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**ADDIS ABABA UNIVERSITY
FACULTY OF BUSINESS AND ECONOMICS
MBA PROGRAM**

**FACTORS AFFECTING ADOPTION OF E-PAYMENT SYSTEM:
THE CASE OF COMMERCIAL BANK OF ETHIOPIA BUSINESS
CUSTOMERS**

**SUBMITTED TO SCHOOL OF GRADUATES OF ADDIS
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REQUIREMENT OF THE DEGREE OF MASTERS IN BUSINESS
ADMINISTRATION (MBA)**

BY

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Declaration

This research project on **Factors affecting adoption of E-payment system in the case of Commercial Bank of Ethiopia Business customers** is my original work and has not been presented for award of Master's Degree in any other university.

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This research project has been presented for examination with my approval as the university supervisor.

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As members of Examining Board of the Final Degree of Masters open Defense, we certify that we have read and evaluate the project prepared by Ermias Mengistu Demissie, entitled: **Factors affecting adoption of E-payment system in the case of Commercial Bank of Ethiopia Business customers**, and recommend that it be accepted as fulfilling the requirement for the degree of Masters.

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All the Glory be to Jesus Christ the son of God; my all in all!

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Lists of Abbreviations

A.T.M	Automated Teller Machine
CBE	Commercial Bank of Ethiopia
E-banking	Electronic Banking
E-commerce	Electronic Commerce
EE	Effort Expectancy
EPS	Electronic Payment System
ICT	Information communication technology
IDT	Innovation Diffusion Theory
MPCU	Model of PC Utilization
NBE	National Bank of Ethiopia
PE	Performance Expectancy
PEOU	Perceived Ease of Use
PIN	Personal Identification Number
PLS	Partial List Square
SCT	Social Cognitive Theory
SEM	Structural Equation Modeling
SI	Social Influence
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for the Social Science
TAM	Technology Acceptance Model
TORA	Theory of Reasoned Action
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UTAUT	Unified Theory of Acceptance and Use of Technology

Abstract

The introduction of new technology is affecting how businesses operate and this introduction requires business organizations and individuals to shift their strategy of doing business to the adoption of information communication technology. The aim of this study is to examine the factors affecting business customers' intention to adopt e-payment system in the case of Commercial Bank of Ethiopia. The method applied in this study is a descriptive research design; and used both primary and secondary data sources. To get the primary data source the study used questionnaire and interview, and for the secondary data various journals and literature relevant to the subject matter of this research were reviewed. The target populations used in this study are from sixteen branches randomly selected from each four districts located in Addis Ababa. Interviews were conducted with the director of payment service, manager of business development and the managers of the randomly selected eight branches. Due to the existence of large population number, 342,648, the study was undertaken on 400 business customers as a sample size that 24 customers from each branch were selected using simple random sampling method. And the study used the structural equation modeling to see the relationship b/n the dependent (Performance expectancy, Effort expectancy, Social influence and Trust) and independent variable (Intention to adopt) using the Unified Theory of Acceptance and Use of Technology (UTAUT) model by Venkatesh et al. (2003), with an additional variable of trust Uchenna Cyril. Eze (2008). The software used to analyze the relationship is Smart PLS3. The finding revealed that all the hypothesis of the direct effects are supported positively and significantly while the indirect/moderators/ are partially supported positively and significantly in that Trust being the stronger influencer to adoption and also technological awareness being the dominant moderator of the dependent variables. From this the study recommends that CBE should strongly work on promoting its e-payment service and creating trust for its stakeholders and policies should enforce the general public to utilize these services in their buying and selling activities as they affect the overall economy of the country and ways of doing business.

Key words: - E-payment adoption, Unified theory of acceptance and use of technology (UTAUT, Commercial bank of Ethiopia, Trust, Intention

CHAPTER ONE

1. Introduction

1.1. Background of the Study

These days digitalization is emerging constantly creating ways in doing business transactions; the introduction of these new technology is affecting how the business operates and this introduction requires business organizations, individuals to shift their strategy of doing business to the adoption of information communication technology (ICT). And this is evidenced by the way business transactions are being made electronically rather than cash base where banks are taking the lead in introducing new e-banking channels to support the business activity (Mohamad, Haroon, and Najiran, 2009).

Technological innovations play a great role in the banking industry and their adoption matters, as described in various studies of e-payment adoption mostly in Africa is low, and these can be described by that those people who have tried or registered for e-payment channel might not use it and becomes inactive (Robinson T. 2000) and some might not use it despite its availability; Additionally, banks can understand the reasons for resistance to e-banking services adoption among potential users since customer acceptance is an important determinant success factor (Delone and McLean 1992) Thus how a country conducts its payment system plays a crucial role in its economy, as this is the enabling channel for the flow of financial resources through well-established financial institutions.

It can easily be said that internet the most useful tools to businesses and individuals in their daily activities. Its use has played a big role in every aspect of human activity including banking. That is globally popular except in developing countries like Ethiopia. The National Bank of Ethiopia (NBE) recently released a circular on the introduction of 'cashless' policy which sets cash withdrawal limits; however the success of this policy requires the increased use of alternative payment systems including e-banking. However, despite the growing popularity of e-banking in the world, its rate of adoption in Ethiopia is relatively slow.

In fact, in Ethiopia, cash is still the most dominant medium of exchange, and the use of these provided e-banking channels forelectronic payment systems are at an embryonic stage and face different challenges. Therefore the aim of the study is to examine the factors affecting the

intention to adopt e-payment system in the case of CBE business customers in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT) model by Venkatesh et al. (2003) with an additional variable of trust (Uchenna Cyril. Eze 2008)

1.2. Statement of the Problem

The appearance of E-banking in Ethiopia goes back to the late 2001; currently 18(Eighteen) banks are operating in Ethiopia which two are government owned while the rest are private banks. And that all except development bank of Ethiopia have implemented E-banking system.

Most studies in Ethiopia tried to show the opportunities and challenges of e-banking in Ethiopia banking industries as how these banks can take e-banking as a competitive strategy among themselves. And while the dynamic of doing business in e-commerce, the governing bank, National Bank of Ethiopia, is demanding change and within this change it is visible that banks have introduced their various e-payment channels even if it is on its infant stage which shows that cash is still the most dominant medium of exchange (Tekabe and Gadisu2016)

In another study Eastin (2002) explains that prior adoption of IT had an identifiable impact because customers will usually adopt a new service only when they have similar experiences before. In addition, the feasibility of technology in terms of security, trust, and efficiency will also affect users' decision to use E-payment and the uses of electronic money transfer channels to the mind of the user create uncertainty and that need the element of trust between the involved parties. Quelch and Klein (1996) stated that trust is an important factor in order to smoothen the transaction process through the use of E-payment channels.

Larpsiri et al., (2002) argued that it is not clear whether electronic documents and records are acceptable as sufficient evidence of transactions. Lack of suitable legal and regulatory framework for E-commerce and Electronic payment is another impediment for the adoption of new technology in banking industry.

Venkatesh, Morris, and Davis (2003) in their studies illustrious that for a successful adoption of information systems in the banking sector is dependent on the extent to which such a system is used and eventually adapted by the potential users. Thus e-payment adoption is not likely to be considered successful if users are unmotivated to use that type of technology, and thus it will not

bring full benefits to the organization. In order to motivate customers to use electronic banking, banks must make key improvements that address the customers' concerns.

