SAINT MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

ASSESEMENT ON CHALLENGES OF E-PAYMENT SERVICE PRACTICE IN COMMERCIAL BANK OF ETHIOPIA

BY
MERON SEIFU

A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES OF ST.MARY'S UNIVERSITY IN PARTIAL FULFULIMENT OF THE REQUIRMENT FOR THE AWARD OF MASTER OF BUSINESS ADMINSTRATION IN PROJECT MANAGEMENT.

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Approved by the Board of Examiner

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LIST OF ABBREVIATIONS

ATM	Automated Teller Machine
B2C	Business to Consumer
CBE	Commercial Bank of Ethiopia
E-banking	Electronic Banking
E-commerce	Electronic Commerce
EFT	Electronic fund transfer
E-payment	Electronic Payment
PC	Personal Computer
POS	Point of Sale
PIN	Personal Identification Number
TAM	Technology Acceptance Model
TOE	Technology Organization Environment

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ABSTRACT

The main objective of this research is to assess the challenges of e-payment service practice in Commercial Bank of Ethiopia (CBE). The study examined service challenges within the context of CBE E-Payment services using Technology- Organization –Environmental (TOE) approach with some modification to guide the research. The study followed descriptive research design and samples were taken from the CBE four selected branch clerical staff by using convenience-sampling technique. The data was analyzed and tested using SPSS to show the technological factor, organizational factors and environmental factors on implementation problems of E-payment services. Based on the statistical analysis environmental factors were found to have significant influence in implementation of E-payment services. The findings of the study were all consistent with prior researches. The study revealed areas of improvement with possible solutions that mitigate the identified major challenges, which includes continuous reviewing and up grading of the existing security system, emphasis for appropriate promotion, and collaboration with other banks to have government support especially to the environmental factors of ICT infrastructure, familiarize their customers with the processes and benefits of the system, hiring well trained and experienced IT professionals to handle the E-payment service and facilitate proper and continuous training for their employees. Furthermore, the study suggests that future researches may embark on comprehensive investigation by incorporating customers' perceptions of all Ethiopian Commercial Banks.

Keywords: E-payment, Implementation, factors affecting, Commercial Bank of Ethiopia

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Technological innovations play a crucial role in banking industry by creating value for banks and customers, that it enables customers to perform banking transactions without visiting a brick and mortar banking system. On the other hand, E-banking has enabled banking institutions to compete more effectively in the global environment by extending their products and services beyond the restriction of time and space (Turban, 2008)

The rise in the Information communication Technology (ICT) has significant impact on service delivery in most of the organizations adopting information system. Electronic banking has benefited banks as competitive advantage for achieving higher efficiency, control of operations and reduction of cost by replacing paper based and labor intensive methods with automated processes, which will lead to higher productivity and profitability.

Banks have embraced self-delivery banking services in their operations to facilitate the timeless financial transactions services to their customer's satisfaction. Hence, the issue of E-payment service quality is a critical one to customer's satisfaction of modern automation banking technology that has long been an impediment to success in the implementation of this alternative banking delivery channels (Davis, 1989).

The evolution of E-Banking started from the use of Automatic Teller Machines (ATMs) and Finland is the first country in the world to have taken a lead in E- banking (Mishra, R. and J. Kiranmai, 2009). Delivery of banking services to customers at their office or home with the help of electronic technology is termed as E - banking. It is the delivery of bank's information to customers via card banking (ATM), mobile banking & internet banking.

An ATM is a computerized telecommunications device that enables the clients of a financial institution to perform financial transactions without the need for a cashier, human clerk or bank teller. The ATM card uses expiration date and personal identification number (PIN) to authenticate the customer.

Mobile payment, also called electronic cash, allows a consumer to pay directly through his/ her mobile via text message. This is a payment where a mobile device (e.g. a phone or personal digital assistant (PDA)) is used at least for the initiation of the payment order and potentially also for the transfer of funds.

Internet 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.

All banking institutions throughout the world have been focusing on service quality to improve the customer satisfaction .By using E- Banking transaction can be made 24 hours a day without requiring the physical interaction with the bank, quick and continuous access to information and corporations will have easier access as they can change on multiple at the click of button. While E-payment has been a fast growing industry among all types of E-business, it has argued that somehow its positive impact was overestimated in some claims and its limit was underestimated more often .

The research into E-payment service implementation related to Ethiopia is limited in the marketing literatures. This study was attempted to contribute to the bank and academician by identifying the major challenges of E-payment service practice for their customers on its verge of high distribution prospect and the future demand of E-payment system in the country, bridge the literature gap and find out how delivering a high-quality automated service could help bank to sustain a strong relationship with their customers within the context of Ethiopia banking sector.

1.2 Statement of the Problem

Electronic payment is mostly referred to automated payment or banking channel that allows delivery of banking services in an effective, efficient and convenient way via electronic channels i.e., Automated Tellers Machine (ATM), Point-Of-Sale terminals (POS), Mobile phones, Internet and Personal computers (CBE E-payment procedure ,2016)

Commercial Bank of Ethiopia is a pioneer to introduce electronic payments in the country when it launched proprietary ATM system in 2002. However, the bank found it important to set up a new solution for electronic payment service, which is capable of supporting its growth requirements. Accordingly, the bank has implements Card Payment services, Mobile Payments, Internet Banking and Point-Of-Sale terminals (POS).

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).This study is useful to policy makers (NBE) to device strategies that will enhance use of ICT in banking business.

Commercial bank of Ethiopia provides E-payment services and there are some challenges that affect the service in electronic payment system. However very limited number of research has been done on the challenges of E-banking service in CBE but more studies are still required to assess of those challenges.

Therefore, the purpose of this study was to identify the main challenges for development of E-payment technology in Commercial Bank of Ethiopia.

1.3. Research Questions

In this study, the following research questions were answered.

- What are the major Technological factors that affect the E-payment service implementation?

- What are the major Organizational factors that affect the E-payment service implementation?
- What are the major Environmental (external) factors that affect the E-payment service implementation?
- What is the most critical factor that affects the E-payment service implementation?

1.4. Objectives of the Study

1.4.1. General Objective

The main objective of this study was to assessing the major challenges on the practice of E – payment service in the Commercial Bank of Ethiopia.

1.4.2 Specific Objectives

- To assess Technological factors that affects the E-payment service implementation.
- To examine Organizational factors that affects the E-payment service implementation.
- To identify Environmental factors that affects the E-payment service implementation.
- To know the most critical factor that affects the E-payment service implementation.

1.5 Significance of the study

This study is significant to identifying the challenges that affect implementation of E-payment service and providing possible recommendation to the bank regarding ways to improve the services. The finding of the study will have a great importance in filling the knowledge gap that exists among stakeholders. The stakeholders involved include the commercial bank of Ethiopia, other concerned individuals and organizations. In addition, the student researcher will fulfill their partial requirement for obtaining MA in project management and the study will be used as a reference material for further studies that could be done on this area of research and will try to identify those that are not covered in this study.

1.6 Scope and Limitation of the study

1.6.1 Scope of the study

The study was delimited to assessing the challenges that affect E-payment service practice only in employee point of view and also delimited on geographical location under North Addis district city branches employees of four selected branches (two grade IV and two grade III) branches (Arada Ghiorgis, Arat Killo, Mehal Ketema and Mehatme Ghandi) respectively.

1.6.2 Limitation of the study

Because of time constraint the study was include only look from perspective of employees. In addition, due to the initial stage of E-Payment services available in Ethiopia, it was very difficult to get secondary data as well as literature in this area from the country perspective.

1.7 Organization of the study

This study has five chapters. The first chapter deals with the introduction part, which includes Background of the study, Statement of the problem, Research questions, Objectives, Significance, Scope of the study and Limitations of study. The second chapter is on the conceptual review of related literature towards E-payment service. The third chapter will handle the methodology of the study. The fourth chapter will reveal data analysis and interpretation of the result and the final chapter will signify Summary, Conclusions, and Recommendations.

CHAPTER TWO
REVIEW OF RELATED LITRATURE

2.1 INTRODUCTION

The birth of information and communication technology (ICT) as a result of merging of computer science and telecommunication engineering, brought dramatic changes of the way business is conducted to compete in the market place and spread throughout the globe (Schneider, 2011).

ICT has made it possible to have electronic payment systems like debit cards, credit cards, electronic fund transfer, direct credits and internet banking. E-payment can refer to a payment system for buying and selling goods or services offered through the internet or any type of electronic fund transfer. Banks play a critical role in these e-payments as an intermediary. Traditional e-payment systems such as Money Gram and Western Union are noted to have many limitations, which inhibit consumers from adopting them. Earlier research suggests that some of these factors relate to lack of trust, security, usability, high transaction costs, lack of perceived advantage and perceived risk. These factors are deemed to be important to provide banks with the confidence to switch to an online payment system (Ozkan, 2010).

The need for electronic payment technologies is to respond to fundamental changes in socio-economic trends. The payment system is the infrastructure, which comprised of institutions, instruments, rules, procedures, standards, and technical, established to affect the transfer of monetary value between all the parties. An efficient payment system reduces the cost of exchanging goods and services, and is indispensable to the functioning of the inter-bank, money, and capital markets. However, a weak payment system may severely drag on the stability and developmental capacity of an economy; its failures can result in inefficient use of financial resources, inequitable risk-sharing among agents, actual losses for participants, and loss of confidence in the financial system and in the very use of money. The tasks to design payment system infrastructures become ever more complex as competition and innovation push constantly

to the limit the search for better combinations of efficiency, reliability, safety, and system stability in the provision of payment services to larger numbers of individual users and institutions.

