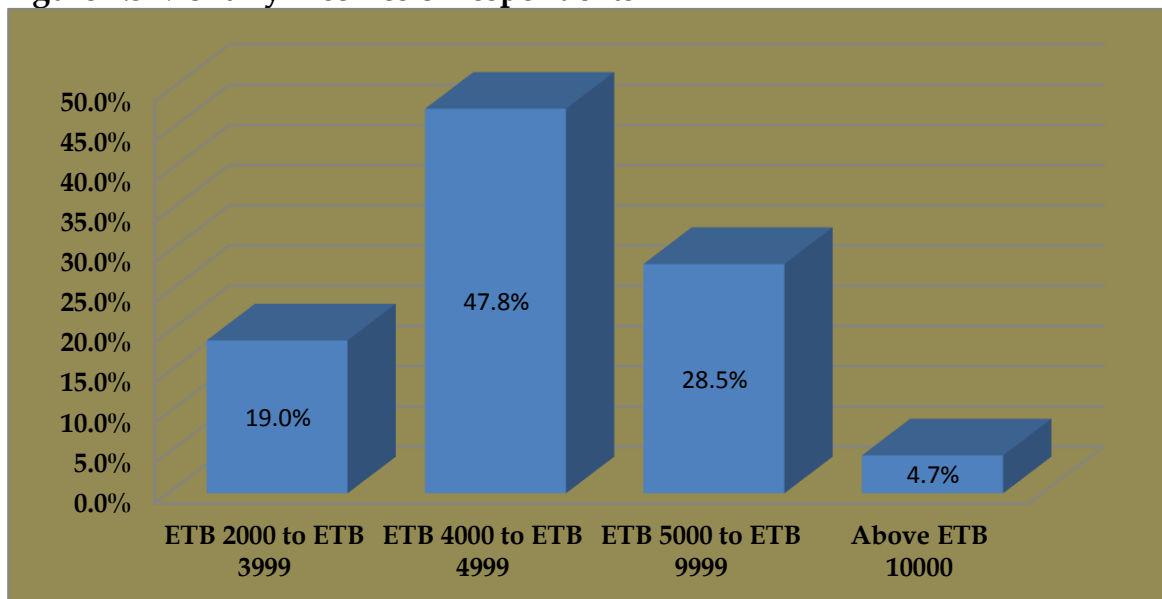
4.3. Challenges of Adopting Agent Banking and Electronic Banking

The challenging factors in adoption of Agent banking and E-banking in Ethiopian banking industry regarding to the technological factor, organizational factor and Environmental factor were analyzed in the following sections.

4.3.1. Environmental Factors

External environmental factors considered as challenges in adoption of new technology for organizations. In this section four external environmental factors are discussed, these are National ICT infrastructure, Legal and regulatory framework, Government support and Competitive pressure.

4.3.1.1. National ICT infrastructure

Despite the recent improvements made on the national infrastructure, the overall ICT infrastructure in Ethiopia remains inadequate. Table 4.1 shows the study results.

Table 4.1 National ICT infrastructure

Factors	SD	D	N	A	SA	Mean	Std Dev.
	1	2	3	4	5		
The quality of internet connection and mobile network significantly challenge adoption of Agent banking and e- banking	6	19	40	155	190	4.23	.910
	1.5%	4.6%	9.8%	37.8%	46.3%		
The development levels of ICT infrastructure significantly impacts Agent banking and electronic banking adoption.	14	28	44	157	167	4.06	1.046
	3.4%	6.8%	10.7%	38.3%	40.7%		
Lack of adequate ICT infrastructure negatively influence adoption of Agent banking and e- banking	16	42	43	144	165	3.98	1.127
	3.9%	10.2%	10.5%	35.1%	40.2%		

*Source: **Research data***

As shown in the above table, the responses were scored on a scale of 1 – 5, with 1 representing the respondents' strong disagreement and 5 representing strong agreement with each of the factors. The challenges of the quality of internet connection and mobile network for Agent banking and E-banking adoption ranked highest with the mean score of 4.23 and standard deviation of 0.91, The second factor was the development levels of ICT infrastructure was score with the mean score of 4.06 and standard deviation of 1.046 and the third factor was Lack of adequate ICT infrastructure with the mean score of 3.98 and standard deviation of 1.127. As the result of the study shows that Agent banking and E-baking requires a generally good infrastructure in terms communication and information technology. Therefore this study identified that the national ICT infrastructure are the major challenges faces the banking industry in adopting Agent banking and E-banking service.

4.3.1.2. Lack of Government Support

Government can either directly or indirectly affect the adoption of Agent banking and E-banking in terms of creating a favorable environment and impetus for banking industry and their customers so that the services can be diffused with the community. The below table shows the questionnaire results about the Government Support.

Table 4.2 lack of Government Support

Factors	SD 1	D 2	N 3	A 4	SA 5	Mean	Std Dev.
The level of development in providing infrastructural facilities (road, electric power, telecommunication and etc) to remote area of the country significantly impacts Agent and e-banking adoption	22	20	62	144	162	3.99	1.108
	5.4%	4.9%	15.1%	35.1%	39.5%		
Lack of strong push from the Government to promote Agent banking and e-banking negatively influence Agent banking and e-banking adoption	21	63	115	147	64	3.41	1.083
	5.1%	15.4%	28%	35.9%	15.6%		

*Source: **Research data***

Table 4.2 shows that the majority of the respondents agree and strongly agree 144 and 169 respectively with statement of 'The level of development in providing infrastructural facilities (road, electric power, telecommunication and etc) to remote area of the country significantly impacts Agent banking and e-banking adoption' having the mean score of 3.99 and standard deviation of 1.108. Similarly the majority of the respondents agree with 'lack of strong push from the Government to promote Agent banking and e-banking positively supports Agent banking and e-banking adoption' with the mean score of 3.41 and standard deviation of 1.083. Unlike the finding of Ayana (2012) lack of Government support was not taken as barriers for the adoption of E-banking system in Ethiopia, the finding of this study shows that lack of government support inhibit adoption agent banking and E-banking. The finding of this study were also consistent with the study of Sherah Kurnia, Fei Peng, and Yi Ruo Liu (2010), the government support is also a strong driver for e-banking adoption in China.

4.3.1.3.   Lack of Legal and Regulatory framework

The study of Gardachew (2010) revealed that lack of legal frame work is one of the challenges for E-banking system in Ethiopia. Table 4.3 shows that the response of study participant regarding the legal and regulatory framework for adoption of Agent banking and E-banking service.