According to the semi-annual review of the commercial bank of Ethiopia research made on global and domestic economic situation on February 2019, At the end of December 2018, the number of mobile and internet banking users of the industry reached 3.54 million and 279.1 thousand, respectively. CBE has 71.3% share from mobile banking users and 23.5% from internet banking users. However regardless of the increasing number of registered users the industry has opened 514 new branches compared to the previous year, which shows still banks are focusing on branch opening rather than increasing actual use of e-payment channels. CBE accounted for 28 percent (1,335) of all commercial banks' branches and it is still expected to grow more. (Source CBE quarterly review, 2019)

However, despite the fact that online banking provides many advantages, such as faster transaction speed and lower handling fees (Kalakota and Whinston, 1997), there are still a large group of customers who refuse to adopt such services due to uncertainty and security concerns (Kuisma et al., 2007; Littler and Melanthiou, 2006). That it shows users prefer the physical bank branches to perform their daily business transaction than using E-payment system. And this is also evident in our country, which the governing bank has given the green light for about more than a dozen under formation banks.

Also the other reasons why some customers prefer the physical cash is for money laundering cash hoarding, tax evasion and terrorist financing which are placing undue pressure on the country's economy and also losing millions each year to reprint banknotes that had been damaged or vandalized.

In addition to the above review to my knowledge, while various studies in technological adoption by customers has been done in the developing as well as in Africa mainly Nigeria and Kenya but there are currently few research findings on the factors that influence intention to use e-payment in Ethiopia due to its newness in the industry. Rather studies were more focusing on challenges and opportunities of the E-banking system to benefit banks as a competitive advantage. In a sense that all commercial banks have implemented the e-banking system the use of their fruit is not yet been reaped and that studies in this sector still remain untouched.

And these gaps are the reason that investigating the factors are that influence customer adoption of e-payment system is a must to benefit financial and banking sectors and policy makers in more understanding customer needs and concerns to adopt the technology. Furthermore, this will also benefit software developers or providers in handling issues faced by user in e-payment system.

1.3. Research Questions

A set of questions are recommended regarding the research issue in order to explain the topic. The questions specified below supports the research study on the variables that adoption on e-payment in the case of Commercial bank of Ethiopia Business Customers.

1. What are the main factors that drive businesscustomers to adopt e-payment?
2. How will moderating variables affect the independent variables?
3. What are the problems faced by CBE to provide reliable and efficient e-payment system?

1.4. Objective of the Study

1.4.1. General Objective

Since e-payment is getting more common in the virtual world, the aim of doing this research is to examine the factors affecting the intention to adopt e-payment system in the case of CBE business customers in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT) model by Venkatesh et al. (2003) with an additional variable of trust.

1.4.2. Specific Objective

The specific objectives are:

1. To identify the relationship of factors that drive business customers to adopt e-payment
 - Determine the relationship between performance expectancy and customer's intention to use e-payment system.
 - To identify the relationship between effort expectancy of use and customers intention to use e-payment system.
 - To examine the relationship between social influence and customers intention to use e-payment system.
 - To identify the relationship between Trust and customers intention to use e-payment system.

2. To understand how moderating variables affect the independent variables.
3. To identify the problems that CBE faces in providing reliable and efficient e-payment system.

1.5. Significance of the Study

Generally, electronic payment is a platform used in making payments for goods/services purchased online with internet (Roy & Sinha, 2014).

Even though many banks operating in Ethiopia have implemented E-Banking systems with some limitations, the volume of physical cash transaction is dominant over the E-payment system. In this regard the significances behind this research are:

- ✓ Will create a better understanding of E-payment system to the business society as well as to the customers
- ✓ Will show ways of competitive advantages to Banks in better attainment of their business objective in regard to E-payment
- ✓ Will be a way forward for further academics studies in the future
- ✓ Will be an input for business partners in decision making in case of e-payment systems software and hardware development

1.6. Scope of the Study

The general aim of doing this research is to examine the factors influencing the acceptance of e-payment in CBE business customers limiting its scope under randomly selected sixteen grade four branches found in the four Addis Ababa districts namely North Addis, East Addis, West Addis, and South Addis. The reason behind the selection is that, CBE classify its customer as retailers, business and premium based on their volume and value of transaction. And also interviews made with the director of payment service, manager of business development and the managers of the randomly selected eight branches, Taking this in to consideration; having the management as well as the business customers as a target group helps to address customers that include individuals, business owners, and other parties who participate in the business sector with different age and Gender group.

1.7. Definitions of Terms and Concept

E-payment simply is an exchange of financial transaction electronically with convenience and speed using various E-banking channels. (WondwossenTadesse and Tsegai G. Kidan; 2005)

We can see that recently banks in Ethiopia through the use of information communication technology have introduced various E-banking channels to their customers; which are

- ✓ **ATM:** It is a machine where cash withdrawal can be made without going in to the banking hall and provides the same services, such as money withdrawal, bill payment balance enquiry, mini statement, and money transfer from one account to the other.
- ✓ **INTERNET BANKING:** Internet banking allows customers of a financial institution to conduct financial transactions on a secure website operated by the institution, through which customers are able not only to inquire about account balances, interest and exchange rates but also to conduct a range of transactions.
- ✓ **POINT of SALE (POS):** A POS terminal manages the selling process by a salesperson accessible interface. The same system allows the creation and printing of the receipt. POS systems record sales for business and tax purposes (Shittu, 2010).
- ✓ **MOBILE BANKING:** also known as M-Banking is a term used for performing balance checks, account transactions, payments, credit applications and other banking transactions through a mobile device. The earliest mobile banking services were offered over Short Message Service (SMS), a service known as SMS banking (Tiwari et al., 2007).
- ✓ **AGENT BANKING:** A banking agent is a retail or postal outlet contracted by a financial institution or a mobile network operator to process clients' transactions. Rather than a branch teller, it is the owner or an employee of the retail outlet who conducts the transaction and lets clients deposit, withdraw, and transfer funds, pay their bills, inquire about an account balance, or receive government benefits or a direct deposit from their employer. Banking agents can be pharmacies, supermarkets, convenience stores, lottery outlets, post offices, and many more. (*Wiki for banking agent, 2015*)

1.8. Structure of the Study

The study is organized in to five chapters. The first chapter states the general introduction of the study. Chapter two presents the literature review regarding the research area and sets out the theoretical foundation for the research. The third chapter outlines the research methodology. The research results and discussions are presented in chapter four. The last chapter draws conclusions and recommendations.

CHAPTER TWO

2. Literature Review

This chapter provides the theoretical framework for the research and reviews relevant literature for the research regarding the intention and use of e-payment. Empirical research works done by other researcher in the area of e-payment are discussed and finally hypothesis of the study is presented and conceptual frame work is drawn from literature review.

2.1.E-Payment Adoption

Dennis (2004) defines e - payment system as a means to do business through the use of information communication technology facilitating their commitment from financial point of view. Also, Briggs and Brooks (2011) sees e-payment as a form of inter-connections between organizations and individuals aided by banks and inter-switch houses that enables monetary exchange electronically.

In another perspective, Peter and Babatunde (2012) viewed e-payment system as any form of fund transfer via the internet. Similarly, according to Adeoti and Osotimehin (2012), electronic payment system refers to an electronic means of making payments for goods and services procured online or in supermarkets and shopping malls.

The benefit of using E-payment System from the perspective of the payers, payees, and other facilitators, like banks telecommunication corporations varies which include low cost, convenient mean, time saving and alternative to cash. In this regard those various concerned organs need to have universal acceptability and cooperation between themselves as stated in (Baddeley, 2004, Lim et al., 2007).Eastin (2002) further states that prior adoption of IT had an identifiable impact because customers will usually adopt a new service only when they have similar experiences before. In addition, the feasibility of technology in terms of security, trust, and efficiency will also affect users' decision to use E-payment.