2.2 DEFINITION OF E-PAYMENT

David B. Humphrey, Lawrence B. Pulley, and Jukka M. Vesala (November 1996): E-payments can be widely defined as payments that are initiated, processed and received electronically. The scope is on e-payment services that support e-commerce transactions (business to consumer, B2C) or electronic payments between consumers (person to person, P2P) and that constitute new concepts, beyond the basic traditional payment instruments provided by the banking industry. Recent developments in the e-payments market will especially be set into a pan-European context, in order to monitor the development of e-payment services within the euro area and across Europe.

E payment is a subset of an e-commerce transaction to include electronic payment for buying and selling goods or services offered through the Internet. Generally, we think of electronic payments as referring to online transactions on the internet, there are actually many forms of electronic payments. As technology is developing, the range of devices and processes to transact electronically continues to increase. A payment is the payer's transfer of a monetary claim on a party acceptable to the payee, a monetary claim that is accepted by the payee will be referred to as the means of payment, payment instruments are tools and procedures to initiate the transfer of the means of payment. For e-payments, the monetary claims (electronic means of payment) are held, processed and received in the form of digital information, and their transfer is initiated via electronic payment instruments.

European Parliament and Council Directive (2000/46/EC): A legal definition of electronic money is provided in Article 1 of the on the taking up, pursuit of and prudential supervision of the business of electronic money institutions (E-money Directive). According to this definition, "electronic money shall mean monetary value as represented by a claim on the issuer which is: (i) stored on an electronic device; (ii) issued on receipt of funds of an amount not less in value than the monetary value issued; (iii) accepted as means of payment by undertakings other than the issuer."

Nordea Bank Finland (April 2005) explained that E-payment is an electronic payment method in which a buyer selects purchases and pays them within a single Internet session. The payment can be transferred to the seller immediately or on a later date. The e-payment reference number notifies the seller, i.e. the service provider, of an executed payment. The service provider also has query and refund functions at its disposal. With the query function, the service provider can check that an e-payment was made successfully. With the refund function, the service provider can refund a purchase paid by e-payment, or a part of it.

2.3 THE CONCEPT OF E-PAYMET

According to Marsh (2005) —E-banking is having 24-hour access to banking operations such as through an Automated Teller Machine (ATM) with Personal Identification Number (PIN) or making a direct deposit into checking or saving accounts. Additionally, Insely & Fleming (2000) argue that E-banking is a general term for a process by which a customer may conveniently perform banking transactions electronically without visiting a brick and mortar institution. Bhattacherjee (2001) expands this definition by stating that —E-banking is as an integrated system that can provide customers flexible, convenient and inexpensive platform with integrated services of online personal banking products including online checking and saving accounts, money market accounts, certificate of deposit, credit cards, home equity loan, home mortgage, insurance, investment services, portfolio management and other related financial services. Thus the electronic platform eliminates the traditional way of banking whereby customers had no option than to walk to a bank to perform transactions. It means that with E-banking the customer can conduct his/her transactions anytime, anywhere without having to walk to a bank.

2.4 TYPES OF E-PAYMENT

The normal types of electronic banking services basically mentioned in the literature include SMS banking, mobile banking (m-banking), Automated Teller Machines (ATMs), telephone banking, personal computer banking, internet banking and electronic check clearing systems Mishra, R. (2009). .

2.4.1 Automated Teller Machine (ATM)

Among the noticeable budgetary touch-focuses, Automated Teller Machine (ATM) has been considered as a standout amongst the most critical segments of e-managing an account framework. ATM is a terminal conveyed by a bank or any money related establishment which empowers the clients to withdraw money, make offset enquiries, request bank statements, exchange stores furthermore store money. The ATMs are essentially self-overhauled saving money terminals and are gone for giving quick and advantageous administrations to the bank's clients (Rasiah, 2010). Basically, it is an electronic terminal which gives clients the chance to acquire managing an account administration at whatever time. To withdraw money, make stores or exchange trusts between records, a purchaser needs an ATM card and an Individual Personal Identification Number (PIN). Rose (1999) describes ATMs as follows: —an ATM combines a computer terminal, record-keeping system and cash vault in one unit, permitting customers to enter the bank‘s book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank‘s computerized records 24 hours a day. With the presentation of an ATM, banks have the capacity to serve customers outside the banking corridor on the grounds that ATMs are put inside or close to the banks furthermore outside the banks, for example, shopping centers, eateries, airplane terminals or wherever that individuals may accumulate. ATM is intended to deal with the most imperative capacity of a bank. With the introduction of ATMs, some limitations such as time and geographic location has been resolved, Hazlina *et al* (2011).

2.4.2 Mobile/Telephone banking

Managing an account with a phone is the procurement of saving money administrations to clients utilizing an excellent phone line. A customer of a bank can acquire the fundamental data on dialing a phone number determined ahead of time. Since versatile managing an account was presented, clients have possessed the capacity to utilize it to get exceptional administrations 24 hours a day without needing to visit the money keeping lobby (bank) for individual exchanges.

2.4.3 Point-of-Sale Transfer Terminals (POS)

The POS system allows customers to make retail purchases with a check card. The card looks like credit card but does not function like it. The amount purchased is transferred immediately from the account of the debit card holder to that of the store. (Malak, 2007).

2.4.4 PC Banking

PC banking is another form of e-banking in which any authorized user can access and obtain financial services from a banking service provider using a personal computer which has been connected with the bank‘s network. (Easingwood & Storey, 1996).

2.4.5 Mail Banking

Mail banking is another form of e-banking service that gives customers the opportunity to communicate with their bankers through the use of the e-mail, Chovanová (2006). He argued that the frequent usage of mail banking is for customers to be able to receive their account statements from their bankers.

2.4.6 Internet Banking

Internet banking refers to the use of the internet as a delivery channel for banking services,
which includes every single customary service, for example, balance enquiry, statement of records requisition, trust transfer to other records, charges payment and a new banking service, for example, electronic bill presentment and payment (Frust, Lang, &Nolle, 2000) without going to a bank (Mukherjee & Nath, 2003). As indicated by channel (Chau & Lai, 2003), —the quick development and notoriety of the internet service has created great opportunities and threats to companies in different business sectors, to endorse and deliver their items and services utilizing internet as a circulation channel. As indicated by Pikkarainen, Karjaluoto & Pahnila, (2004) internet banking is a web entrance, through which clients can utilize various types of managing an account administrations running from bill installment to making speculations. —Aside from money withdrawal, web account management (internet banking) offers the client a complete access to any kind of keeping money exchange at the snap of a mouse (De Young, 2001).In the perspective of Bill Entryways (2008) "saving money is fundamental, banks are most certainly not". Bill Entryways tries to recommend that the conventional bank is in the coliseum of

annihilation in order to be supplanted with electronic keeping money which keeps on pulling in new clients. The money savings (banking) industry trusted that by receiving new innovation, they will have the capacity to enhance client administration level and attach their clients closer to the banks. Mia, Rahman & Debnath (2007) disclose that because of the development of progress in the business environment, banks have the capacity to place themselves in the Internet to use the force of the web keeping in mind the end goal to accomplish upper hand. As Karjaluoto *et al*. (2002) additionally contended that ―managing an account (banking) is no more bound to time and topography, thus clients everywhere throughout the world have generally simple access to their records 24 hours a day and 7 days a week‖. The creator further contended that, with web account management (internet banking) benefits, the clients who felt that the block and mortar w of saving money (banking) took a lot of their time and exertion are currently ready to make exchanges at the snap of a mouse. ―Web savings offers numerous advantages to the client, for example, simple entry, format, predictable subjects, simple route, exceptional substance, access through various media, higher intuitiveness, higher utilization of non-literary data, different dialects, plan and lower expense of exchange, and push‖. (Cai, Yang &Cude, 2008).

2.5. Conceptual studies related with E-payment challenges

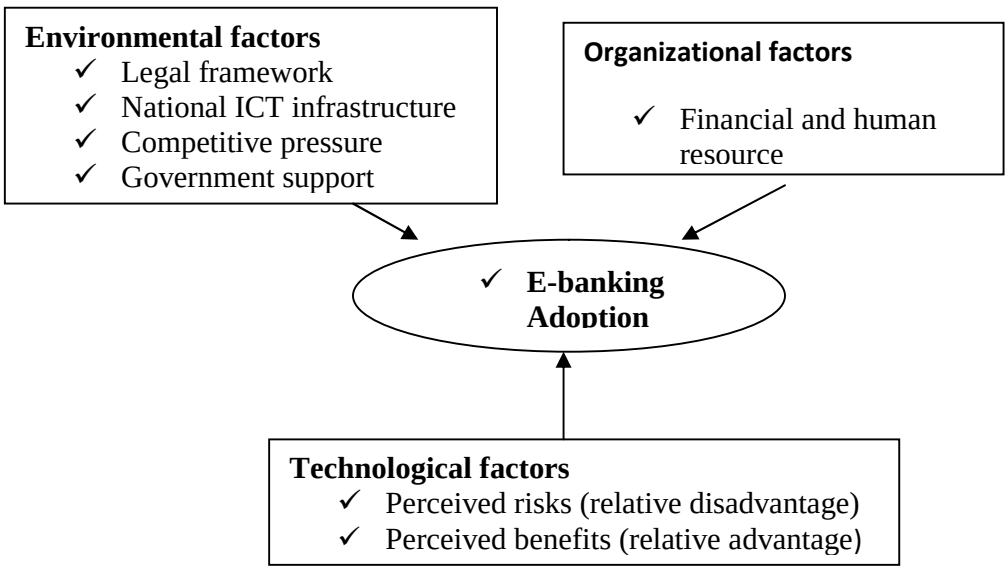
2.5.1 Factors influencing Banks to Implement E-payment system

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, the Technology-organization-Environment framework (TOE) (Tornatzky & Fleischer 1990),which identifies three basic Factors for the adoption of technological innovation, i.e, technological factors, organizational and environmental factors. Technology Acceptance Model(TAM) (Davis, 1989), which posit the two sets of beliefs, i.e., perceived ease of use (PEOU) and perceived usefulness (PU) to determine individual's acceptance of a technology. PEOU refers to the degree to which an individual believes that using a particular system would be free of physical and mental effort, PU on the other hand is related to users' perception of the degree to which using a system will be beneficial (Alsabbagh & Molla 2004).