Table 4.3 Legal and Regulatory framework

Factors	SD 1	D 2	N 3	A 4	SA 5	Mean	Std Dev.
Lack of legal frame works that enforce banks to adopt Agent banking and e-banking significantly impacts Agent banking and e-banking adoption.	16	61	110	153	70	3.49	1.061
	3.9%	14.9%	26.8%	37.3%	17.1%		
Lack of regulatory guidelines on Agent banking and e-banking negatively influences adoption of Agent banking and e-banking	27	60	111	134	78	3.43	1.147
	6.6%	14.6%	27.1%	32.7%	19%		

*Source: **Research data***

As the above table depicted that lack of legal framework that enforce banks to adopt agent banking and e-banking significantly impact agent banking and e-banking adoption with mean score of 3.49 and standard deviation of 1.061, similarly lack of regulatory guidelines on Agent banking and e-banking are another challenges for the adoption of agent banking and e-banking adoption having the mean score of 3.43 and standard deviation of 1.147. The study result indicates that lack of legal and regulatory frameworks hinder the implementation and development of agent banking and e-banking service in the banking industry of Ethiopia.

4.3.1.4. Lack of Competitive Pressure

The competition from both foreign and domestic private banks appears to be the most important driver for banking industry to adopt and develop agent banking and e-banking capabilities. Table 4.4 shows that the questionnaire response on lack of competitive pressure between local and foreign banks.

Table 4.4 Lack of Competitive Pressure

Factors	SD 1	D 2	N 3	A 4	SA 5	Mean	Std Dev.
Lack of competition from foreign banks negatively influences Agent banking and e-banking adoption.	41	58	91	127	93	3.42	1.259
	10%	14.1%	22.2%	31%	22.7%		
Lack of competition between local banks negatively influences Agent banking and e-banking adoption	51	89	63	148	59	3.18	1.273
	12.4%	21.7%	15.4%	36.1%	14.4%		

Source: **Research data**

The above table indicates that the largest numbers of respondents 31% and 22.7% were agree and strongly agree respectively with lack of completion from foreign banks negatively influences Agent banking and e-banking adoption with the mean score of

3.42 and standard deviation of 1.259, similarly the respondents agree with Lack of competition between local banks negatively influences Agent banking and e-banking adoption having the mean score of 3.18 and standard deviation of 1.273. The findings of this study reflect that lack of competition from both foreign banks and local banks considered as challenges for adoption and development of agent banking and e-banking service in banking industry.

4.3.2. Organizational Factors

This section cover the basic organizational factors that challenge adoption of agent banking and e-banking, these are financial resource, human resource and top management support.

4.3.2.1. Financial Resource

Financial resources are an important factor in facilitating innovation adoption for any organization and they are often correlated with the firm size (Kuan 2001 & Iacovou 1995). Table 4.5 shows the response of study participants regarding unavailability of financial resource.

Table 4.5 Financial resource

Factors	SD 1	D 2	N 3	A 4	SA 5	Mean	Std Dev.
Implementing technological innovation requires high investment cost.	8	40	53	174	135	3.95	1.012
	2%	9.8%	12.9%	42.4%	32.9%		
The size of bank significantly influences adoption of Agent banking and e-banking.	21	59	65	171	94	3.63	1.136
	5.1%	14.4%	15.9%	41.7%	22.9%		

*Source: **Research data***

As table 4.5 depicted that the majority of the respondent agree with the idea of implementing technological innovation requires high investment cost, 42.4% and 32.9% of respondents agree and strongly agree respectively with the mean score of 3.95 and standard deviation of 1.012. 41.7% and 22.9% of respondents agree and strongly agree respectively that the size of bank significantly influences adoption of Agent banking and e-banking having the mean score of 3.63 and standard deviation of 1.136. The finding result of the study shows that the firm size facilitates the required financial resource for adopting agent banking and e-banking service. However, unavailability financial resources hinder the adoption of agent banking and e-banking services.

4.3.2.2.   Human Resource

In addition to financial resource, human resources also important factors in adoption of new technology. The results of the study presented in table 4.6 regarding human resource on adoption of agent banking and e-banking services.

Table 4.6 Human resource

Factors	SD 1	D 2	N 3	A 4	SA 5	Mean	Std Dev.
Lack of technical and managerial skills of staffs on using technological innovation negatively influences adoption of Agent banking and e-banking.	9	42	76	159	124	3.85	1.036
	2.2%	10.2%	18.5%	38.8%	30.2%		
Lack of skilled IT personnel's in implementing technological innovation negatively influences adoption of Agent banking and e-banking.	19	52	45	159	135	3.83	1.156
	4.6%	12.7%	11%	38.8%	32.9%		
Educational level and skill of Agents significantly impact adoption of agent banking.	10	42	107	165	86	3.67	0.997
	2.4%	10.2%	26.1%	40.2%	21%		

*Source: **Research data***

Result reported on table 4.6 shows that mean score of 3.85 and standard deviation of 1.036 for the question of Lack of technical and managerial skills of staffs on using technological innovation negatively influences adoption of Agent banking and e-banking, the majorities of the respondents agree and strongly agree 38.8% and 30.2% respectively out of the total respondents. Lack of skilled IT personnel's in implementing technological innovation with the mean of 3.83and standard deviation of 1.156 in which 38.8% and 32.9% of the study participant responds that they are agree and strongly agree respectively. Educational level and skill of Agents is also another challenges of adoption of agent banking having the mean score of 3.67 and standard deviation of 0.997, from the total respondents 40.2% and 21% of the respondents agree and strongly agree respectively. The finding results of the study indicate that human resources factors considered as the challenging factors for adoption of agent banking and e-banking.

4.3.2.3. Top Management Support

Top management support plays very important role in adoption of new technological innovation. Table 4.7 shows the response of the questionnaire about top management support for agent banking and e-banking adoption.

Table 4.7 Top Management Support

Factors	SD	D	N	A	SA	Mean	Std Dev.
	1	2	3	4	5		
Commitments of top level management to adopt new technology positively influences adoption of Agent banking and e-banking	12	44	53	187	114	3.85	1.039
	2.9%	10.7%	12.9%	45.6%	27.8		
Top management support by providing sufficiently the required resource to have positive impact in adopting Agent banking and E-banking	19	38	96	172	85	3.65	1.053
	4.6%	9.3%	23.4%	42%	20.7%		

*Source: **Research data***

As the above table indicates that the majority of the study participant replies that commitments of top level management to adopt new technology positively influences adoption of Agent banking and e-banking with the mean and standard deviation of 3.85 and 1.039 respectively. Similarly the large numbers of respondents agree with the top management support by providing sufficiently the required resource to have positive impact in adopting Agent banking and E-banking with the mean score and standard deviation of 3.65 and 1.053 respectively. The finding of this study shows that top management support was found to be the main enabler of the success of e-banking adoption.