Davis (1989) finds that a user's overall attitude toward a specific information technology (IT) and its applications is a major factor determining whether an individual uses that system. In another study done by White and Nteli (2004); that focused on why the increase in Internet users in the United Kingdom had not been paralleled by increases in Internet usage for banking

purposes, their results showed that customers still have concerns with the security and the safety aspects of the Internet.

One of the challenges regarding e-payment is the lack of specific laws to govern it and facilitate the payment system is a concern for both the bankers and the customers. This relates to issues such as unfair and deceptive trade practice by the supplier and unauthorized access by hackers. Larpsiri et al., (2002) argued that it is not clear whether electronic documents and records are acceptable as sufficient evidence of transactions. Lack of suitable legal and regulatory framework for E-commerce and Electronic payment is another impediment for the adoption of new technology in banking industry. There is no separate legislation that deals with electronic banking including enforceability of the validity of electronic contracts, digital signatures and intellectual copyright and restricts the use of encryption technologies and High rates of illiteracy. (Gardachew 2010) stated that 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

2.2. Theoretical Background and Model Development

2.2.1. Unified Theory of Acceptance and Use of Technology

Different theoretical models have attempted to explain the relationship between user beliefs, attitudes and intentions such as Theory of Reasoned Action (TRA – Fishbein&Ajzen, 1975), Theory of Planned Behavior (TPB – Ajzen, 1991) and Technology Acceptance Model (TAM – Davis, 1989).

But all inclusive examination of the previous eight well known models were combined to create a unified model, by Venkatesh et al. (2003) Unified Theory of Acceptance and Use of Technology (UTAUT) which can explain as much as seventy percent of the variance in intention. The eight models studied by these researchers are TRA, TAM, Motivational Model (Davis, Bagozzi, &Warshaw (1992)), and TPB, a hybrid model combining constructs from TAM and TPB (C-TAM-TPB – Taylor & Todd (1995)), Model of PC Utilization (MPCU – Thompson, Higgins, & Howell (1991)), Innovation Diffusion Theory (IDT – Moore &Benbasat (1996)) and Social Cognitive Theory (SCT – Compeau& Higgins (1995)).

This model by Venkatesh explains that the four constructs act as determinants of behavioral intentions and usage behavior which are: (i) performance expectancy, (ii) effort expectancy, (iii) social influence, (iv) facilitating conditions. In addition to that gender, age, experience and voluntariness of use acts as a moderator variables. (Carolina, 2012)

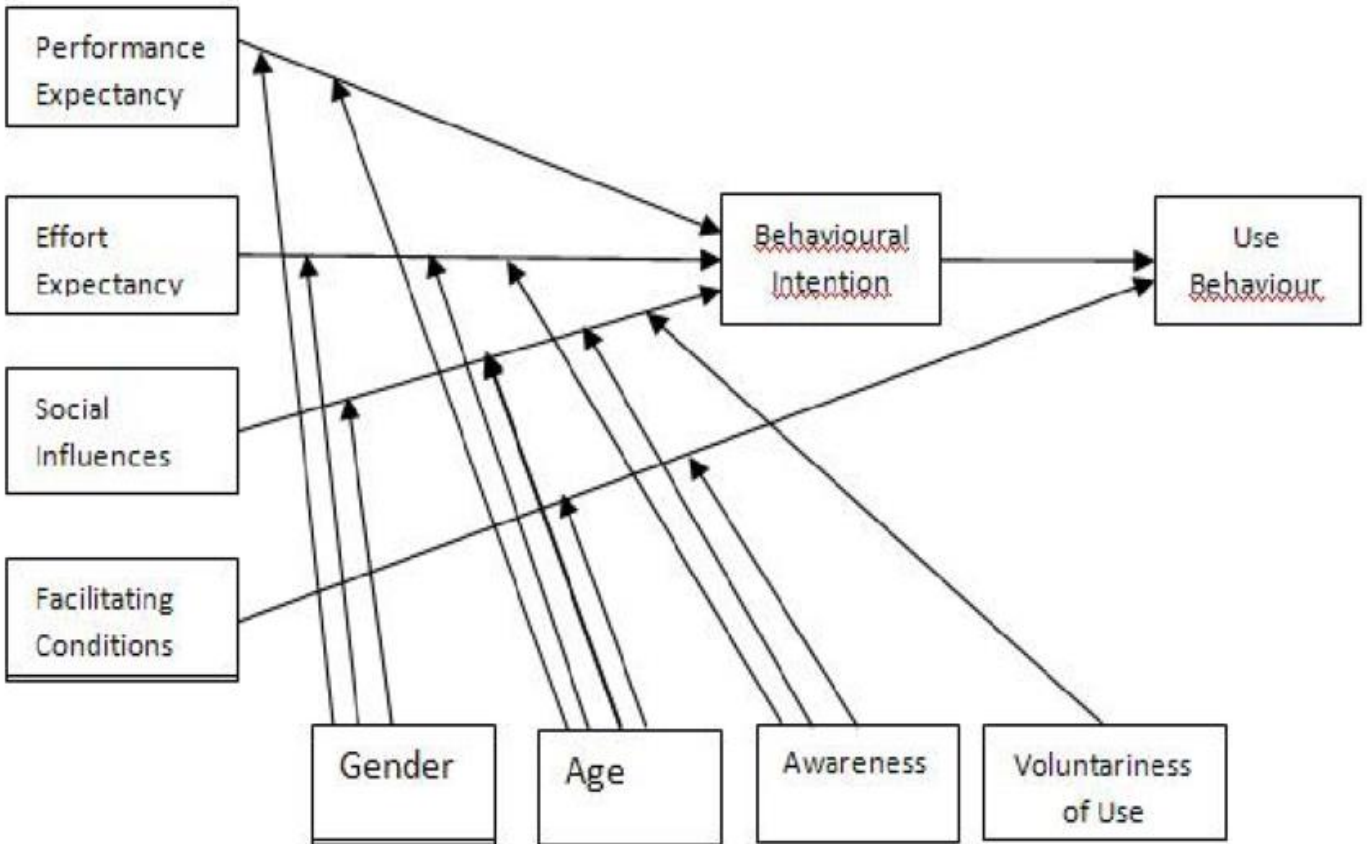


Figure1. The Unified Theory of Acceptance and Use of Technology (UTAUT) model by Venkatesh et al. (2003)

2.2.2. Trust

Eze (2008) on their study of Modeling User Trust and Mobile Payment Adoption: A Conceptual Framework explained consumers perception, concern, regarding security of technology has increased lately that which will also affects customers' e-payment adoption. The concept of trust has received several definitions by researchers. In many studies, trust is based on previous interactions Gefen (2000).

The study further explains that trust is in any financial transaction is a cornerstone and which is built on a multitude of factors such as the consumers' perception of the security of the mobile payment system. Ondrus and Pigneur (2006) put forward that a high level of trust in mobile payments is more of a basic requirement than a competitive advantage.

Regarding the conceptualization of the variables the study utilized five variables which directly affects trust and trust affecting perceived ease of use, perceived usefulness and the dependant variable which is intention to adopt, which is also affected by both perceived ease of use, perceived usefulness.

- Confidentiality

According to Merz (2002), confidentiality is about ensuring that user's transaction information is secured and cannot be viewed by unauthorized persons.

- Integrity

Integrity means that the information and systems have not been altered or corrupted by external & unauthorized parties Merz(2002) and that they trust the institution as well as the system.