2.5.2. Technology- organization- Environment (TOE) framework

Tornatzky and Fleischer proposed TOE framework; 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. Based on this, the researcher adopt the TOE framework to summarize possible key factors affecting E-banking adoption as shown in Figure 2.1 The ***technological factor*** refers to adopter's perception of E-banking attributes. Typical characteristics of technology considered in technology adoption studies are based on the assumption of Rogers' diffusion of innovation (Rogers 2003), Which include relative advantages (perceived benefits), and relative disadvantages (perceived risks).While the ***organizational factor*** refers to the organizations characteristics that influence its ability to adopt and use of E-banking system. The ***environmental factor*** refers to the external environment in which an organization operates and its condition for supporting the development of E-banking services. For each context, various factors have been identified from the literature but only those that are considered relevant for E-banking adoption are included in the framework. Details of factors considered in this study are discussed below.

Figure: 2:1.Technology-Organization-Environment framework



Source: Tornatzky and Fleischer (1990)

2.5.2.1. Technological Factors

It appears that there is a lack of consensus on what factors belong to this context. For example, one study (Salwani 2009) includes technology competence covering existing technology infrastructure and skills to utilize the technology in this context, while other studies (Ellias 2009 & Chang 2007) consider some relevant characteristics of technology. To avoid overlapping between technology and organizational contexts, researcher chooses two basic factors related to technology competence, which have relevant to the organizational factors, i.e. perceived benefits and perceived risks are considered in this study from the technological factors.

1. Perceived benefits: - Perceived benefits of E-banking cover both direct and indirect benefits for the banking industry as well as for the consumers. Direct benefits include the savings on operational cost, improved organizational functionality, productivity gain, improved efficiency and increased profitability. Indirect benefits include the opportunity or intangible benefits such as improved customer's satisfaction through improved services, improved banking experience and fulfillment of their changing needs and lifestyle (Lu *et al*. 2005; Kuan &Chau 2001 & Iacovou 1995)

2. 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). Therefore, the perception of the risks regarding E-banking is expected to influence its adoption and further growth.

2.5.2.2. Organizational Factors

Organizations are different in their preference to adopt technological innovation (Iacovou 1995 & Grover 1993) influenced by a number of factors, like firm size, top management support and

financial and human resources. In the framework for this study, researcher uses one basic organizational factor as discussed below.

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.

2.5.2.3. Environmental factors

Researcher identified factors related to the environmental context that play a crucial role in technology adoption and some factors in this category are arguably more influential than others, especially when countries under study have an authoritative government leadership. The Four factors relevant for E-banking adoptions included in this study are-

1. Legal 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 & Wu 2002; Martinson & Trappey 2001).

2. 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 nation‟s ICT infrastructure, E-banking adoption and use cannot do well (Efendioghu 2004 & Scupola 2003).

3. Competitive pressure: - Competitive pressure can strongly influence any bank to develop and adopt E-banking initiatives and it may affect the bank‟s perception towards E-banking system. As implied in previous studies (Quaddus & Hofmeyer 2007; Gibbs, Kraemer & Dedrick 2003).

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

2.6. Challenges Regarding Electronic Payment System

According to Harrison (2012), it is hypothesized that many of the factors affecting the successful adoption of new technologies such as e-commerce and E-banking are generic in nature and that the successful adoption of internet technologies in part depends on how these are used in conjunction with the other technologies and management practices that form a technology cluster. However, the most critical challenges can be ascribed to the very limited information and communication infrastructure available in most developing countries. Reasons vary widely among sectors and countries and are most commonly related to lack of applicability to the business, preferences for established business models, (OECD, 2004). Common challenges includes; enabling factors (availability of ICT skills, qualified personnel, network infrastructure); cost factors (ICT equipment and networks, software and re-organization); security and trust factors (security and reliability of ecommerce systems, uncertainty of payment methods, legal frameworks and intellectual property right); and challenges in areas of management skills, technological capability, productivity and competiveness. Lack of reliable trust and redress systems and cross country legal and regulatory differences was also impede e-commerce adoption (OECD, 2004). It is however important to note that challenge to e-commerce adoption work differently according to organizational type and culture. Areas of training and people development need to be addressed Harrison (2012).

The study that was conducted by Isaac (2005) indicated that the challenges for the adoption of E-banking in Africa are security, human face i.e. customers still value personalized and responsive services from their bankers, poor and/or lack of technological infrastructure especially in the rural areas, lack of proper legislation governing e-transactions and preference to paper money, as opposed to “virtual” cash in transactions etc.

Ziad et al., (2009) also analyzed E-commerce challenges in terms of three categories: economic, socio-political and cognitive. The economic obstacles include several factors that affect the diffusion of e-commerce such as slow internet diffusion, unavailability of credit cards, unavailability of a physical delivery system, and low bandwidth availability.

The socio-political challenges take account of government regulations like privacy and security, lacks of business laws for e-commerce, lacks of legal. Finally, the cognitive hindrances contain a number of factors, which lead to a negative cognitive assessment of

E-commerce of individuals and organizations like inadequate awareness, knowledge, skills, and confidence; a lack of awareness and understanding of potential opportunities; lack of confidence in service providers and the postal network and computer illiteracy.

2.6.1 Lack of Usability

Electronic payment system requires large amount of information from end users or make transactions more difficult by using complex elaborated websites interfaces. For example credit card payments through a website are not easiest way to pay as this system requires large amount of personal data and contact details in web form.

2.6.2 Lack of Security

Online payment systems for the internet are an easy target for stealing money and personal information. Customers have to provide credit card and payment account details and other personal information online. This data is sometimes transmitted in an un-secured way, (Kolkata and Whinston, 1997). Providing these details by mail or over the telephone also entails security risks (Guttman, 2003, Laudon and Traver, 2002)

2.6.3 Issues with E-Cash

The main problem of e-cash is that it is not universally accepted because it is necessary that the commercial establishment accept it as payment method. Another problem is that when we makes payment by using e-cash, the client and the salesman have accounts in the same bank which issue e-cash. The payment is not valid in other banks.

2.6.4 Lack of Trust

Electronic payments have a long history of fraud, misuse and low reliability as well as it is new system without established positive reputation. Potential customers often mention this risk as the

key reason why they do not trust a payment services and therefore do not make internet purchases (Lietaer, 2002)

2.6.5 Users Perception Regarding Acceptance of Electronic Payment Systems

User's acceptance is a pivotal factor determining the success or failure of any information system project. (Davis, 1993), Many studies on information technology report that users attitudes and human factors are important aspects affecting the success of any information system (Davis, 1989, Burkhardt, 1994, Rice&Adyn, 1991). According to Dillion and Morris (1996) user's acceptance is "the demonstrable willingness within a user group to employ information technology for the tasks it is designed to support". It means these are not successful without acceptance of users. Electronic payment system is an innovative way for online payments. Issues are not accepting easily because of lack of security in changing business-environment. Online payment system requires improvement of information technology. The failure of electronic payment system is depend on the factor that it neglects the needs of users and the market.

2.6.6 Lack of Awareness

Making online payment is not an easy task. Even educated people also face problems in making online payments. Therefore, they always prefer traditional way of shopping instead of online shopping. Sometimes there is a technical problem in server customers tried to do online payments but they fails to do. As a result, they avoid it.

2.6.7 Online Payments are not Feasible in Rural Areas

The population of rural areas is not very literate and they are not able to operate computers. As they are unaware about technological innovations, they are not interested in online payments. Therefore, the online payment systems are not feasible for villagers.

2.6.8 Highly Expensive and Time Consuming

Electronic payment system are highly expensive because it includes set up cost, machine cost, management cost etc and this mode of payment will take more time than the physical mode of payment.

2.6.9 Lack of Uniform Platform by Banks and MDAs

There is no compelling law mandating the banks to use common software platform. Every bank is left to use whatever platform they felt will perform the e-Payment services on behalf of the clients. There is the problem of switches in effecting transfer from one bank to another. Interconnectivity has been a problem. No uniformity of account numbers since different banks different numbering systems. Happily enough, the Federal Government according to Dankwambo through the Office of Accountant General of the Federation will be rolling out a common platform configuring soon.