4.3.3.   Technological Factors

4.3.3.1.   Perceived Risk

The perception of the risks regarding agent banking and e-banking is expected to influence the adoption and further growth. Table 4.8 shows participant responses on perceived risk of agent banking and e-banking service.

Table 4.8 Perceived Risk

Factors	SD 1	D 2	N 3	A 4	SA 5	Mean	Std Dev.
Lack of confidence with the security aspects negatively influences adoption of Agent banking and e-banking.	24	24	66	189	107	3.81	1.072
	5.9%	5.9%	16.1%	46.1%	26.1%		
Customers fear risk of new technology innovation	21	26	105	145	113	3.74	1.087
	5.1%	6.3%	25.6%	35.4%	27.6%		
Lack of availability of physical security negatively impact adoption of agent banking	28	45	115	158	64	3.45	1.092
	6.8%	11%	28%	38.5%	15.6%		

Source: **Research data**

As the above table indicates that the respondents were agreed on the lack of confidence with security of e-banking products and agent banking services with the mean score of 3.81 and standard deviation of 1.072 and similarly the response of respondents as shown on the above table the customers fear of new technology innovation another challenges for agent banking and e-banking adoption with the mean of 3.74 and standard deviation of 1.092. Lack of availability of physical security with the agent's location was considered as challenge for agent banking adoption and further growth. These results were consistent with the findings of Ayana (2012) in which lack of confidence with the security aspect is considered as challenge for the adoption E-banking.

4.3.4. Other Challenging Factors

In addition to challenges of technological factors, environmental factors and organizational factors, there are other factors that challenge the adoption and further growth of agent banking and e-banking for the banking industry of Ethiopia. Table 4.9 shows the results of the study.

Table 4.9 Other Challenging Factors

Factors	SD 1	D 2	N 3	A 4	SA 5	Mean	Std Dev.
The maximum limits on E-banking products e.g. daily withdrawal limit from ATM, daily transfer amount limit by mobile banking and daily payment limit using POS, has an impact on success of Electronic Banking services	10	45	67	157	131	3.86	1.061
	2.4%	11%	16.3%	38.3%	32%		
Daily withdrawal limit from Agent and limits of deposit with Agent has an impact on success of Agent Banking services.	14	27	135	167	67	3.60	0.952
	3.4%	6.6%	32.9%	40.7%	16.3%		
Proximity and accessibility to a bank branch by the retail agent's impacts Agent Banking success	11	28	123	200	48	3.60	0.880
	2.7%	6.8%	30%	48.8%	11.7%		

Managing credit risk, operational risk, Liquidity risk and reputational risk greatly influence adoption of agent banking	10	23	155	160	62	3.59	0.897
	2.4%	5.6%	37.8%	39%	15.1%		
Collaboration with other banks on various aspects e.g. receiving agents' deposits on behalf of other banks has an impact on provision of Agent Banking services.	12	42	131	162	63	3.54	0.969
	2.9%	10.2%	32%	39.5%	15.4%		

Source: **Research data**

As table 4.9 depicted the study result the majority of respondent were agree and strongly agree with 38.3% and 32% respectively that the maximum limits on e-banking products usage per day challenges the adoption of e-banking service with the mean score of 3.86 and standard deviation of 1.061. Daily withdrawal limit from agent and limits of deposit with agent has an impact on success of agent banking services with the mean value of 3.60 and standard deviation of 0.952. Proximity and accessibility to a bank branch by the retail agent's impacts agent banking success with the mean value of 3.60 and standard deviation of 0.880.

The other challenge for agent banking was risk management with a mean score of 3.59 and standard deviation of 0.897. The use of retail agents will increase credit, operational, liquidity and reputational risk to banks. The time lag between collection of deposits from customers and remitting it to banks generates credit risk. Inadequate physical or electronic security, frauds and errors lead to operational risk. Agents may not have enough cash to meet withdrawal demands, hence liquidity risk. If retail agents underperform, the bank's image suffers hence reputational risk. These results were consistent with the findings of Daissy (2011) in which risk management challenges agent banking successes. Collaboration with other banks on various aspects e.g. receiving agents' deposits on behalf of other banks has an impact on provision of Agent banking services with the mean value of 3.54 and standard deviation of 0.969.

4.4.   Prospects of Adopting Agent Banking and Electronic Banking

It should be noted that E-banking can bring about various benefits for banks and their customers as well. It is obvious that cost savings, efficiency, gaining new segments of customers, improvement of the banks reputation and better customer services and satisfaction are primary benefits to banks (Jayawardhena & Foley, 2000). E-banking is really beneficial to customers in terms of cost savings, no limit on time and space, quick response to customer complaints, and better services/products. Such benefits are believed to elevate customer satisfaction.

Agency banking represents a significant opportunity to reduce transaction costs such as travel for clients by bringing financial services to hard-to-reach and geographically dispersed areas. Obviously, the set-up of agent banks is less costly and more flexible than for traditional bank branches since it reduces the need to invest in staff and physical infrastructure. These views are supported by Kithaka (2001) and Kasekende (2008) among other researchers.

4.4.1.   Perceived Benefits

4.4.1.1.   Perceived Ease of Use

Perceived ease of use represents the degree to which an innovation is perceived as easy to understand, learn or operate. AC Nielsen Consult (2002) noted that the drivers of growth in electronic banking are determined by the perceived ease of use, thereby making perceived ease of use a major factor affecting the acceptance of any information system. Table 4.10 shows that the respondents levels of agreement on the perception of ease of use of agent banking and e-banking products.