- Authentication

Authentication from the consumer point of view means obtaining a level of comfort with a claimed identity. The level of comfort is likely to vary with the value of the transaction and the risk it represents. Security concerns, with respect to exposure of credit card information to hackers or unknown vendors are still a major anxiety for consumers which will impair adoption rate. Merz (2002).

- Authorization

It is about securing the financial transaction authenticity which is usually ensured by the use of PIN or Passwords to validate the authority of the provider to the services or transactions requested to be performed. Merz (2002).

- Non-repudiation

Is an important requisite in electronic transaction as Zhou(1996) explains, it must not be possible for the parties involved in the transaction to deny the agreement they had prior to the happening of the transaction.

In general the study hypothesized that perceived strength of the above five variables have a positive impact on a consumer's trust in mobile payments.

The uses of electronic money transfer channels to the mind of the user create uncertainty and that need the element of trust between the involved parties. Quelch and Klein (1996) stated that trust is an important factor in order to smoothen the transaction process through the use of E-payment channels. In that a high level of trust between the parties encourages conducting online transaction, in the other hand lack of trust will hinder the intention to engage in such transaction. Hoffman, (1999)

To enhance and increase the use of e-payment adoption the providers as well as the system should be trusted by users. Lack of consumer perceived Trust in such systems is one of the main barriers to mobile commerce transactions in a mobile environment (Siau, K., Sheng, H. & Davis, S., 2004)

In general uncertainty raises concerns about the safety of money, that establishing Trust is critical in enabling people to adopt electronic transactions. Therefore incorporating trust as one variable in studying the intention to adopt e-payment in the UTAUT model will help to understand how determinant it is.

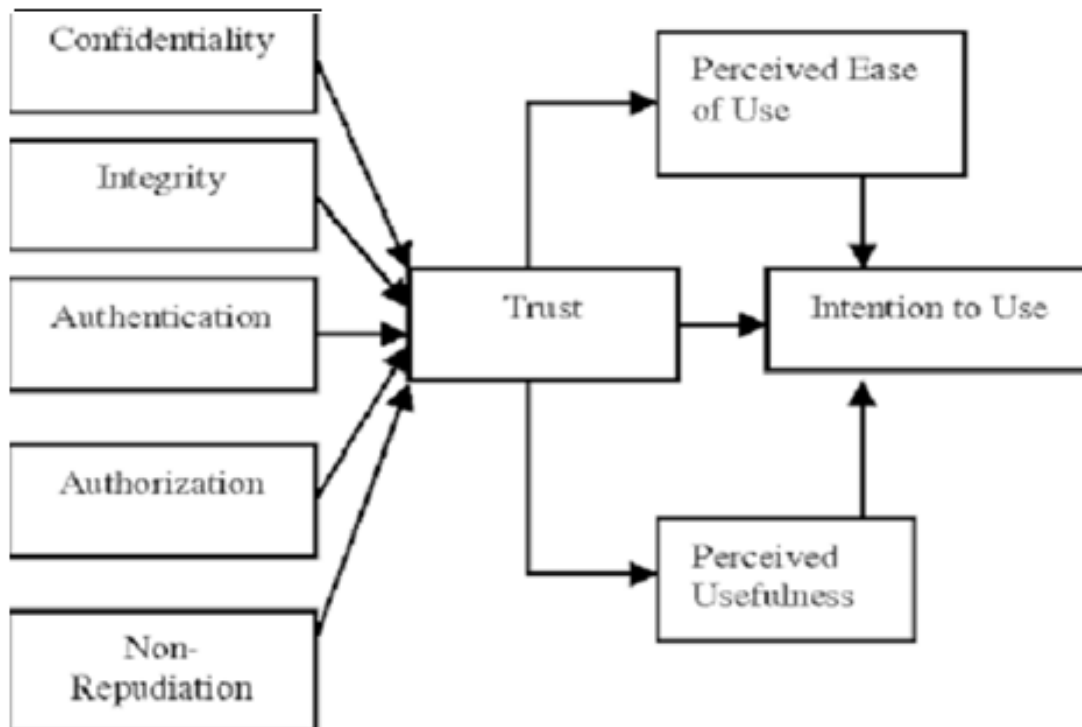


Figure 2 Conceptual model of user trust and mobile payment adoption Uchenna Cyril. Eze (2008)

2.3. Empirical Reviews

A study done by Adel M. Qatawneh ,Fairouz M. Aldhmour and Safa Mohammad Alfugara(2015) aimed to investigate the factors that significantly affect the adoption of electronic payment system (EPS) in Jordan, these factors were (System Characteristics: Security and Privacy, simplicity) and (Organizational Aspects: organization culture and top management support) on the adoption of (EPS) in Jordan.

The deductive approach was adopted in this study to achieve its objectives. It introduces a theoretical framework from which the study hypotheses are built then tested to reach the findings that may be generalized later. The population of this study was 2320 employees who work at Orange Company. Proportionate sample was targeted from the employees at the Orange's branches. Likertfive- point scale questionnaire was developed to collect the required data after reviewing some previous studies that related to the subject of the study. SPSS (version.20.0) software was used for the statistical analysis.

This study revealed that top management support and simplicity have the strongest impact among the other independent variables on the adoption of EPS in telecom companies. As a result the decision makers in Orange Company should support the adoption of the EPS to improve the process of the adoption of EPS.

Determinants of Customers' Acceptance of Electronic Payment System in Indian Banking Sector – A Study by Sanghita Roy, Dr. Indrajit Sinha (2014) with the aim of to determine the factors influencing consumer's adoption on the light of Technology Acceptance Model. Survey based questionnaires are designed and Factor Analysis is used to find reliable and consistent factors. Proposed model illustrates the level of fulfillment of each acceptance factors and therefore predicts its adoption and indicates areas of improvement. The study was based on primary data with randomly selected 650 respondents with 167 valid responses and Statistical analysis of the data was done through SPSS 16 software in computer. In the analysis 5 point Likert scale was used.

The study shows that the model explains 69.0% of the variance in intention to use e-payment. Because the overall model is significant ($F = 119.312$, $P = 0.000$) and also among the factors Perceived Ease of Use (PEOU) is found to be the most significant predictor. Conversely, customer attitude was found to have least significant affect on adoption of E-payment. From the finding it is clear that customer have to use more and more this online payment system.

Wendy et al. (2013) aims to discover the factors influencing perception towards electronic payment (E-payment) from the Malaysian consumers' perspective. A self-reporting questionnaire was developed and disseminated to 200 respondents, out of which 183 valid responses were considered for further statistical analysis. The multiple linear regression results reveal that benefits, self-efficacy, and ease of use exert significant influences on consumers' perception towards E-payment. However, the insignificant results obtained for trust and security warrant further investigation. This study proposes five factors for measuring consumers' perception towards E-payment which is replicable across different economies. However, the small sample size raises the issue of generalizability which future studies should seek to address. This study has advanced knowledge for it has provided information on the current state of E-payment acceptance and use, particularly among Malaysians. The significant factors identified are beneficial to the policy maker, banking institutions, online transaction. Facilities providers

and software developers as they develop strategies directed at increasing E-payment acceptance and use.