2.6.10 Lack of adequate Infrastructure

As noted earlier, the E-Payment system is being partially implemented. If it is to be fully implemented, a number of IT infrastructures will have to be put in place. These include but not limited to Laptop, desktop, scanners, good internet connectivity, training and global software. The provision of basic Information Technology infrastructures according to Ovia is a major challenge.

2.6.11 Platform Security

As rightly pointed out by Atanbasi , the major challenge of e-Payment in the country is security. Security in terms of platform, hackers and virus attacks. This will ensure that output from the system are reliable and accurate. The MDAs still carry their schedule(s) to the banks through the banks through Compact Disks (CDs), Flash Drives or e-mail attachments.

2.6.12 Lack of Seriousness by Banks

While a number of banks have deployed the necessary infrastructure in place to ensure effective implementation, it is sad to note that some banks are still not fully ready for this new payment regime.

2.6.13 Resistance to changes in technology among customers and staff due to:

- Lack of awareness on the benefits of new technologies
- Fear of risk
- Lack of trained personnel in key organizations
- Tendency to be content with the existing structures, and
- People are resistant to new payment mechanisms
- Security- where disclosed of private information, counterfeiting and illegal alteration of payment data may be rampant

Omogui-Okauru , noted some of the problems with e-Payment at the Federal Inland Revenue Services (FIRS), among others, have to do with reconciliation; being able to reconcile what is paid, what the banks received and ultimate basic account. The complaints and constraint facing accountant in FIRS is also the fact that the e-Payment has not been as fast as should be.

2.7. E-Payment Challenges in Ethiopia

Banking and Finance is an important sector for establishing e-commerce. There are some roles of banking sector in ecommerce such as, online corporate banking, electronic fund transfer, automated teller machines (ATM), debit card, credit card etc. Bank is the only authorized organization, which can store and transact money. Technological developments in banking sector make trading activities much easier and cheaper for customers. It provides convenience in terms of the capital, labor, time and all the resources needed to make a transaction (Uppal, 2008). Banking in Ethiopia faces numerous challenges to fully adopt E-banking. Research result studied by Wondwossen & Tsegai (2005) forward the following challenges:

- Low level of internet penetration and poorly developed telecommunication infrastructure:
- Lack of infrastructure for telecommunications, Internet and online payments impede smooth development and improvements in e-commerce in Ethiopia.
- Lack of suitable legal and regulatory framework for e-commerce and e-payment:
- Ethiopian current laws do not accommodate electronic contracts and signatures.
- Ethiopia has not yet enacted legislation that deals with ecommerce concerns.

- Political instabilities in neighboring countries: Political and economic instabilities in Somalia, Southern Sudan, and Eritrea are threatening traits that do not provide a very conducive environment for E-banking in Ethiopia.
- High rates of illiteracy: Low literacy rate is a serious impediment for the adoption of E-banking in Ethiopia as it hinders the accessibility of banking services. For citizens to fully enjoy the benefits of E-banking, they should not only know how to read and write but also possess basic ICT literacy.
- High cost of Internet: The cost of Internet access relative to per capita income is a critical factor. Compared to the developed countries, there are higher costs of entry into the e-commerce market in Ethiopia. These include high start-up investment costs, high costs of computers and telecommunication and licensing requirements.
- Absence of financial networks that links different banks (Banks are not yet automated): Most of the banking-transactions currently taking place use credit and debit cards supplied by Visa and MasterCard. For conducting E-banking, the use of credit or debit cards is mandatory thus requiring the need for specialized systems which is not currently available. Frequent power interruption: Lack of reliable power supply is a key challenge for smoothly running E-banking in Ethiopia.

2.8. Empirical studies related with E-payment challenges

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 implementation 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. On the other hand the study conducted by Daghfous and Toufaily (2007) on the success and critical factors in adoption of E-banking by Lebanese banks. The research was conducted on the factors that can lead to success the adoption of E-banking and the other factors that can constitute as barrier to its adoption, it focus on the organizational, structural and strategic factors which can accelerate or, on the contrary, slow the adoption of this electronic mode of distribution and communication by the banks, through analyzing the case of the Lebanese market. In order to test the validity of the theoretical framework, structured survey was used, interview questionnaire that was given to E-banking managers or to information technology managers of all the banks on the official list of institutions operating on the Lebanese market, with a total of 57 banks, 31 of them operate internationally and 26 are strictly local were used to gather data. The results of their study shows that the organizational variables (bank size, functional divisions, technical staff, technical infrastructure, perceived risks, decision makers` international experience and mastery of innovation) are variables which exert significant impact on the adoption of E-banking, among the structural characteristics, the result revealed that internal technological environment of the bank is a very important factor in determining the adoption of E-banking, also the result shows that banks which are developing in the international scale are more likely to adopt E-banking innovations.

In general, review of empirical studies show that understanding the practice of e-banking in Commercial Bank of Ethiopia, Ethiopia, and Africa and on the other world. The study mostly deals about the opportunity and challenges of e-banking practices. Some studies also deals about the critical success factors in e-banking is important for banking industry because it would potentially help to improve their strategic planning process. The main obstacles and barriers the

oppose e-banking practice are the concern of security, privacy of information and technology investment cost. The literature also indicates that according to the customers there are different factors related to the service itself and how to be accepted and used by the customers, which differs from country to country.

Japhet and Usman (2010) identified the following specific challenges hindering the adoption of e-commerce in developing countries.

- Lack of convenient payment means, poor distribution system, imperfect legal system, and lack of large scale telecommunication transmission capability (broadband), Internet security are problems face these countries.
- Another most pressing limitations are access to technology (computers, connectivity, and gateway to Internet), limited bandwidth, which reduces the capacity to handle audio and graphic data; poor telecommunications infrastructures and unreliable electricity supply.
- The cost of the Internet access makes it inaccessible to most users in developing countries. The cost of accessing the infrastructures also influences the growth of ecommerce. The priority for most developing countries is to put in place the necessary infrastructure and a competitive environment and regulatory framework that support affordable Internet access. The monthly connection cost of the Internet far exceeds the monthly income of a significant portion of the population.
- Confidence and trust is also an essential requirement for secure electronic trading. The geographical separation of buyers and sellers, often coupled with a lack of real-time visual or oral interaction, creates a barrier to ecommerce adoption in developing countries. Language is another important hindrance to ecommerce adoption. Most people in developing countries are illiterates and uneducated. Moreover, English is a primary language used in many Western countries where new technologies originate. It is the predominant language for development of IT and ecommerce and it is the main language used on the Web.
- Finally, the study identified various socioeconomic characteristics as barriers hindering ecommerce adoption in developing countries. The most common are unfavorable

economic condition , the poor state of educational system , Lack of ICT skills and business skills ,un reliable and non secure payment infrastructures , the inefficient logistics and distribution system and the lack of good transport

Exploratory study conducted by Alhaji Ibrahim H. (2009) the following are among the critical challenges for the adoption of E-banking in Nigeria:-

- Lack of Technological Infrastructure – the implementation of e-payment is been impeded by unavailability of ICT infrastructure. Most rural areas where majority of small and medium scale industries are concentrated have no access to internet facilities
- ICT Equipment Costs – where available, the cost of ICT is a critical factor relative to per capital income. This makes the cost of entry higher compared to developed countries.
- Regulatory and Legal Issues – inexistence of proper legal and regulatory framework.
- Non-readiness of banks and other stake holders (acceptability) – even though some have shown impressive willingness, some banks are still not fully ready to for this new payment regime.
- Resistance to changes in technology among customers and staff due to: · Lack of awareness on the benefits of new technologies,
    - Fear of risk among banks
    - Lack of trained personnel in key organizations and
    - Tendency to be content with the existing structures
- People are resistant to new payment mechanisms;
- Security – where disclosure of private information, counterfeiting and illegal alteration of payment data may be rampant.
- Frequent connectivity failure in telephone lines.
- Frequent power interruption.

In addition, a research conducted by Eze and Nwankwo (2012) stated that the following as major challenges for adoption and development of E-banking technology in Nigeria:-

- Legal and Regulatory framework: - The absence of a proper legal and regulatory framework for internet constitutes one of the major challenges of E-banking. The existing banking laws do not address the issue of E-banking as a new banking system.

- Consumer Protection: - Another major challenge of the development of E-banking is the issues of adequate protection for consumers of banking products from the various risks to which they are exposed to. The risks include financial loss, malfunctioning of terminals or cards as well as the possibility of unauthorized disclosure of information without the consent of the consumer. The challenges here range from customer details being stolen from the vendors files to the selling up of a fraudulent website by fake customer to deceive other innocent customers.
- Loss of Audit Trail: - Another challenge of E-banking is the loss of audit trail as business processes continue to change with internal banking, personal computer and telephone banking. Audit trail basically allows for the tracing of transactions through banking environment facilitates the work of supervisors in ascertaining the reliability or otherwise of the information contained in the master file.
- Security of Financial Transactions: - There are numerous threats to the security of internet banking. One of such threats is the fear of insecurity and trust associated with on-line banking which can only be tackled by a good online developer that can put in place the required firewalls whereby only the authentic users can gain access. Security breaches in E-banking are most frequently discussed in terms of the dangers that hackers may intercept messages, misuse the information on modify the content of the message.
- Money Laundering and other Financial Crimes: - Another major challenge is that under E-banking the financial system is prone to criminal abuse such as money laundering and other financial crimes. Money laundering and other financial crimes are easily facilitated through E-banking. This has given a lot of work to monetary authorities, which have continued to work to see that the activities of the money launderers and fraudsters are brought under control.
- Systems and Infrastructure Failure: - Systems and infrastructural failure have also a lot of effect on E-banking. Failure results to loss of data. System failure can be caused by software failure either at the entity or at an organization used for outsourced functions. Infrastructure failures are mainly caused by power failure. The system and infrastructural really given a lot of setback to development E-banking.
- The Potential Risks of E-banking: - Electronic delivery and payments systems involve a wide range of potential risks. The use of an electronic channel to deliver products and

services introduces unique risks due to the increased speed at which systems operate and the broad access in terms of geography, user group, applications database and peripheral systems. The potential risks bring by the e – banking has a lot of implications for the safety and soundness of the nation's banking system.