Table 4.10 Perceived ease of use

Factors	SD 1	D 2	N 3	A 4	SA 5	Mean	Std Dev.
Bank provide simple instruction how to use e-banking services	31	60	67	195	57	3.46	1.129
	7.6%	14.6%	16.3%	47.6%	13.9%		
Agent banking services are compatible with the bank existing service offering	15	47	152	149	47	3.40	0.960
	3.7%	11.5%	37.1%	36.3%	11.5%		
Agent banking is easy to understand and use	29	88	139	115	39	3.11	1.072
	7.1%	21.5%	33.9%	28%	9.5%		
Electronic banking products are easily understand and used by customers	35	129	87	115	44	3.01	1.170
	8.5%	31.5%	21.2%	28%	10.7%		

*Source: **Research data***

As table 4.10 shows the result of the study that 61.5% the respondents were agreed on their bank provide simple instruction how to use e-banking products with the mean value of 3.46 and standard deviation of 1.129. From the total of the study participant 47.8% of respondents were agreed that agent banking services are compatible with the bank existing service offering and only 15.2% of respondents were not agreed on this point and having the mean score of 3.4 and standard deviation of 0.960.

The other question the respondents that were asked to indicate the extent they agree with the statement 'Agent banking is easy to understand and use' 38% of the respondents were agreed, 28.6% of them were not agree and 33.9% of them were responded that they are neutral of this point and the mean score of 3.11 and standard deviation of 1.072. However, 40% of respondents were disagreed that electronic banking products are easily understand and used by customers and only 39% of them agreed and the mean value of 3.01 and standard deviation of 1.170. The results of the

study indicate that e-banking products are not easily understand and used by the customers but e-banking products simplifying banking activity.

4.4.1.2. Perceived Usefulness

Perceived usefulness has long been found to have a significant influence on attitude and intention to use or adopt an innovation (Yuttapong et al., 2009; Sheikhshoaei and Oloumi, 2011; Zhou, 2011). It is the extent to which a user believes that a particular system would improve their performance (Hosein, 2010). Table 4.11 shows the result of the study with regards to perceive usefulness of agent banking and e-banking adoption.

Table 4.11 Perceived usefulness

Factors	SD	D	N	A	SA	Mean	Std Dev.
	1	2	3	4	5		
E-banking services are save time and cost of users	9	21	25	123	232	4.34	0.958
	2.2%	5.1%	6.1%	30%	56.6%		
Agent banking and E-banking services are increased the productivity of bank	7	7	49	141	206	4.30	0.870
	1.7%	1.7%	12%	34.4%	50.2%		
E-banking improve customer service	8	8	53	145	196	4.25	0.894
	2%	2%	12.9%	35.4%	47.8%		
Agent banking and e-banking create wider market coverage for bank	9	13	53	157	178	4.18	0.927
	2.2%	3.2%	12.9%	38.3%	43.4%		
E-banking service helps to perform banking tasks in a simple way	13	27	35	160	175	4.11	1.025
	3.2%	6.6%	8.5%	39%	42.7%		
E-banking services are reduce bank hall queue	10	15	79	138	168	4.07	0.983
	2.4%	3.7%	19.3%	33.7%	41%		
E-banking services are accessible without time limit	31	41	50	142	146	3.81	1.235
	7.6%	10%	12.2%	34.6%	35.6%		
Agent banking will enhance access to the bank service by both existing and new customers	16	21	92	194	87	3.77	0.970
	3.9%	5.1%	22.4%	47.3%	21.2%		

*Source: **Research data***

As table 4.11 indicates that the majority of respondents were agreed that e-banking services save time and cost of users with the mean score of 4.34 and standard deviation of 0.958. This shows that the clients of the bank can save their time and money by using e-banking products in order to withdraw money from their account, to make payments, to transfer funds and to check the account balance without the need to travel long distance to get bank branch. The other benefits gained from implementing of E-banking system are that it increase the productivity of bank, were the mean and standard deviation of 4.30 and 0.870 respectively. The majority of respondents were agreed that E-banking improve customer service with the mean value of 4.25 and standard deviation of 0.894. This implies that in addition to increasing the productivity, adopting E-banking products improve customer service and satisfaction. On the other hand Agent banking and e-banking create wider market coverage for bank with the mean and standard deviation of 4.18 and 0.927 respectively. This indicate that the bank would not be limited by geographical location to provide banking service to customer by hiring retail agents in a remote area without the need to open branch and If banks can use sufficient technological tools to deliver service, such as ATM, Internet, Mobile and POS terminal. Most of the respondents were agreed that E-banking service helps to perform banking tasks in a simple way with the mean value of 4.11 and standard deviation of 1.025. This shows that using of E-banking system helps bank staff to perform banking activity quickly by employing a low amount of resources. For the question of E-banking services are reduce bank hall queue, were the mean and standard deviation of 4.07 and 0.983 respectively. As the bank implement and provide e-banking services delivery channels widely, the number of customer come to bank branch can reduced in compared to those banks that do not adopt e-banking service. E-banking services are accessible without time limit twenty four hours a day and seven days in a week, with the mean and standard deviation of 3.81 and 1.235 respectively.

In addition to the above mentioned benefits Agent banking will enhance access to the bank service by both existing and new customers with the mean and standard deviation

of 3.77 and 0.970 respectively. The study findings show that increasing the area covered by agents within the country has had the effects of increasing the reach of the financial services to the people thus raising the levels of financial inclusion because a certain parts of the population would not visit the bank branches for various reasons. The findings in summary show that agent banking has the effect of increasing the level of financial inclusion in this countries.

4.5. Likelihood of Agent banking and E-banking Adoption

The respondents were asked to state to what extent their respective banks consider adopting agent banking and e-banking. The results are shown in Table 4.12.

Table 4.12 Likelihood of Agent banking and E-banking Adoption

Factors	Not applicable 1	To a limited extent 2	To a moderate extent 3	To a great extent 4	To a very great extent 5	Mean	Std Dev.
likelihood of E-banking adoption	20	83	116	110	81	3.36	1.152
	4.9%	20.2%	28.3%	26.8%	19.8%		
likelihood of Agent banking adoption	180	82	71	49	28	2.18	1.295
	43.9%	20%	17.3%	12%	6.8%		

*Source: **Research data***

The likert scale gave 5 levels. "Not applicable" is the first level and it represents banks which are not considering having E-banking products and only 4.9% of respondents were reply that their banks are not considering having E-banking products. The next level is "to a limited extent" 20.2% representing banks which are considering having only very few e-banking products. The third level is "to a moderate extent" and 28.3% represents banks that are considering having a good number of e-banking products.

The fourth level "to a great extent" 26.8% represents banks that are considering implementing a large number of e-banking products. The fifth level "to a very great extent" 19.8% represents banks which are considering having very wide market coverage by increasing the number of ATM and POS machines installed, Mobile and Internet banking. As shown in Table 4.12, the mean score of 3.36 and the standard deviation of 1.152 indicate that a high inclination towards the adoption of e-banking by most respondent banks.