Sargent, K et al. (2012) examined factors identified in the Unified Theory of Acceptance and Use of Technology (UTAUT) and the UTAUT is extended by including resistance to change and top management support. Data collected using multidimensional scales were initially analyzed using a principal components analysis with varimax rotation Exploratory Factor Analysis was conducted using SPSS/PASW (18.0) to determine how a range of change items loaded onto factors derived from a combined data set (N=147). The findings indicate effort expectancy, internal facilitating conditions and top management support all influence individuals' intention to use information technology. The results also show that resistance to change or fear of change does not always play a role in innovation adoption. The findings reinforce the need to support new technologies from both a managerial and technical perspective.

GohSauWei(2017) which the purpose of this study is to examine the factors affecting adoption of e-payment among private universities student in KlangValley. The study inspects factors affecting adoption e-payment by using cross-sectional analysis of 500 target respondents in five different private universities in Klang Valley. This paper observes the relationship between attitude, subjective norm, perceived ease of use, perceived usefulness, perceived security, trust, benefit and self-efficacy to the e-payment intention of private universities' students.

It can be concluded that there is a significant relationship between the attitude, subjective norm, perceived ease of use, perceived usefulness, perceived security, trust, benefit and self-efficacy to the e-payment intention of private universities' students. Besides, the study found out that self-efficacy has the strongest relationship with online shopping intention.

This study is important to academicians, buyers and sellers who involved in e-payment as it demonstrates attitude, subjective norm, perceived ease of use, perceived usefulness, perceived security, trust, benefit and self-efficacy are among the eight critical factors in affecting the e-payment intention.

Senarathna and Wickramasuriy, (2011) examined the relationship between organizational factors and ecommerce adoption to understand the factors that contribute to E-commerce adoption. Quantitative approaches were considered in their research. The study draws on the data obtained from a sample of 200 SMEs in Colombo District using a postal survey. The sample was chosen

using a stratified random sampling technique based on business type of the SMEs. Based on correlation, regression and cluster analysis, the findings of this research were revealing and facilitated the understanding of certain organizational factors that influence the level of E-commerce adoption. The main factor identified was organizational culture. The results of this study show empirical evidence that there is a positive correlation between the adhocracy cultural characteristics among the SMEs and the level of E-commerce adoption. Also, hierarchy cultural characteristic showed a negative correlation with the level of E-commerce adoption in SMEs. An argument can be made out that a culture promoting innovation and risk acceptance would provide the needed support for higher levels of adoption of new technologies. Top managers' opinion towards innovation also influences the way of doing business by the firm.

2.4. Empirical Studies In Ethiopia

A study done by AnuwarAbdulkadir on a case of selected ten banks with a descriptive study aimed at assessing the factors affecting adoption of agent banking and electronic banking in Ethiopian banking industry. A survey design was employed by use of questionnaires sent out to the respondents of purposively selected and 410 valid responses. The study population comprised the selected ten banks, namely Commercial Bank of Ethiopia, Awash International Bank, Dashen Bank, Bank of Abyssinia, Wegagen Bank, United Bank, Nib International Bank, Zemen Bank, BirhanInternational Bank and Abay Bank. The data collected was analyzed using descriptive statistics. A research framework developed based on technology organization-environment framework. The findings of the study revealed that the main challenges face the banking industry in adoption of agent banking and e-banking are lack of adequate national ICT infrastructure, Lack of skilled IT personnel's, Lack of government support, Security risk, Lack of legal and regulatory frameworks and lack of competition between local and foreign banks. This study found that the introduction of third party retail agents presents several risk factors with regard to effective regulation and supervision of banks. The study also identified perceived ease of use and perceived usefulness as prospects of adopting agent banking and e-banking system.

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.

Another study done by LaekemariamHaile (2015) on Factors Affecting the Adoption of Mobile Banking in Commercial Bank of Ethiopia as the tool for help banks understand and improve the service in order to gather the expected benefits and can add on to the existing literature concerning mobile banking in the Ethiopian context. From the literature, six determinant factors are identifies. Each variable is measured using 5-point Likert-scale using primary data collection method, questionnaires were distributed to target respondents of customers of Commercial bank of Ethiopia for mobile banking users,

This study is based on The Unified Theory of Acceptance and Use of Technology (UTAUT) model specifies the causal relationships between Performance expectancy, Perceived risk, Perceived cost, Effort expectancy, Trust, Mobile banking service quality and Behavioral intention items. The data were analyzed using AMOS version 23 and SPSS version 20. The findings of this study revealed that Performance expectancy, Perceived risk, perceived cost, Effort expectancy and Trust, were the factors affecting users having intention to adopt mobile banking. Meanwhile, the Mobile banking service quality was found to be insignificant in this study. Furthermore, this study also manages to present demographic variables effects toward behavioral intention to adopt mobile banking, and found that gender is non-significant factor for mobile banking adoption. Age and occupation is found as significant factor for adoption of mobile banking but educational qualification was not a significant factor for adoption of mobile banking in Ethiopian mobile banking user context.

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.

With the aim to examine the factors affecting customers' intention to adopt ATM banking system in Ethiopian banking industry, the case of Addis Ababa city by AsratMollaFantaye(2017). The study applied mixed research design and collect data through the use of primary and secondary data sources. The target population for the study was among the head office customers of seventeen commercial banks located in Addis Ababa. The study was undertaken on 385 customers and used the simple and multiple regressions to see the relationship between the dependent variable intention to adopt ATM banking system and the independent variables, Attitude, Subjective Norm, Perceived Behavioral Control, Perceived Ease of Use and Perceived Usefulness. Thus the paper had come up with result of subjective norm and attitude has significant impact on intention to adopt ATM-banking. The predictive capacity of subjective norm is much higher. The paper also presented preferred banking system among customers' and why they choose between teller-based banking and ATM-banking, customers' preferences for ATM-banking across different educational levels and gender and ATM-banking services used by customers too.

The paper showed the existing legal frameworks on ATM-banking. From the respondents', receiving banking products or services through teller-based channel is more preferred than ATM-banking channel. ATM-banking usage with educational level and gender, better results were recorded for ATM-banking with educational level of bachelor degree and above and for male participants'. ATM-banking usage is lower among participants with lower educational level. Also the paper resulted the multipurpose ATM banking service is used for limited functions of withdrawing money and requesting balance statement. Based on the above findings the paper provides recommendation such as: undertaken awareness creation tasks to improve customers' knowledge on utilizing ATM-banking packages. And also making ATM always functional, secure and privacy keeper as well as frequent monitoring and maintenance is a must.

2.5. Conceptual Framework and Hypothesis Development

A conceptual framework is a logically developed, described and elaborated network of interrelationships among variables integral in the dynamics of a situation being investigated (Mugenda&Mugenda, 2003) that the under explained variables are included and are part of the conceptual framework of the study.