A research conducted by Vaithianathan, S. (2010) stated that lack of technology infrastructure, lack of awareness, lack of skilled human resources, and the lack of government initiatives, including various economic and social factors are cited as hurdles that prevent pervasive e-commerce adoption in Indian.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The topics included under this chapter are, instrument used, source of data, data collection, population and sample, data analysis tools and ethical considerations. Generally, the whole process in this chapter was elaborate how and what methods was used on the research process to find the result.

3.2. Research Design

The study was conducted by using descriptive research design. Descriptive research design is a type of research design that is mainly concerned with describing the nature or condition and the degree in detail of the present situation. Creswell (2003) stated that the descriptive method of research design is used to gathering formation about the present or existing condition.

This study was focused on describing the current situation of the problem and answer the research questions which are in the form of ‘‘what’’, and to highlight the challenges that can affect the of E-Payment service in Commercial Bank of Ethiopia. Therefore, Descriptive research is being used to achieve the research objectives.

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

3.3 Source of Data and Data Collection method

The study was conducted by using both primary and secondary sources. Primary data was collected from the respondents based on a structurally designed questionnaire .The researcher adopts questionnaire used by Mattewos (2012) with some modification and it was include both closed ended and open-ended questions. Questionnaires were distributed to employees of the selected branches. Those respondents were select because, they are deemed knowledgeable about E-payment system and could provide important perspectives on its implementation. In addition, semi structured interview with the Director of the E-payment department was used to collect supporting data. Secondary source of data are those which are made available and collected from the websites of the bank, from books, report and published articles and existent information, collected by researchers for different purposes.

The questionnaires were structured in close-ended type and responses to the questions were measured on a five Likert rating scale where: Strongly Agree (SA) = 1; Agree (A) = 2; Neutral (N) =3, Disagree (D) = 4; and Strongly Disagree (SD) = 5; the use of Likert scale is to make it easier for respondents to answer question in a simple way. In addition, this research instrument will permit an efficient use of statistics for the interpretation of data. Moreover, the central issue to argue that likert scales is that it produce ordinal data. Johns (2010) noted that in statistical terms the level of measurement of the likert response scale is ordinal rather than interval: that is, we can make assumptions about the order but not the spacing of the response options. Thus, the permissible descriptive statistics that can perform on ordinal data is median (or average response) and mode (or more frequent responses) (Hole 2011).

3.4. Population, Sampling technique & Procedure and Sample size

3.4.1 Target Population

Employees who perform the actual activities of the bank (clerical staffs) in CBE in North Addis Ababa district four selected branches was considered as a target population for this particular study. Those branches have independent E-payment department and made high amount of transaction per day. The total populations of the selected branches were around 209 employees.

3.4.2. Sample size Determination

The total populations of the research were employees of the selected branches of CBE in Addis Ababa. By using of Solvin formula the student researcher, use around 137sample employees at 95% confidence level. The student researcher was distribute questioner to samples in selected branches.

$$n = \frac{N}{1 + Ne^2}$$

Where, n=sample size

N=population size

e=the level of precision, sampling error

(Source:Yamne (1967)

Therefore $n = \frac{209}{1+209(0.05)^2}$

n=137

3.4.3. Sampling Technique

The total population of this study is E-payment department and selected branches in North Addis Ababa District considering there is no significant difference in E-payment implementation practice among branches and districts. Therefore, only four branches were selected and incorporated in the study. Then, a convenience-sampling technique was used to select respondents to fill questionnaires to get opinion of employees. This study focuses only in obtaining data from the bank on the key implementation problems of E-payment service of the bank. Convenience sampling method is opted because most of the staffs of the bank are busy in serving customers on office hours and it also make easily access participants who has deemed knowledge about E-payment service and collaborate fully in the survey. Based on convenience sampling, 137 employees were selected as participant of the study. The respondents were from various positions ranging from junior staff to those in management positions.

3.5. Data Analysis Tools

In order to meet the stated research objectives, the collected data was analyzed based on the nature of the objective. A descriptive analysis was used to present and interpret the data collected on various variables of factors affecting the implementation of E-payment service. Using percentages and tables was employ to analyze each objective. The student researcher analyzed the data collected through survey to statistical population concerning the implementation of E-payment system. The data collected via questionnaires were analyzed with descriptive statistics using statistical package for social scientists (SPSS). The data that was collected from the interview and reviews of documents interpreted qualitatively. The analysis of quantitative data and interpretation of qualitative data combines to seek convergence among the results (Creswell, 2003).

3.6. Ethical Considerations

Before starting the actual data collection the purpose of the study, the right to participate and refuse will told to the study subjects. Verbal consent from the study subjects will obtain. Confidentiality of the information will guarantee by not writing their name and anything that enable to identify study participants. In addition to that, a respondent's answer kept in a confidential place.

The student researcher acted responsibly according to ethical standards to ensure that the information gathered will not brought to disrepute. All respondents had a right to privacy, to safety, to know the true purpose of the researcher, to obtain research results and to abstain from answering questions .

CHAPTER FOUR
DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This section of the study details the results analyzed from responses of the respondents. It is presented largely descriptively in the form of tables and organized according to the objectives of the study. Out of the sample size of 137, 128 answered and returned the questionnaires. Thus, the response rate was 93%. The researcher was also conducted interviews with CBE E-payment Director. Besides, other documents regarding to E-banking technology were reviewed. Accordingly, the presentation, analysis and interpretation of the interviews and questionnaires were done simultaneously whereby the findings obtained from the interviews were presented in parallel by substantiating against the results obtained from the questionnaires. In order to analyze the research results SPSS V. 20.0 tool software were used. Descriptive measures of each questions response and an interview conducted with E-payment director are presented in the following sections.

4.2 RELIABILITY AND VALIDITY OF DATA

The validity and reliability of the data collected and the response achieved depend, to a large extent on the design of the questions as a valid question will enable accurate data to be collected and one that is reliable will mean these data are collected consistently (Saunders et al 2009). Polit & Beck (2006) and Gillis & Jackson (2002:26) define —validity in terms of whether the measuring instrument measures what it is supposed to measure. For Langford (2001:52, 95) the measuring instrument should be —dependable and trustworthy in providing information. In developing the measuring instrument for this study, relevant questions and alternatives were considered to address e-banking to ensure validity and reliability. For Polit & Beck (2006:325) reliability means to —test the accuracy of a measuring instrument, whereas for Brink (2000:171), De Vos (2006: 86), Parahoo (2006:36) and Gillis & Jackson (2002:27) reliability refer to a —measuring instrument yielding the same results under comparable circumstances if repeated on the same person or used by two different researchers. According to Cooper and Schindler (2001), —a researcher may choose to use a panel of experts to judge how well the

instrument meets standards or use his own judgments. In this study, the researcher used different literatures (books, journals and thesis) to determine how well the research instrument meets standards.

4.3. Demographic information of the respondents

According to Proctor (2000), —demographic data are essential to acquire fundamental information about the respondents. It provides identification material about the respondents such as age, gender, educational levels etc. This information is very vital as it shows whether the respondents have the capacity and credibility to answer the questions in relation to the objectives of the study.

Table 4.1. Respondents' Demographic profile

Variables	Classification of variables	Frequency	Percentage
Gender	Male	76	59%
	Female	52	41%
	Missing	-	-
	Total	**128**	**100%**
Age	21-29	74	58%
	30-39	42	33%
	40-50	5	4%
	Over 50	2	1%
	Missing	5	4%
	Total	**128**	**100%**
Educational level	Diploma	-	-
	Bachelor degree	121	95%

	Masters degree	5	4%
	Missing	2	1%
	Total	**128**	**100%**
Monthly income (in Eth. Birr	Br2000-Br3999	6	5%
	Br4000-Br4999	33	26%
	Br5000-Br9999	82	64%
	Over 10,000Br	7	5%
	Missing	-	-
	Total	**128**	**100%**

Source: Survey result, 2017

As it is shown on the above table, the highest percentage of participants in this study was males, which are 76 out of the total who form 59% of respondents. In the case of classification of respondents by age the highest percentage of participants are young (21-29 years old) which are 74 out of the total who form 58% of total respondents. Regarding the educational level of the study participants, the highest percentage of them has bachelor degree that forms 95% of total participants, which are 121 from the total. On the other hand, the highest percentage of participants has monthly income ranges between 5000 to 9999 Eth birr; their percentage in participation is 64%.