For the question that were asked to state to what extent their respective banks consider adopting agent banking, the large numbers of respondents (43.9%) were replies that their respective banks are not considering having retail agents, 20% were replies that their respective banks are considering having only very few agents, 17.3% their banks that are considering having a good number of retail agents, 12% of respondents banks that are considering recruiting a large number of agents and only 6.8% of respondents bank which are considering having a very wide coverage of retail agents and have already embarked on recruitment of agents. The study result shows the mean score of 2.18 and the standard deviation of 1.295 indicate that most respondent banks are does not considering towards the adoption of agent banking.

CHAPTER FIVE

5. Summary of Findings, Conclusion and Recommendation

5.1. Summary of Findings

Guided by the technology-organization-environment (TOE) framework, this study has identified a number of challenges to agent banking and e-banking adoption on the other hand the prospects/benefits from adoption of agent banking and e-banking. The overall finding of the study is consistent with other studies on technology adoption in developing countries.

The findings of the study indentified challenges to agent banking and e-banking adoption under TOE framework was indicate that lack of adequate national ICT infrastructure ranked first. Lack of financial resource, lack of human resource and top management support ranked second, third and fourth respectively from organizational factor. The fifth challenge that identified was lack of government support in providing infrastructural facilities. The sixth ranked challenge was lack of confidence in the security aspects, lack of availability of physical security in agent location and fear of new technology innovation risk from perceived risk. Lack of legal and regulatory framework and lack of competition between local and foreign bank was ranked seventh and eighth challenge.

In addition to TOE framework, the finding of the study indentified some challenges of agent banking and e-banking adoption. The maximum limits on E-banking products usage, daily withdrawal limit from Agent Bank and limits of deposit with Agent bank, proximity and accessibility to a bank branch by the retail, risk managements in agent banking and collaboration with other banks on various aspects e.g. receiving agents' deposits on behalf of other banks, were identified as challenges to adoption of agent banking and e-banking.

The finding of this study indentified perceived benefits of agent banking and e-banking adoption. Perceived ease of use is taken as a benefit of using agent banking and e-banking system. The results of the study indicate that e-banking products are not easily understand and used by the customers but e-banking products simplifying banking activity.

In general the finding of the study identified other benefits of agent banking and e-banking adoption, such as saving time and cost of users, increased productivity of bank, improve customer service, create wider market coverage, simplify banking activity for staff, reduce bank hall queue, accessible without time limit and enhance access to the bank service by both existing and new customers.

5.2. Conclusion

From the analysis made in the preceding chapter, the following conclusions are drawn.

E-banking system, such as ATM, mobile banking, internet banking, point of sale terminals and others were not well adopted by Ethiopian banking industry. This is due to the development levels of ICT infrastructure and the poor quality of internet connection and mobile network is a major obstacle for agent banking and e-banking to effectively deliver services.

In addition to national ICT infrastructure the firm size plays important role in facilitating the required financial resource and human resource for adopting e-banking system. Lack of skilled IT personnel in implementing technological innovation is another challenge for the banking industry of Ethiopia. Technical and managerial skills available in Ethiopian banks for the adoption of E-banking are also limited. This is influence the choice of technology in Ethiopian banking industry.

Strong top management support becomes an essential requirement when the e-banking initiatives have to be implemented. With a strong and proactive top management

support, banking industry of Ethiopia will able to launch deep and large scale organizational change programs to facilitate agent banking and e-banking.

Government initiatives are the most significant factor determining the extent and deployment of E-business adoption, lack of government support is challenges for banking industry in adopting new technological innovation in Ethiopia. The level of security risk associated with E-banking product, lack of confidence with the security and lack of physical security in agent location challenge the banking industry. Result of the study also shows that lack of legal and regulatory frame works that enforce banks to adopt Agent banking and e-banking system and lack of competition between local banks and foreign banks is also another challenge for the adoption of agent banking and e-banking in the country.

The maximum daily limits of withdrawal from ATM, daily transfer amount limit by mobile banking and daily payment limits of using POS machines is another challenge for further growth of e-banking system in the country.

The maximum balance that should be maintained in a mobile agent account should be Birr 25,000.00 and daily transaction (debit) not to exceed Birr 6,000.00, proximity and accessibility to a bank branch by the retail agent's, collaboration with other banks on various aspects e.g. receiving agents' deposits on behalf of other banks and risk management of agent banking is also other challenges for agent banking adoption in Ethiopia.

Based on the result obtained in the study the banking industry gained a lot of benefits from adoption of agent banking and e-banking services. Perceived Ease of use is one of the basic benefits for banks, in which it enables bank staff to perform banking activities in a simple way. In general the finding of the study identified other benefits of agent banking and e-banking adoption, such as time and cost saving, increased productivity of bank, improves customer service, create wider market coverage, simplify banking activity for staff, reduce bank hall queue, accessible without time limit, enhancing

access to the bank service by both existing and new customers and enhancing financial inclusion.

5.3. Recommendations

Based on the above conclusion the researcher recommends the following points that will help the banking industry of Ethiopia in minimizing the challenges faces the adoption of agent banking and e-banking system;

- ➢ Without an adequate development level and quality of a national ICT infrastructure, Agent banking and E-banking adoption and use cannot do well, so Ethio telecom have to support banking industry by investing on ICT infrastructure development in order to improve service of the telecom.
- ➢ The government supports the banking industry by introducing financial education program.
- ➢ Banks should launch campaigns to create direct awareness to potential adopters, issues such as fear of the lack of privacy and security, together with relative advantages of using Agent banking services and E-banking products.
- ➢ The introduction of third party retail agents has several risk factors with regard to effective regulation and supervision of banks, which include operational risks, money laundering, credit risk and reputational risk. It is therefore recommended that, the regulator closely monitors the banking sector and strictly enforces compliance with the agent banking guidelines, while the banks continuously ensure careful vetting of agents.
- ➢ National Bank of Ethiopia, (NBE) needs to urgently establish a comprehensive legal and regulatory frame works on the use of technological innovation and the use of third party retail agents in banking sector.
- ➢ The government considers allowing foreign banks entry to enhance the competition and introduction of modern technology in the banking sector.