2.5.1. Dependent Variable

2.5.1.1. Intention to Adopt

Various researchers has theorized and found that user's intention is the most important determinant of actual behavior for user acceptance and use of technology such as e-payment Zhou, (2008). The theory of reasoned action (TORA) by (Ajzen&Fishbein, 1980) stated that intention is the direct antecedent of behavior in that is determined by individual attitude towards performing the behavior and the individual's perception of what relevant other think of the behavior. For further enhance our understanding of the phenomenon. "Extensions to the various models identified in previous research mostly enhance the predictive validity of the various models beyond the original specifications" (Venkatesh, et al., 2003)

2.5.2. Independent Variables

2.5.2.1. Performance Expectancy

Performance expectancy can be explained as the extent to which one understands e-payment system can help him do business. Previous models on performance expectancy construct showed that it is the strongest predictor of intention and remains significant at all points of measurement. (Minton and Schneider 1980) on their study explained that gender differences showed that men tend to be highly task-oriented and, therefore, performance expectancies, which focus on task accomplishment, are likely to be especially salient to men. Similar to gender, age is theorized to play a moderating role that younger workers may place more importance on extrinsic rewards. Thus, the influence of performance expectancy will be moderated by both gender and age. " (Venkatesh et al. 2003)

- ❖ H1: The influence of performance expectancy on intention to adopt will be moderated by gender, age and awareness, thus there will be a significant relationship between performance expectancy and intention to adopt

2.5.2.2.Effort Expectancy

Effort Expectancy is “the degree of ease associated with the use of system” (Venkatesh et al. 2003). Previous models regarding the relation between effort expectancy and behavioral intention is stronger in older workers and young women, thus they hypothesized gender, age and experience to moderate the relationship between the constructs and found the relationship between effort expectancy on behavioral intention was significant. In general it is found that effort expectancy is silent for women and particularly those who are older and with relatively little experience with system Venkatesh et al. (2003),

- ❖ H2: The influence of effort expectancy on intention to adopt will be moderated by gender, age and awareness, thus there will be a significant relationship between effort expectancy and intention to adopt

2.5.2.3.Social Influence

Venkatesh defined it “is the degree to which an individual perceives that important others believe he/she should use the new system” (Venkatesh et al. 2003). This construct is synonymous to subjective norms in other studies. And it can also be as social factors and image respectively. Similarly, age, gender, experience, and voluntariness of use were theorised to moderate the influence of social influence and behavioural intention, because past literatures has proven that the effect was stronger in women and those with experience in mandatory situation (Venkatesh et al. 2003)

- ❖ H3: The influence of social influence on intention to adopt will be moderated by gender, age and awareness, thus there will be a significant relationship between social influence and intention to adopt

2.5.2.4.Trust

Trust is defined as a function of the degree of risk involved in financial transactions, and the outcome of trust is reduced perceived risk, leading to positive intentions toward E-payment adoption (Yousafzai et al., 2003)

With customers’ expectation that e-payment transactions performed are safe, that explains users’ trust (Tsiakis&Sthephanides, 2005; Mallat, 2007). Trust can be described as a degree of certainty

in the process of financial transaction that the performer has which the perceived risk is reduced and thus leads to positive intentions toward use of e- payment (Yousafzai et al., 2003).

It is true that customers make their own decision to trust or not a system regarding their money, in that various studies had stated, trust involve in online exchanges of money have significant impact that determinant influencing customers' willingness to adopt e-commerce transactions. Trust is important for understanding interpersonal behavior and business term in economic exchanges which will affects users' opinion toward e-payment systems. (Chou et al. (2004)

Zhou (2011) in his study explained that online transaction due to the presence of high degree of uncertainty and risk customers need to trust the system as well as the provider, this will more emphasize on the importance of trust in e-payment. Without trust in the system, it will be very difficult for e-payment to achieve its intended purpose (Lim et al.,2006).

Another study Kniberg (2002) had proved that adoption of e-payment system is reliable if trustworthiness is there. Users' confidence that their personal information and money will not been used without their permission or acknowledgement or against their personnel interest.

Abrazhevich (2001) and Chou et al. (2004) further explained that to understand interpersonal behavior and business term in economic exchanges which will affects users' opinion toward e-payment systems trust is important factor to be studied

- ❖ H4: The influence of trust on intention to adopt will be moderated by gender, age and awareness, thus there will be a significant relationship between trust and intention to adopt

2.5.3. Moderating Variables

2.5.3.1. Technology Awareness

Technological adoption is a process by which a user accepts the system and continues using it. According to Rogers and Shoemaker (2001), consumers go through “a series of process in knowledge, conviction, decision and confirmation” before they are ready to adopt a new product or service. The adoption or rejection of an innovation begins when “the consumer becomes aware of the innovation”.

(MmilandSathye, 1999) in the study titled “Adoption of Internet Banking by Australian customers: An Empirical Investigation” one of the impediment of internet banking adoption is lack of awareness which mostly negatively affect Internet banking adoption.

- ❖ H5: Technology Awareness will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt

2.5.3.2.Age

Age has been theorized to importantly moderate the other variables in many studies. (Hall and Mansfield 1975; Porter 1963) suggested that regarding job related attitudes younger workers may place more importance on extrinsic rewards. It is evident that there exists a difference in technology adoption between gender and age Venkatesh (2000) in that studies of gender differences can be misleading without reference to age Venkatesh et al. (2003) and Levy (1988). Actually, age is considered to moderate almost all the relationships within UTAUT (Venkatesh et al., 2003).

- ❖ H6: Age will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt

2.5.3.3.Gender

Regarding gender, previous studies tried to examine gender difference between men and women to understand the adoption and use of technology and Putrevu (2002) suggests that difference in information processing exists between men and women and as such both genders will have different rate of technology acceptance in an organizational context.

- ❖ H7: Gender will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt

2.5.4. Justification for use of Moderating Variables

Many technology acceptance studies neglect moderating effects of individual factors, although some do admit that the absence of such characteristics is one of their work’s limitations (e.g., Davis et al., 1989). The inconsistencies existing in prior studies imply that perceptions are not equally efficacious in developing usage intentions for everyone (Venkatesh, 2000)

The attitude towards using e-payment can be captured by amongst different age groups. Previous studies on technology acceptance propose that there is a strong relationship between age and the adoption of new technology, Fonchamnyo (2012).

It is observed that older customers are found to have negative attitude towards technology and innovation as compared to younger adults who are more interested in using these new technologies. Thus, older customers are less likely to adopt e-payment. Actually, age is considered to moderate almost all the relationships within UTAUT (Venkatesh et al., 2003).

(Heshan Sun, 2006) explained that various studies suggested that women and men are different in terms of information processing, using different socially constructed cognitive structures and that decision-making processes by woman and men are different (Venkatesh and Morris, 2000).

As cited in the study, Rogers (Rogers, 1995) defined technology awareness as “user's knowledge about the capabilities of a technology, its features, potential use, and cost and benefits, i.e., it relates to awareness-knowledge”. Thus having the knowledge of how to use the technology will positively moderate the relationship between the variables.