Years of experience	Frequency	Percentage
0-2 years	7	5%
2-5 years	68	53%
5-10 years	38	30%
Above 10 years	15	12%
Total	**128**	**100%**

Table 4.2 Respondent experiences in CBE

Source: Survey result, 2017

The frequency table of work experience profile of the respondents is given table 4.2 above shows that 7 respondents, representing 5% of the staff were experience are 0-2 years, 68 respondents, representing 53% of the sampled staff are there experience lies between 2-5 years, 38 respondents, representing 30% of the sampled staff their experience between 5-10years and 15 respondents, representing 12% are their experience above 10 years. To see the overall experience of the staff 58% of the staff's experience less than or equal to 5 years, the remaining staff experience is above 5years.

Table 4.3 Job position of the respondents

Position	Frequency	Percentage
Junior Officer	-	-
Customer Service Officer	113	88%
Customer Service Manager	11	9%
Branch Manager	4	3%
Total	**128**	**100%**

Source: Survey result, 2017

Table 4.3 shows that 113 respondents, represents 88% of the staff are customer service officer, 11 respondents, represents 9% of the staff are customer service manager, and 4 respondents

from the total sample covers 3% are managers in position. As data indicates, the large number of staff is customer service officers they cover 88% from the total sampled staff.

The following section discusses the factors affecting implementation of E-Payment service in CBE. These factors were identified based on the basic frameworks, technology- organization-environment (TOE) framework.

4.4. Technological Factor

The issues raised in this study in relation with technological factor are perceived risk, which hinder banking industries from the adoption of new technological innovations. The E-payment Director participated in this study were asked whether security issue is raised with the use of technological facility in the banking industries, he stated that security is the main concern that hinders CBE to use technological facilities. These were also supported by the survey result shown on table 4.2, as follows.

Table 4.4. Technological factor

S/N	Description	Frequency & Percentage	SA	A	N	D	SD	Total
1	Customers of our bank fear risk to use E-payment system	Frequency	34	57	12	14	11	**128**
		Percentage	27%	45%	9%	11%	8%	**100%**
2	Lack of confidence with the security aspects considered as challenges for the adoption of E-banking system	Frequency	26	65	9	16	12	**128**
		Percentage (%)	20%	51%	7%	13%	9%	**100%**
3	In the case of using mobile banking, ATM and others, security risk affect users decision to use the system	Frequency	22	78	11	14	3	**128**
		Percentage (%)	17%	61%	9%	11%	2%	**100%**
4	Customers do not trust	Frequency						

	the technology provided by the bank		23	63	9	27	6	**128**
		Percentage (%)	18%	49%	7%	21%	5%	**100%**

Source: Survey result, 2017

The result presented in the above table shows that the respondents asked whether customers of banks fear risk to use E-Payment system, and the descriptive statistics result gives mean 3.91 and mode of 2.00, that means the largest number of respondent were agreed on the issue, which is 57(45%) of the respondents are agree. Therefore, fear of risk is one of the technological factors that hinder implementation of E-payment system in the CBE. Similarly, the result shown on the above table revealed that lack of confidence with the security issue is considered as factors that affect the implementation E-banking system were Mean 3.86 and Mode 2.00 value for the second question . This result were consistent with the findings of Ghazi and Khalid (2012, p.9); Khalfan*et al* (2006) in which all indicted that, technological challenges, such as security risk as hindrance factor for the implementation of E-payment.

In addition, the result shown on the above table indicated that lack of trust on the use of technological facility provided by bank is another factor that can affect the implementation of technological innovation by Ethiopian banking industries. Large numbers of respondents 63 respondents out of the total or about 49% agree on customers do not trust the technology. Mean of 3.96 and Mode of 2.00 agreed with the idea that trust is one basic factor in the implementation of E-banking system. This result confirms the finding of Sathye (1999) which suggests; the greatest challenge among the electronic banking sector is winning the trust of customers in the issue of security or perceived security risk as a key inhibitor in the implementation of online payment.

4.5. Organizational Factor

One of the basic issue related with organizational factor is, the availability of financial as well skilled human resource to implement the system. In this, study costs related with the use of E-banking instrument and technical or managerial skills required to implement E-banking system were considered as organizational factors.

Table 4.5 Organizational Factors

S/ No	Description	Frequency & Percentage	SA	A	N	D	SD	Total
1	The bank have procedures in place for when there is an interruption in service of e-	Frequency	38	52	5	18	15	**128**
		Percentage (%)	30%	40%	4%	14%	12%	**100%**
2	Relatively using of E-Payment to get banking service is expensive for customers	Frequency	4	2	-	58	64	**128**
		Percentage (%)	3%	2%	-	45%	50%	**100%**
3	Customers of CBE were not familiar with the service provided	Frequency	39	51	6	17	15	**128**
		Percentage (%)	30%	40%	5%	13%	12%	**100%**
4	Lack of technical and managerial skills on the use technological innovations affect the E-	Frequency	37	66	13	9	3	**128**
		Percentage (%)	29%	52%	10 %	7%	2%	**100%**
5	High cost of implementation of E-banking (such as cost of ICT equipment and network	Frequency	43	72	2	7	4	**128**
		Percentage (%)	34%	56%	2%	5%	3%	**100%**
6	Lack of skills to implement E-payment service on the expected level affect the	Frequency	51	63	6	3	5	**128**
		Percentage (%)	40%	49%	5%	2%	4%	**100%**

Source: Survey result, 2017

The result depicted on the tables deals with whether there is the banks have procedures in place for when there is an interruption in service of e-banking for the customers were 52(40%) are agree.

As it is shown in the following table 4.3, regarding the cost incurred on the use of different E-banking system like internet /online banking and mobile banking the largest number of respondents 58 out of the total or 64% did not agreed with the idea. Similarly, the descriptive statistics result shows that, mean 3.89 and mode value for the first two questions in the table is 2.00. On the other, hand the result presented on table 4.3. above revealed that unfamiliarity with the service provided though ATM, Internet banking, telephone and mobile phone by customers, Lack of technical and managerial skills on the use of technological innovation mean 3.68 and mode value is 2.00 and Lack of skills to implement E-banking system are considered as a factor that affect the implementation of E-payment service.

An interview script received from the respondent, which indicated that, compared with traditional banking system, also supported the above results; using different technological innovation in banking industry is used to perform banking activities at lower costs. This finding is consistent with the finding of Rasoulina & Javaheri(2006) which suggests, cost, infrastructure, Socio-cultural, time, information, legislation and regulation and economic as the most effective issues affecting the electronic activities. These issues can be either challenges or opportunity. For instance, if a country has managed to achieve a cost reduction greater than the investment made in adoption of new technology, then the cost factor can be considered as an opportunity than as challenge.

In general, using of E-banking service such as internet banking, mobile banking and others is not expensive when compared with traditional banking system. On the other hand, lack of social awareness/lack of familiarity with different technology and lack of sufficient skills to use and implement E-banking system were considered as factors affecting implementing E-payment service in CBE.

4.6. Environmental factor

Another factor that can affect the implementation of e-payment service in banking industry is an external environment. In this study four basic environmental factors are considered, these are legal frame works, national ICT infrastructure, competitive pressure and government support. The result

obtained from survey, interview and literature regarding those four issues were presented in the following sections.

Table 4.6 Environmental factors

S/ No	Description	Frequency & Percentage	SA	A	N	D	SD	Total
1	Lack of available ICT infrastructure can affect the E-payment service	Frequency	65	56	4	3	-	**128**
		Percentage (%)	51%	44%	3%	2%	-	
2	Lack of legal frame works that enforce banking industries to adopt technological innovation	Frequency	9	12	8	57	42	**128**
		Percentage (%)	7%	9%	6%	45%	33%	**100%**
3	Delivering E –Payment services using internet is difficult due to low internet access in Ethiopia	Frequency	84	41	3	-	-	**128**
		Percentage (%)	66%	32%	2%	-	-	**100%**
4	Lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-banking context	Frequency	61	44	9	6	8	**128**
		Percentage (%)	48%	34%	7%	5%	6%	**100%**
5	Frequent power disruption can affect the E-Payment service implementation	Frequency	87	41	-	-	-	**128**
		Percentage (%)	68%	32%	-	-	-	**100%**

6	Lack of competition among local banks and foreign banks can affect the service Implementation	Frequency	42	61	5	11	9	**128**
		Percentage (%)	33%	48%	4%	8%	7%	**100%**
7	Customers may not willing to accept E-Payment service	Frequency	38	46	6	21	17	**128**
		Percentage (%)	30%	36%	5%	16%	13%	**100%**
8	Mobile banking services may not perform well because of network problems	Frequency	47	60	4	9	8	**128**
		Percentage (%)	37%	47%	3%	7%	6%	**100%**
9	Lack of sufficient public awareness has an effect on E-payment implementation	Frequency	74	51	3	-	-	**128**
		Percentage (%)	58%	40%	2%	-	-	**100%**
10	Lack of sufficient government support will affect customers willingness	Frequency	34	48	11	16	19	**128**
		Percentage (%)	27%	38%	8%	12%	15%	**100%**

Source: Survey result, 2017

Despite the recent improvements made by Ethiopian government on the national infrastructure, the overall ICT infrastructure in Ethiopia remains inadequate. Card-based payment systems in Ethiopia have been growing fast in recent years. Four commercial banks in the country including the state owned (Commercial Bank of Ethiopia), Dashen bank, Zemen bank and Wegagen bank have introduced wider use of debit or ATM cards. Commercial banks in Ethiopia also cited plans to use new technologies for remittance transfers, including mobile-phone transfers and remittance-linked financial products such as prepaid cards. However, significant challenges to these plans include, lack of adequate financial and telecommunications infrastructure for the new

technologies (Alemayehu& Jacqueline 2011). Similarly, the study of Wondwossen and Tsegai (2005) stated that lack of sufficient telecommunication infrastructure is one of the basic challenges in the development of E-payment in Ethiopia. More over the questionnaire result in this study presents ten questions to examine the perception of bank staff on the issue.