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Appendix I

SAINT MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Dear Respondents

I am a graduate student at Saint Mary's University. I am undertaking a survey on the Prospects and Challenges Influencing the Adoption of Agent Banking and Electronic Banking in Ethiopian Banking Industry, in partial fulfillment of the requirement for the award of a Master of Business Administration (MBA) in Accounting and Finance.

I therefore request for your kind assistance in completing the attached questionnaire to the best of your knowledge. The information you give will be treated with strict confidence and is solely will be used for academic purposes. A copy of the final report will be availed to you upon request.

Your assistance and co-operation will be highly appreciated.

Thank you.

Anuwar Abdulkadir

0926372829

Section One: Questionnaire

Part I: Demographic Details

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

1. Gender:

Male ⬭   Female ⬭

2. Age:

20 to 30 years ⬭   31 to 40 years ⬭

41 to 50 years ⬭   51 to 60 years ⬭

3. Educational level:

Diploma holder ⬭   First degree holder ⬭

Masters degree ⬭

4. Employer:

State owned bank ⬭   Private bank ⬭

5. Monthly Income:

Less than Br 2000 ⬭   Br 2000 to Br 3999 ⬭

Br4000 to Br 4999 ⬭   Br 5000 to Br 9999 ⬭

Above Br 10000 ⬭

6. To what extent do your banks consider adopting agency banking and E-banking?

Agent Banking		**E-Banking**	
Not applicable	⬭	Not applicable	⬭
To a limited extent	⬭	To a limited extent	⬭
To a moderate extent	⬭	To a moderate extent	⬭
To a great extent	⬭	To a great extent	⬭
To a very great extent	⬭	To a very great extent	⬭

Part II: Challenges and prospects of adopting Agent banking and Electronics banking in Ethiopian banking industry.

Kindly indicate by ticking (√) the extent to which you agree with each of the following statements as regards the adoption of Agent banking and E-banking by your bank.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	**2**	**3**	**4**	**5**
1. Environmental Factors					
National ICT infrastructure — Lack of adequate ICT infrastructure negatively influence adoption of Agent banking and e- banking					
The quality of internet connection and mobile network significantly challenge adoption of Agent banking and e- banking					
The development levels of ICT infrastructure significantly impacts Agent banking and electronic banking adoption.					
Legal and regulatory framework — Lack of regulatory guidelines on Agent banking and e-banking negatively influences adoption of Agent banking and e-banking.					
Lack of legal frame works that enforce banks to adopt Agent banking and e-banking significantly impacts Agent banking and e-banking adoption.					
Government support — Lack of strong push from the Government to promote Agent banking and e-banking positively supports Agent banking and e-banking adoption.					
The level of development in providing infrastructural facilities (road, electric power, telecommunication and etc) to remote area of the country significantly impacts Agent banking and e-banking adoption.					
Competitive pressure — Lack of competition between local banks negatively influences Agent banking and e-banking adoption.					
Lack of competition from foreign banks negatively influences Agent banking and e-banking adoption.					
2. Organizational Factors					
Financial resource — Implementing technological innovation requires high investment cost.					
The size of bank significantly influences adoption of Agent banking and e-banking.					
Human resource — Lack of skilled IT personnel's in implementing technological innovation negatively influences adoption of Agent banking and e-banking.					

	Lack of technical and managerial skills of staffs on using technological innovation negatively influences adoption of Agent banking and e-banking.					
	Educational level and skill of Agents significantly impact adoption of agent banking.					
Top management support	Commitments of top level management to adopt new technology positively influences adoption of Agent banking and e-banking.					
	Top management support by providing sufficiently the required resource to adopt Agent banking and E-banking					
3. Technological Factors						
Perceived risk	Lack of confidence with the security aspects negatively influences adoption of Agent banking and e-banking.					
	Lack of availability of physical security negatively impact adoption of agent banking.					
	Customers fear risk of new technology innovation					
Perceived ease of use	Electronic banking products are easily understand and used by customers.					
	Agent banking is easy to understand and use					
	Bank provide simple instruction how to use e-banking services					
	E-banking service helps to perform banking tasks in a simple way.					
	Agent banking services are compatible with the bank existing service offering.					
Perceived usefulness	Agent banking will enhance access to the bank service by both existing and new customers					
	E-banking services are accessible without time limit.					
	E-banking improve customer service					
	E-banking services are save time and cost of users					
	Agent banking and E-banking services are increased the productivity of bank					
	E-banking services are reduce bank hall queue					
	Agent banking and e-banking create wider market coverage for bank.					
Other	Daily withdrawal limit from Agent Bank and limits of deposit with Agent bank has an impact on					

success of Agent Banking services.					
Managing credit risk, operational risk, Liquidity risk and reputational risk greatly influence adoption of agent banking.					
Proximity and accessibility to a bank branch by the retail agent's impacts Agent Banking success.					
Collaboration with other banks on various aspects e.g. receiving agents' deposits on behalf of other banks has an impact on provision of Agent Banking services.					
The maximum limits on E-banking products e.g. daily withdrawal limit from ATM, daily transfer amount limit by mobile banking and daily payment limit using POS, has an impact on success of Electronic Banking services.					

Your participation and assistance is highly appreciated!

Appendix II

    Descriptive statistics Result

1. Lack of adequate ICT infrastructure negatively influence adoption of Agent banking and e- banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	3.9	3.9	3.9
	Disagree	42	10.2	10.2	14.1
	Neutral	43	10.5	10.5	24.6
	Agree	144	35.1	35.1	59.8
	Strongly Agree	165	40.2	40.2	100.0
	Total	410	100.0	100.0	

2. The quality of internet connection and mobile network significantly challenge adoption of Agent banking and e- banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	1.5	1.5	1.5
	Disagree	19	4.6	4.6	6.1
	Neutral	40	9.8	9.8	15.9
	Agree	155	37.8	37.8	53.7
	Strongly Agree	190	46.3	46.3	100.0
	Total	410	100.0	100.0	

3. The development levels of ICT infrastructure significantly impacts Agent banking and electronic banking adoption.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	3.4	3.4	3.4
	Disagree	28	6.8	6.8	10.2
	Neutral	44	10.7	10.7	21.0
	Agree	157	38.3	38.3	59.3
	Strongly Agree	167	40.7	40.7	100.0
	Total	410	100.0	100.0	

4. Lack of regulatory guidelines on Agent banking and e-banking negatively influences adoption of Agent banking and e-banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	27	6.6	6.6	6.6
	Disagree	60	14.6	14.6	21.2
	Neutral	111	27.1	27.1	48.3
	Agree	134	32.7	32.7	81.0
	Strongly Agree	78	19.0	19.0	100.0
	Total	410	100.0	100.0	