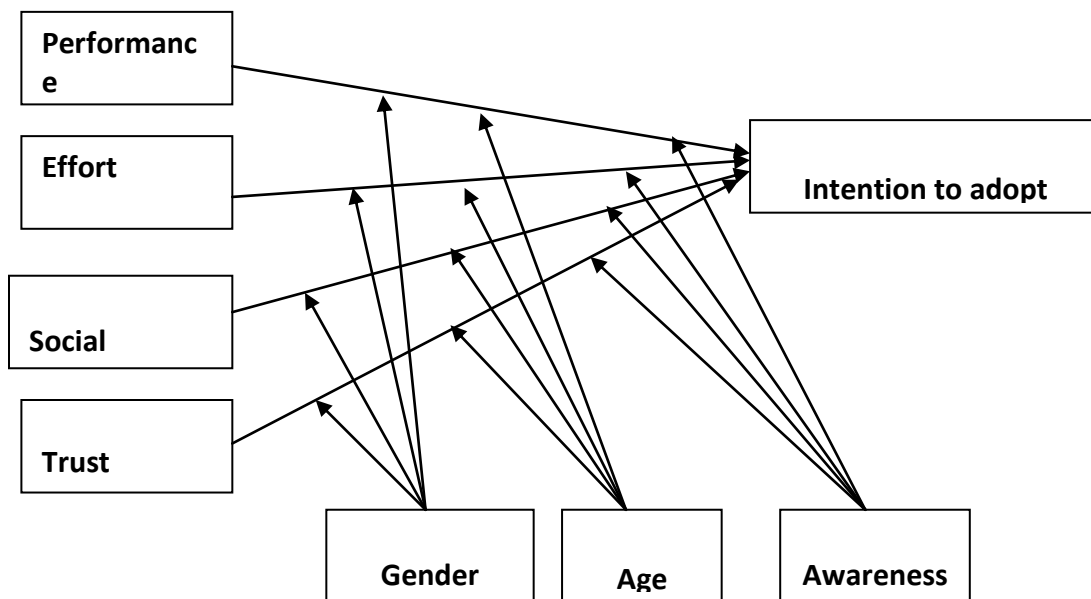


Figure 3: Modified Conceptual framework

CHAPTER THREE

3. Research Methodology

3.1. Research Design

In this research a descriptive design method is used and quantitative research approach is applied. The justification for the use of the quantitative research approach is that from previous studies it can be said that the sole point of qualitative research is to understand and explain social interactions about a certain phenomenon when little is known or if there is uncertainty (Cronholm and Hjalmarsson, 2011), in contrary to this idea quantitative deals with testing of hypothesis, looking at cause and effect as well as making a prediction between variables mostly to verify/nullify (Creswell, 2002; Teddlie and Tashakkori, 2012; Feilzer, 2010). Furthermore, Williams, (2007) remarks that quantitative research starts with a statement of a problem, generating of hypothesis or research question, reviewing related literatures and an analysis of data using statistical methods to test the strength and significance of the relationships between the given variables”. In addition to this idea, Gelo, et-al. (2008.) advocates that “Quantitative and qualitative research approaches clearly differ in terms of how data are collected and analyzed.

Various studies also explained that there are three main areas qualitative research is criticized. First, regarding generalization, small samples lead to no or poor generalization of findings; second, researcher bias guiding to interpretation of raw data based on the researchers’ own predispositions (Stenbacka, 2001; Morse et al., 2008; Mays and Pope, 1995); and thirdly, in extreme cases qualitative research can lead to idiosyncratic theory building, i.e., one theory relates to one issue or one case or one individual only (Eisenhardt, 1989).

In general Quantitative research requires the reduction of phenomena to numerical values in order to carry out the statistical analysis. By contrast; qualitative research involves the collection of data in a non-numerical form, i.e. texts, pictures, videos, etc. In quantitative research, Variables are very essential because it is the phenomenon that is classified and quantified.

Therefore the quantitative component were derived from the survey data collected from the customers of commercial bank of Ethiopia in sixteen selected branches from the four districts found in Addis Ababa and interviews were made with the director of payment service, manager of business development and the managers of the randomly selected eight branches.

3.2. Data Source and Collection Method

The study used both primary and secondary data. Primary sources of data were gathered from structured questionnaire, and interviews were made with the director of payment service, manager of business development and the managers of the randomly selected eight branches, whereas secondary sources of data are generated through a review of relevant documents and web pages. Questionnaires were distributed to CBE's business customers from randomly selected sixteen branches from the four Addis Ababa districts.

The questionnaires were structured mainly in close-ended questions by which the respondents are able to indicate their level of agreement using a five Likert rating scale measurement where: Strongly Agree = 1; Agree = 2; Neutral = 3; Disagree = 4; and Strongly Disagree = 5; the use of Likert scale is to make it easier for respondents to answer question in a simple way and to measure the respondents' view concerning statements on Performance expectancy, Effort expectancy, Social influence, Trust and intention to adopt. Originally the questionnaire is prepared in English language, However, for the convenience of the diverse sample group it was translated in to Amharic.

The interview consists 10(TEN) questions related to the objective of the study which are answered by the director of payment service, manager of business development and the managers of the randomly selected eight branches,

3.3. Target Population

The general aim of doing this research is to understand the factors influencing the acceptance of e-payment in CBE business customers limiting its scope under branches found in the four Addis Ababa districts namely North Addis, East Addis, West Addis, and South Addis with a sampling frame of Yohannes, Sheger, Menlik Hospital, Silassie, Dilgebeya, Jemmu, Mexico, Kerra, Misrak_dil, Africa Avenue, Kazanchies, Megenagna, Addis Ketema, Atanatera, Eyesus_Gedam and Tekelehaimanot branches and the director of payment service, manager of business development and the managers of the randomly selected eight branches,

Therefore, based on the information obtained from Management information system, the total population size of the study becomes 342,648 business customers.

3.4. Sampling Method and Sample Size

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

The sampling design for this population was simple random sampling. In simple random sampling each individual in the population has an equal probability of being selected which is important for the external validity of the study (Creswell, 2009).

In doing so from out of each four districts namely East Addis Ababa 24 (Twenty-four) grade four branches, North Addis Ababa 11 (Eleven) grade four branches, West Addis Ababa 14 (Fourteen) grade four branches and South Addis Ababa 17 (Seventeen) grade four branches, by lottery method 16 (sixteen) branches with a total population size of 342,648 business customers were selected.

Branches Business Customers Data List

Table 1: Branches Business Customers Data List (Source CBE Customer Data Base)

No,	Branch Name	No, of Customers
1	Addis Ketema	34,625.00
2	Africa Avenue	31,763.00
3	Atanatera	7,986.00
4	Dilgebeya	8,450.00
5	EyesusGedam	3,650.00
6	Jemmu	4,398.00
7	Kazanchies	7,625.00
8	Kerra	20,439.00
9	Megenagna	20,761.00
10	Menlik Hospital	2,983.00
11	Mexico	38,218.00
12	Misrakdil	12,548.00
13	Sheger	35,216.00
14	Silassie	38,712.00
15	Tekelehaimanot	47,623.00
16	Yohannes	27,651.00
	TOTAL CUSTOMERS	342,648.00

Given a population of 342,648 CBEs' business customers, 95% confidence interval and error level of 0.05 the sample size is 400 business customers using the formula for sample size determination when the population size is known (Yamane, 1967)

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

Where n = sample size

N = size of population

e = Error level

$$n = \frac{342,648}{1 + 342,648(0.0025)}$$

$$n = 400$$

By having a total sample size of 400 business customers; to give equal chance for each selected 16 (sixteen) benches, 25 business customers were selected from each branch with a means of lottery method.

3.5. Measurements of Variables

The key variables in this study were measured by self-report questionnaire. The first part of the instrument includes demographic characteristics of gender, age, educational qualification, and monthly income. The second part of the questionnaire assesses the customer's relation with the bank regarding how long they have been customer of the bank as well as their awareness and use of e-payment system and the last part will assess the four variables in the research hypothesis. Measurement statement for each constructs were adopted from previous literatures-PE, EE and SI were adopted from (Venkatesh et al. 2003 cited in Carolina, 2012); Trust from Uchenna Cyril. Eze (2008); also its reliability were tested with Cronbach alpha and are above the expected threshold of 0.7, showing evidence of internal consistency. The variables were measured using five-point Likert scales, ranging from strongly disagree (1) to strongly agree (5).

3.6. Data Analysis Techniques

Data analysis consists of examining, categorizing, tabulating, or otherwise recombining the evidence, to address the initial proposition of a study (Yin, 1989).