The above table 4.4 shows that the largest number of respondents 65 or 51% out of the total respondents was agreed that ICT infrastructure in Ethiopia for internet access is not sufficient to use online banking service, where the mean 4.06 and mode value for the first question is 2.00. This indicated that lack of available ICT infrastructure in the country inhibits to use E-banking system. Similarly, an interview script received from the CBE E-payment director indicates that the poor quality of telecommunication network service is a major obstacle for all banks in Ethiopia to effectively deliver some services such as internet banking, mobile banking and others

Results reported on table 4.4, shows the largest number of respondents 57 or 45% out of the total respondents were not agreed that there is no legal frame works in Ethiopia. Likewise, the mean 3.98 and mode value for the second question in the above table were 4.00. National Bank of Ethiopia (NBE) also prove that, Ethiopia have special rule on the use of E-banking system or it is included in the banking regulation in accordance with Article 59(2) of Banking Business Proclamation No.592/2008 and Article 27(2) of Micro-Financing Business proclamation No.626/2009 . Since there is legal frame works on the adoption of technological innovation at central bank, Ethiopian banking industry can be enforced to implement E-banking system. So lack of legal frame work for the implementation of E-payment system is not a basic challenge for Ethiopian banking industry. The finding of this study were also not consistent with the study of Tan and Ouyang (2002), they found that lack of legislation is an initial challenges that influence E-banking adoption in china.

The above table 4.4 shows that the largest number of respondents 64 or 48%, were agreed with the idea that lack of competition between Ethiopian banking sector and foreign bank is considered as challenges for the implementation of E-payment system. Similarly, an interview result revealed that, Ethiopian government did not allow foreign banks to operate in the country. These is due to protecting of local banks from well-developed foreign bank competition

therefore, Ethiopian banking industry did not consider about competition with foreign banks and such polices could discourage banking sector of the country from implementation of E-banking system.

An interview with Director of E-Payment service indicated that: Our bank were aggressively doing on the provision of high quality service to customers by employing different technological innovation, for example the bank purchase core banking system software, which offers service to customers more than the sophisticated ATM machine. It would enable banks to provide Internet banking to deliver product/service to customers. It helps customers to view their balances, transfer funds, and pay bills online. Banks could also offer mobile banking services through which customers can check their balance and transfer funds by short message service (SMS), as well as phone banking to check balances and make account inquires by phone. However, some experts in the banking industry speculate that underdeveloped telecommunications infrastructure may hinder the visibility and practicality of the core banking system. Therefore, one of the major obstacle factor identified in this study is lack of ICT infrastructure, to use E-banking service, such as internet banking, mobile banking, ATM and others.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusion of the findings as well as possible important recommendations and suggestion for further research methods will be presented.

5.1 CONCLUSIONS

This study aims at assessing the main challenges of E-payment service practice in Commercial Bank of Ethiopia. To achieve the proposed objective Technology-Organization-Environment (TOE) framework were used. On the other hand, both quantitative as well as qualitative (mixed) research approach was employed in the study.

The challenges as discussed in the study can be categorized into three main groups' i.e. Organizational, Environmental and Technological factors.

Procedure of the bank during interruption of the service, Service charge, Familiarity of customers with the service, Lack of skills and trained staff in implementation and running of E-payment system, High cost of implementation of E-banking such as cost of ICT equipment and network and software, Lack of skills to implement E-payment are described in the study as organizational factors that challenge the E-Payment service practice in Commercial bank of Ethiopia and it is consistent with the finding of Rasoulina (2006).

The Technological factors, identified in this study were fear risk to use E-payment system, Lack of confidence with the security aspects, security risk, lack of trust on the technological innovation used by banking industries. The finding identified under technological factor were also consistent with other studies on technology adoption in different countries, Ghazi and Khalid (2012) &Sathye (1999), both of them found that security risk is the major barrier for the implementation of E-payment system.

In connection with Environmental factors, Lack of available ICT infrastructure, Lack of legal frame works that enforce banking industries to adopt technological innovation, Low internet access, Lack of adequate coordination and interaction, Frequent power disruption and cooperation between banks, Lack of competition among local banks and foreign banks, customer willingness to accept E-Payment service , Lack of sufficient public awareness and Lack of sufficient government support are considered the basic external challenges for adoption and development of E-payment technology in commercial bank of Ethiopia.

The findings of the study also reveal that customers are very much sensitive and highly concerned about the security of their account and privacy of their private information. However, they do not have enough knowledge about security features and user privacy policies. For this reason, they may not have full confidence to use electronic banking services.

In general, the findings of this study help to understand major challenges of E-payment service and it helps to mitigate the root causes of challenges that hinder E –payment development.

The study also identified security risk, customer familiarity with the service, technical, managerial and implementation skills of E-banking, maintenance capability up on failure, promotion, public awareness, ICT infrastructures and low internet access as major challenges of E-Payment service in CBE. Among the variables that measures challenges in adoption of E banking, perceived risk and environmental factors have significant influence where as that of organizational factors were found less influential.

5.2 RECOMMENDATIONS

The student researcher recommends the following possible solutions that can help to mitigate the identified challenges of E-payment services:-

- ✓ It is recommended that CBE should embark on an intense educational campaign to educate its customers on the real benefits of electronic payment. The bank should run campaigns, promotions and adverts, which aim at educating their customers on the need to adopt electronic payment services. In addition, the campaign must aim at boosting customer confidence in the electronic payment services they provide and assure them of

the security and privacy for the need to patronize these services. This will encourage more customers to adopt the e-banking platform. Hence, more revenue will be generated as they patronize which will intend add up to the profit margins.

- ✓ For the successful implementation as well as practice of E-banking system, ICT infrastructure is a major prerequisite and hence the government should support banking sector by investing on ICT infrastructure development. This will help banks in raising more funds to be in the better position to contribute their quota of the VAT service introduced by the government.

- ✓ Hiring well trained and experienced IT professionals to handle the E-banking service and facilitate proper and continuous training for their employees.

- ✓ CBE employees should be adequately trained in e-banking products and services to be able to help enroll more customers on the platform and also to address customers' needs and challenges when the need arises which will lead to boosting the customer‘s confident in their usage. By so doing, the banks can earn more revenue from the usage of the e-banking services that adds to their profit margins.

- ✓ The bank should build always to guarantee reliability or dependability of online transactions in order to build customer confidence & to improve the trustworthiness reputation of banks.

- ✓ Maximize the staff's existing technical, managerial and implementation skills of E-banking, which ultimately have an effect in the adoption of the service.

5.3 SUGGESTIONS FOR FURTHER RESEARCH

This study described the factors affecting E-payment service practice of commercial bank of Ethiopia. Nevertheless, it did not consider the customers perspective and other stakeholder .Therefore, the student researcher would like to recommend further research be made on the area especially to capture the customers' and other stakeholders perspectives.

REFERENCES

- Alagheband, P. (2006), Adoption of electronic banking services by Iranian Customers, MA thesis, Lulea University of Technology, http://www. epubl.ltu.se/1653-0187/2006/49/LTU-PB-EX-064SE.pdf Viewed 10 September 2011,
- Alsabbagh, I. (2004), `Adoption and use of internet banking in the Sultanate of Oman", *Journal of internet banking and commerce*. 9(2)
- Ayana, G. (2013) Adoption of Electronic banking system in Ethiopian Banking industry: Barriers and Drivers
- Banji, O & Catherine, A 2004, `Internet Access in Africa: Empirical Evidence from Kenya and Nigeria", 21(1): 67-81.
- Bhattacherjee, A. (2001) Understanding information systems continuance: an expectation-confirmation model. *MIS Quarterly*, 25, 351–370
- Chau, K.Y, Patrick & Lai, S., K, Vincent. (2003). An empirical investigation of the determinants of user acceptance of Internet Banking. *Journal of Organizational Computing and Electronic Commerce, 13*(2),123-145
- Creswell, W 2003, *Research Design: Qualitative, Quantitative and Mixed Approaches*," 2nd edition. Sage publication, California.
- Davis, 1989, `User Acceptance of Computer Technology: A Comparison of Two Theoretical Models", *Management Science* 35(8): 982- 1003.
- De Young R. (2001). The internet's place in the banking industry. *Chicago Fed letter* no. 163. http://www.chicagofed.org/publications/fedletter/2001/cflmar2001_163.pdf No. 2, pp. 67-83.
- Efendioglu, A. and Yip, F. (2004), Chinese culture and e-commerce: An Exploratory study Interacting with Computers", 16:45-62.
- Gardachew, W. (August, 2010). Electronic-banking in Ethiopia- practices, opportunities and challenges. Journal of Internet Banking and Commerce, vol. 15, no.2
- Harrison Utum Ubi, 2012, Adoption of e-commerce in the Nigerian banking Industry: problems and prospects, A study of UBA PLC and Zenith Bank PLC, Nnamdi Azikiwe University, AWKA Anambra State.MA thesis.