5. Lack of legal frame works that enforce banks to adopt Agent banking and e-banking significantly impacts Agent banking and e-banking adoption.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	3.9	3.9	3.9
	Disagree	61	14.9	14.9	18.8
	Neutral	110	26.8	26.8	45.6
	Agree	153	37.3	37.3	82.9
	Strongly Agree	70	17.1	17.1	100.0
	Total	410	100.0	100.0	

6. Lack of strong push from the Government to promote Agent banking and e-banking positively supports Agent banking and e-banking adoption.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	21	5.1	5.1	5.1
	Disagree	63	15.4	15.4	20.5
	Neutral	115	28.0	28.0	48.5
	Agree	147	35.9	35.9	84.4
	Strongly Agree	64	15.6	15.6	100.0
	Total	410	100.0	100.0	

7. The level of development in providing infrastructural facilities (road, electric power, telecommunication and etc) to remote area of the country significantly impacts Agent banking and e-banking adoption.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	22	5.4	5.4	5.4
	Disagree	20	4.9	4.9	10.2
	Neutral	62	15.1	15.1	25.4
	Agree	144	35.1	35.1	60.5
	Strongly Agree	162	39.5	39.5	100.0
	Total	410	100.0	100.0	

8. Lack of competition between local banks negatively influences Agent banking and e-banking adoption.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	51	12.4	12.4	12.4
	Disagree	89	21.7	21.7	34.1
	Neutral	63	15.4	15.4	49.5
	Agree	148	36.1	36.1	85.6
	Strongly Agree	59	14.4	14.4	100.0
	Total	410	100.0	100.0	

9. Lack of competition from foreign banks negatively influences Agent banking and e-banking adoption.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	41	10.0	10.0	10.0
	Disagree	58	14.1	14.1	24.1
	Neutral	91	22.2	22.2	46.3
	Agree	127	31.0	31.0	77.3
	Strongly Agree	93	22.7	22.7	100.0
	Total	410	100.0	100.0	

10. Implementing technological innovation requires high investment cost.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	2.0	2.0	2.0
	Disagree	40	9.8	9.8	11.7
	Neutral	53	12.9	12.9	24.6
	Agree	174	42.4	42.4	67.1
	Strongly Agree	135	32.9	32.9	100.0
	Total	410	100.0	100.0	

11. The size of bank significantly influences adoption of Agent banking and e-banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	21	5.1	5.1	5.1
	Disagree	59	14.4	14.4	19.5
	Neutral	65	15.9	15.9	35.4
	Agree	171	41.7	41.7	77.1
	Strongly Agree	94	22.9	22.9	100.0
	Total	410	100.0	100.0	

12. Lack of skilled IT personnel's in implementing technological innovation negatively influences adoption of Agent banking and e-banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	19	4.6	4.6	4.6
	Disagree	52	12.7	12.7	17.3
	Neutral	45	11.0	11.0	28.3
	Agree	159	38.8	38.8	67.1

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Agree	135	32.9	32.9	100.0
	Total	410	100.0	100.0	

13. Lack of technical and managerial skills of staffs on using technological innovation negatively influences adoption of Agent banking and e-banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.2	2.2	2.2
	Disagree	42	10.2	10.2	12.4
	Neutral	76	18.5	18.5	31.0
	Agree	159	38.8	38.8	69.8
	Strongly Agree	124	30.2	30.2	100.0
	Total	410	100.0	100.0	

14. Educational level and skill of Agents significantly impact adoption of agent banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	2.4	2.4	2.4
	Disagree	42	10.2	10.2	12.7
	Neutral	107	26.1	26.1	38.8
	Agree	165	40.2	40.2	79.0

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Agree	86	21.0	21.0	100.0
	Total	410	100.0	100.0	

15. Commitments of top level management to adopt new technology positively influences adoption of Agent banking and e-banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	2.9	2.9	2.9
	Disagree	44	10.7	10.7	13.7
	Neutral	53	12.9	12.9	26.6
	Agree	187	45.6	45.6	72.2
	Strongly Agree	114	27.8	27.8	100.0
	Total	410	100.0	100.0	

16. Top management support by providing sufficiently the required resource to adopt Agent banking and E-banking

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	19	4.6	4.6	4.6
	Disagree	38	9.3	9.3	13.9
	Neutral	96	23.4	23.4	37.3
	Agree	172	42.0	42.0	79.3

Strongly Agree	85	20.7	20.7	100.0
Total	410	100.0	100.0	

17. Lack of confidence with the security aspects negatively influences adoption of Agent banking and e-banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	24	5.9	5.9	5.9
	Disagree	24	5.9	5.9	11.7
	Neutral	66	16.1	16.1	27.8
	Agree	189	46.1	46.1	73.9
	Strongly Agree	107	26.1	26.1	100.0
	Total	410	100.0	100.0	

18. Lack of availability of physical security negatively impact adoption of agent banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	28	6.8	6.8	6.8
	Disagree	45	11.0	11.0	17.8
	Neutral	115	28.0	28.0	45.9
	Agree	158	38.5	38.5	84.4

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Agree	64	15.6	15.6	100.0
	Total	410	100.0	100.0	

19. Customers fear risk of new technology innovation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	21	5.1	5.1	5.1
	Disagree	26	6.3	6.3	11.5
	Neutral	105	25.6	25.6	37.1
	Agree	145	35.4	35.4	72.4
	Strongly Agree	113	27.6	27.6	100.0
	Total	410	100.0	100.0	

20. Electronic banking products are easily understand and used by customers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	35	8.5	8.5	8.5
	Disagree	129	31.5	31.5	40.0
	Neutral	87	21.2	21.2	61.2
	Agree	115	28.0	28.0	89.3
	Strongly Agree	44	10.7	10.7	100.0

20. Electronic banking products are easily understand and used by customers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	35	8.5	8.5	8.5
	Disagree	129	31.5	31.5	40.0
	Neutral	87	21.2	21.2	61.2
	Agree	115	28.0	28.0	89.3
	Strongly Agree	44	10.7	10.7	100.0
	Total	410	100.0	100.0	

21. Agent banking is easy to understand and use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	29	7.1	7.1	7.1
	Disagree	88	21.5	21.5	28.5
	Neutral	139	33.9	33.9	62.4
	Agree	115	28.0	28.0	90.5
	Strongly Agree	39	9.5	9.5	100.0
	Total	410	100.0	100.0	

22. Bank provide simple instruction how to use e-banking services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	31	7.6	7.6	7.6
	Disagree	60	14.6	14.6	22.2
	Neutral	67	16.3	16.3	38.5
	Agree	195	47.6	47.6	86.1
	Strongly Agree	57	13.9	13.9	100.0
	Total	410	100.0	100.0	

23. E-banking service helps to perform banking tasks in a simple way.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	3.2	3.2	3.2
	Disagree	27	6.6	6.6	9.8
	Neutral	35	8.5	8.5	18.3
	Agree	160	39.0	39.0	57.3
	Strongly Agree	175	42.7	42.7	100.0
	Total	410	100.0	100.0	

24. Agent banking services are compatible with the bank existing service offering.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	15	3.7	3.7	3.7
	Disagree	47	11.5	11.5	15.1
	Neutral	152	37.1	37.1	52.2
	Agree	149	36.3	36.3	88.5
	Strongly Agree	47	11.5	11.5	100.0
	Total	410	100.0	100.0	

25. Agent banking will enhance access to the bank service by both existing and new customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	3.9	3.9	3.9
	Disagree	21	5.1	5.1	9.0
	Neutral	92	22.4	22.4	31.5
	Agree	194	47.3	47.3	78.8
	Strongly Agree	87	21.2	21.2	100.0
	Total	410	100.0	100.0	

26. E-banking services are accessible without time limit.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	31	7.6	7.6	7.6
	Disagree	41	10.0	10.0	17.6
	Neutral	50	12.2	12.2	29.8
	Agree	142	34.6	34.6	64.4
	Strongly Agree	146	35.6	35.6	100.0
	Total	410	100.0	100.0	

27. E-banking improve customer service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	2.0	2.0	2.0
	Disagree	8	2.0	2.0	3.9
	Neutral	53	12.9	12.9	16.8
	Agree	145	35.4	35.4	52.2
	Strongly Agree	196	47.8	47.8	100.0
	Total	410	100.0	100.0	

28. E-banking services are save time and cost of users

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.2	2.2	2.2
	Disagree	21	5.1	5.1	7.3
	Neutral	25	6.1	6.1	13.4
	Agree	123	30.0	30.0	43.4
	Strongly Agree	232	56.6	56.6	100.0
	Total	410	100.0	100.0	

29. Agent banking and E-banking services are increased the productivity of bank

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	1.7	1.7	1.7
	Disagree	7	1.7	1.7	3.4
	Neutral	49	12.0	12.0	15.4
	Agree	141	34.4	34.4	49.8
	Strongly Agree	206	50.2	50.2	100.0
	Total	410	100.0	100.0	

30. E-banking services are reduce bank hall queue

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	2.4	2.4	2.4
	Disagree	15	3.7	3.7	6.1
	Neutral	79	19.3	19.3	25.4
	Agree	138	33.7	33.7	59.0
	Strongly Agree	168	41.0	41.0	100.0
	Total	410	100.0	100.0	

31. Agent banking and e-banking create wider market coverage for bank.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.2	2.2	2.2
	Disagree	13	3.2	3.2	5.4
	Neutral	53	12.9	12.9	18.3
	Agree	157	38.3	38.3	56.6
	Strongly Agree	178	43.4	43.4	100.0
	Total	410	100.0	100.0	

32. Daily withdrawal limit from Agent Bank and limits of deposit with Agent bank has an impact on success of Agent Banking services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	3.4	3.4	3.4
	Disagree	27	6.6	6.6	10.0
	Neutral	135	32.9	32.9	42.9
	Agree	167	40.7	40.7	83.7
	Strongly Agree	67	16.3	16.3	100.0
	Total	410	100.0	100.0	

33. Managing credit risk, operational risk, Liquidity risk and reputational risk greatly influence adoption of agent banking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	2.4	2.4	2.4
	Disagree	23	5.6	5.6	8.0
	Neutral	155	37.8	37.8	45.9
	Agree	160	39.0	39.0	84.9
	Strongly Agree	62	15.1	15.1	100.0
	Total	410	100.0	100.0	

34. Proximity and accessibility to a bank branch by the retail agent's impacts Agent Banking success.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	2.7	2.7	2.7
	Disagree	28	6.8	6.8	9.5
	Neutral	123	30.0	30.0	39.5
	Agree	200	48.8	48.8	88.3
	Strongly Agree	48	11.7	11.7	100.0
	Total	410	100.0	100.0	

35. Collaboration with other banks on various aspects e.g. receiving agents' deposits on behalf of other banks has an impact on provision of Agent Banking services.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	2.9	2.9	2.9
	Disagree	42	10.2	10.2	13.2
	Neutral	131	32.0	32.0	45.1
	Agree	162	39.5	39.5	84.6
	Strongly Agree	63	15.4	15.4	100.0

**34. Proximity and accessibility to a bank branch by the retail agent's impacts
Agent Banking success.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	2.7	2.7	2.7
	Disagree	28	6.8	6.8	9.5
	Neutral	123	30.0	30.0	39.5
	Agree	200	48.8	48.8	88.3
	Strongly Agree	48	11.7	11.7	100.0
	Total	410	100.0	100.0	

**36. The maximum limits on E-banking products e.g. daily withdrawal limit
from ATM, daily transfer amount limit by mobile banking and daily payment
limit using POS, has an impact on success of Electronic Banking services.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	2.4	2.4	2.4
	Disagree	45	11.0	11.0	13.4
	Neutral	67	16.3	16.3	29.8
	Agree	157	38.3	38.3	68.0
	Strongly Agree	131	32.0	32.0	100.0
	Total	410	100.0	100.0	

37. likelihood of E-banking adoption

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Applicable	20	4.9	4.9	4.9
	To a limited extent	83	20.2	20.2	25.1
	To a moderate extent	116	28.3	28.3	53.4
	To a great extent	110	26.8	26.8	80.2
	To a very great extent	81	19.8	19.8	100.0
	Total	410	100.0	100.0	

38. likelihood of Agent banking adoption

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Applicable	180	43.9	43.9	43.9
	To a limited extent	82	20.0	20.0	63.9
	To a moderate extent	71	17.3	17.3	81.2
	To a great extent	49	12.0	12.0	93.2
	To a very great extent	28	6.8	6.8	100.0
	Total	410	100.0	100.0	