- Hazlina, T. *et al* (2011), Impacts of Service Quality on Customer Satisfaction: Study of Online Banking and ATM Services in Malaysia. *International Journal of Trade, Economics and Finance*, Vol.2, No.1, pp 023
- Hossain & Leo(2009).Service quality for customers satisfaction. Prentice Hall U.S.A pp352-355,2009
- Iacovou, L 1995, „Electronic data interchange and small organizations: Adoption and Impact of Technology*', MIS Quarterly*, 19(4): 465-485.
- Isaac Awuondo (2005). The Future of E-banking in Africa
- Karjaluoto, H., Mattila, M. & Pento, T. (2002). Electronic banking in Finland –consumer beliefs and reactions to a new delivery channel. Journal of Financial Services Marketing 6 (4), forthcoming. Factors underlying attitude formation toward Internet banking. Paper under review with the European Journal of Marketing
- Kuan, Y and Chau K 2001, „A Perception-based model for EDI adoption in small business using a Technology-Organisation-Environment Framework*', Journal of Information and Management, 35:507-512.*
- Lu, et *al*. 2005, „Internet banking: strategic response to the accession of WTO by Chinese banks", *Journal of Industrial Management & Data Systems*, 105(4):429-440.
- Malak, J 2007, Readiness of the Palestinian banking sector in adopting the electronic banking system :exploratory study, MA thesis, The Islamic University of Palestine.
- Mattewos, L. **(**2012) Challenges and Prospect of E-Banking. MA thesis pp.51-62
- Mishra, R. (2009). *E-Banking: A Case of India*, The Icfai University Journal of Public Administration, Vol. 5, No. 1, pp. 55-65, 2009.
- MUKHERJEE, A. & NATH, P. (2003) A model of trust in online relationship banking. *International Journal of Bank Marketing,* VOL.21, No.1**,** 5-15.
- Organization for Economic Cooperation and Development (OECD, 2001). Electronic finance: Economics and Institutional Factors, occasional paper No 2, financial affairs division, OECD, Paris.
- Ozkan ,A.(2010) Online Payment challenges, Adoption and Impact of Technology.pp212-123

- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahnila, S. (2004),Consumer acceptance of online banking: An extension of the technology acceptance model‖. *Journal of Internet Research*, Vol. 52
- Rasiah, R.—. 2010. —Industrialization in the second-tier NIEs, in R. Rasiah; D.J. Schmidt (eds): *The new political economy of Southeast Asia* (Cheltenham, Edward Elgar), pp. 44–102
- Rose, P. S. (1999). Commercial bank management. Boston, Irwin/McGraw-Hill.
- Schneider, G. P. (2011). *Electronic Commerce* (9th ed.). Boston: Course Technology, CENGAGE Learning
- Salwani, *et al*. 2009, „E-commerce usage and business performance in the Malaysian tourism sector: empirical analysis*'*, *Information Management & Computer Security*. 17(2):166-185
- Tornatzky, G & Fleischer, M 1990, The Process of Technology Innovation, Lexington, MA, Lexington book.
- Tan, Z & Wu, O 2002, „Global and National Factors Affecting E-commerce Diffusion in China, in Globalization and E-Commerce., Centre for research on information technology and organizations: Irvine.
- Turban, E. (2002). *Electronic Commerce a Managerial Persp*ective. Prentice Hall, U.S.A
- Uppal, R. and Rimpi Jatana, (2007) E-banking in India – Challenges and opportunities. ISBN: 8177081373, PP. 266.
- Wondwossen, T and Tsegai, G 2005, `E-payment: challenges and opportunities in Ethiopia‟, *Economic commission for Africa*, Addis Ababa Ethiopia.
- Ziad Hunaiti, Masa'deh, Mohammed Mansour and Ahmad Al-Nawafleh (2009) Electronic Commerce Adoption Barriers in Small and Medium-Sized Enterprises in Developing Countries: The Case of Libya IBIMA business review Volume 2, 2009, pp 37-43
- Zhao, *et al.* 2008,Perceived risk and Chinese consumers' internet banking Service Adoption‟, *International Journal of Bank Marketing*, 26(7):505-525.

APPENDIX

Dear Sir/Madam

My name is **Meron Seifu, MBA** student in department of Project Management at St Mary's University. The aim of this questionnaire is to **assess challenges of e-payment service practice in Commercial Bank of Ethiopia (CBE).** You have been chosen purposely to provide information on problems for implementation of E-Payment service. I would like to seek your cooperation in answering the questions in the questionnaire. Your information, views and opinion will be kept **confidential**.

If you have any queries, please do not hesitate to contact me.

Email: meryseifu12@gmail.com.et **Mobile: 0911302549**

Thank you for your time and participation in this research

General Instruction

Please tick your response in the space provided. In all such cases where more than one response is necessary under the same question, please tick as many responses as are applicable. If you have comments or if you want to provide further explanations, please use the space provided at the end of the questionnaire.

Section I: Demographic profile of respondents

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

1. Gender: Male ☐ Female ☐

2. Age: 21-29 ☐ 30-39 ☐ 40-49 ☐ Above 50 ☐

3. Educational level: Diploma holder ☐ First-degree ☐ Masters degree ☐

4. Monthly income (in Eth. Birr):

Less than 3000Br ☐ Br3000-Br4999 ☐ Br5000-Br6999 ☐

Br 7000-9999 ☐ OverBr10, 000 ☐

5. Work experience in the Bank

0-2 years ☐ 2-5 years ☐ 5-10 years ☐

Above 10 years ☐

6. Job position

Junior officer ☐ Customer service officer ☐ Customer service manager ☐

Branch manager ☐

Section II: Questionnaires related with Assessment on challenges of E-payment service practice in commercial bank of Ethiopia

Instruction: Below are lists of statements pertaining to implementation of E-payment. Please indicate whether you agree or disagree with each statement by ticking (√) on the spaces that specify your choice from the options that range from "strongly agree" to "strongly disagree" .Each choices were identified by numbers ranged from 1 to 5.

Note: SA- Strongly Agree, A- Agree, N- Neutral, DA- Disagree, SD- Strongly Disagree

Questionnaires related with challenges on E-payment service.

	The following are some challenges on E-payment service please indicate level of your choice.	**SA** 1	**A** 2	**N** 3	**D** 4	**S.D** 5
I. Technological Factor (Perceived Risk)						
1	Lack of knowledge to use E-Payment system can create implementation problem					
2	Lack of confidence with the security aspects considered as problems for the implementation					
3	In the case of using E-payment service, security					
4	Money laundering and other financial crimes are easily facilitated through E–Payment					
5	Customers do not trust the technology provided by the bank					
II. Organizational Factors						
6	The bank have procedures in place for when there is an interruption in service of e-banking					

7	Relatively using of E-Payment to get banking service is expensive for customers					
8	Customers of CBE were not familiar with the service provided though E-Payment					
9	Lack of technical and managerial skills on the use technological innovations affect the E-payment service					
10	High cost of implementation of E-banking. (such as cost of ICT equipment and network, software and reorganization)					
11	Lack of skills to implement E-payment service					
III. Environmental factors						
12	Lack of available ICT infrastructure can affect the E-payment service					
13	Lack of legal frame works that enforce banking industries to adopt technological innovation					
14	Delivering E –Payment services using internet is difficult due to low internet access in Ethiopia					
15	Lack of adequate coordination, interaction and cooperation between banks and other decision making					
16	Frequent power disruption can affect the E-Payment service implementation					
17	Lack of competition among local banks and foreign banks					
18	Customers may not willing to accept E-Payment service					
19	Mobile banking services may not perform well because of network problems					
20	Lack of sufficient public awareness has an effect on E-payment implementation					

21	Lack of sufficient government support will affect customers willingness to use technological innovation					

Any other barriers? Please specify below.

If you agree on most of the above challenges, what measures should be taken to reduce these challenges?

_____

_____

Interview Questions

Challenges on E-payment service

1. What are the basic challenges adopting of new technological innovations like E-payment?

2. Are the following challenges considered in your institution as problems for the implementation of E-payment?

A. Lack of competition

B. Customers reluctance

C. Lack of social awareness

D. Cost incurred in the purchase of technological instruments

E. Security risk

F. Inadequate ICT infrastructure

G. Lack of skilled man power

H. Lack of promotion

3. Do you think that government policy have impact on the implementation of E-payment system?

(Please specify/explain).

5. What sort of support would you expect from the government in relation to the E-Payment improvement in Ethiopia?

6. If you have any comment please specify

_____

_____

_____

Declaration

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

Declared by:

Name: Meron Seifu

Signature_____

Date_____

Confirmed by Advisor:

Name: Zemenu Aynadis (Asst.prof.)

Signature_____

Date_____

ENDORSEMENT

This is to certify that Meron Seifu Wubneh has carried out her research entitled *Assessment on challenges of E-payment service practice of Commercial Bank of Ethiopia* under my supervision as university advisor. And I hereby certify that her work is original in nature and is suitable for the submission for the reward of MBA in Project Management.

Advisor: Zemenu Aynadis (Asst.Prof.)_____