The research approach used is quantitative research approach. In order to meet the stated research objectives, the collected data using survey questionnaire are analyzed quantitatively using both descriptive and structural equation modeling with the help of SMART PLS 3 software. And SPSS v 20

3.7. Ethical Consideration

Throughout the research, the researcher will uphold and respects the participants' right to privacy, anonymity, fair treatment and to protection from discomfort and harm (Neuman, 2003). Ethics is the code of moral principles and values that governs the behavior of an individual or group with respect to what is right or wrong (Bratton and Gold, 2000). In this research, ethical issues have got especial consideration. The researcher will clearly discuss the purpose of the research to the participants during data gathering stage of the research. As a matter of confidentiality, the participants will not be required to write or tell their names. Furthermore, the participants are to be assured that their responses for the questionnaire as well as the interview will be used for the intended purpose only.

CHAPTER FOUR

4. Data Analysis and Discussion

4.1. Introduction

For the purpose of this research 440(Four hundred Forty) questioners were distributed to Business customers of the selected sample groups; however from the distributed questioners only 398 (Three Hundred Ninety-eight) was collected and again from these 11 (Eleven) of them were not properly filled out by the respondents so are rejected and that the study used 387(Three hundred Eighty seven) valid responses which gives as 87% response rate. The final data was then inserted to SPSS v20 and was exported to SMART PLS 3software's for further analysis and the following findings are made.

4.2. Demographic Information of Respondents

Table 2: Gender of Respondents (Survey result from SPSS 20)

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	216	55.8	55.8	55.8
Female	171	44.2	44.2	100.0
Total	387	100.0	100.0	

Table 2 explains that from the total 387 respondents, 55.8% are male while the rest of 44.2% are female respondents which shows that it can be said has included both genders less equally.

Table 3: Age of Respondents (Survey result from SPSS 20)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-35	213	55.0	55.0	55.0
	36-49	123	31.8	31.8	86.8
	50-65	31	8.0	8.0	94.8
	Above 65	20	5.2	5.2	100.0
	Total	387	100.0	100.0	

Table 3 explains that from the total 387 respondents, 55.% are found at the age of 18-35, 31.8% from the age of 36-49 while the rest of 14% are equal and above the age of 50; which states that the respondents are at the young age and are likely to adopt easily as per the previous studies.

Table 4: Educational background of Respondents (Survey result from SPSS 20)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Elementary	21	5.4	5.4	5.4
	High school	41	10.6	10.6	16.0
	Diploma	96	24.8	24.8	40.8
	Degree	192	49.6	49.6	90.4
	Masters-and-above	37	9.6	9.6	100.0
	Total	387	100.0	100.0	

From table 4 we can see that 5.4% respondents who are elementary and 10.6% are high school level respondents while 49.6% and 24.8% which took the lion share of the respondents are respectively degree and diploma holders; and for masters and above respondents are found to be at 9.6%.

Table 5: Income level of Respondents (Survey result from SPSS 20)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<3000	48	12.4	12.4	12.4
	3000-6000	87	22.5	22.5	34.9
	6001-9000	111	28.7	28.7	63.6
	9001-12000	84	21.7	21.7	85.3
	>12000	57	14.7	14.7	100.0
	Total	387	100.0	100.0	

The 5th table avails the finding of the respondent's income which comparably falls from 21.7% to 28.7%; which 28.7% is the middle income level of the respondents which is 6001-9000 birr and 14.7% is greater than 12,000 birr, if willing to use can easily make their transaction through e-payment channels.

4.3. Customers Information with E-payment channels Frequency Table

	Frequency	Percent	Valid Percent	Cumulative Percent
<1 years	50	12.9	12.9	12.9
1-2 years	89	23.0	23.0	35.9
Valid 2-4 years	113	29.2	29.2	65.1
>4 years	135	34.9	34.9	100.0
Total	387	100.0	100.0	

Table 6: How Long They Were Customer of The Bank (Survey result from SPSS 20)

From table 6, we can see that all 387 respondents have been customer of the bank from less than a year to more than four years at a percent of 12.9% to less than a year to 34.9% which are to more than four years and the rest 52% are found to be between a year and four; that we can infer from the finding that their stay can expose them to the various e-payment channel service delivery of the bank and their awareness of them could be grater.

Table 7: How aware they are of the service of E-payment provided by CBE (Survey result from SPSS 20)

	Frequen cy	Percent	Valid Percent	Cumulative Percent
I Dont know	34	8.8	8.8	8.8
Little	183	47.3	47.3	56.1
Valid Enough	119	30.7	30.7	86.8
i know Well	51	13.2	13.2	100.0
Total	387	100.0	100.0	

The finding in table 7 explains how customers are aware about the e-payment service provided by the bank, and it can be said that contrary to the 34.9% stay at the bank for more than four year, 47.3% of the respondents has a little awareness while only 30.7% of them knows enough, while 9% know nothing at all and only 13% has a well understanding of the payment services which recommends that the bank has to do more on awareness creation.

Table 8: Current E-payment Use of customers (Survey result from SPSS 20)

	Frequency	Percent	Valid Percent	Cumulative Percent
I am using	133	34.4	34.4	34.4
Valid I am not using	254	65.6	65.6	100.0
Total	387	100.0	100.0	

The finding in table 8 are about the current e-payment use of customers and it can be seen that 65.6% of the respondents are not currently using the service which can be the result of table 7 which has explained their awareness level regarding the e-payment service provision of the bank.

Table 9: Future E-payment Use of customers (Survey result from SPSS 20)

	Frequency	Percent	Valid Percent	Cumulative Percent
I will use	260	67.2	67.2	67.2
Valid I will not use	127	32.8	32.8	100.0
Total	387	100.0	100.0	

In this last table, table 9 when we see the respondents' future intention the finding clearly indicates that a promise of future use of 67.2 and the rest 32.8 are still not willing to use due to their unexplained reason.

4.4. Analysis and discussion on Factors that affects customers' intention to adopt e-payment system from questioners.

To understand the effect of the independent variables on the dependant variable the data collected from valid 387(Three hundred Eighty Seven) questioners was analyzed through Structural equation modeling (SEM)

Structural equation modeling (SEM) is a statistical technique for testing and estimating causal relationship using a combination of statistical data and qualitative causal assumptions. Researchers acknowledge the possibilities of distinguishing between measurement and structural models and explicitly taking measurement error into account (Henseler, Ringleand, &Sinkovics, 2009). Partial least squares (PLS) is a variance-based technique and it will be used on this

investigation, Smart PLS 3.0 (Ringle, Wende, & Will, 2015) was the software used to analyze the relationships defined by the theoretical model.

The hypotheses established in this research were:

- ❖ H1: The influence of performance expectancy on intention to adopt will be moderated by gender, age and awareness, thus there will be a significant relationship between performance expectancy and intention to adopt
- ❖ H2: The influence of effort expectancy on intention to adopt will be moderated by gender, age and awareness, thus there will be a significant relationship between effort expectancy and intention to adopt
- ❖ H3: The influence of social influence on intention to adopt will be moderated by gender, age and awareness, thus there will be a significant relationship between social influence and intention to adopt
- ❖ H4: The influence of trust on intention to adopt will be moderated by gender, age and awareness, thus there will be a significant relationship between trust and intention to adopt
- ❖ H5: Technology Awareness will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt
- ❖ H6: Age will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt
- ❖ H7: Gender will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt

So in these parts we will examine the measurement model as well as testing the structural model.

4.4.1. Measurement Model

The measurement model testing will be done in order to assess internal consistency, indicator reliability, convergent validity and discriminant validity

Table 10. Measurement Model

	ITEMS	LOADING ^a	AVE ^b	CR ^c	rho_A ^d
Performance Expectancy	PER_EXP1	0.56	0.53	0.81	0.78
	PER_EXP2	0.86			
	PER_EXP3	0.53			
	PER_EXP4	0.87			
Effort Expectancy	EFOR_EXP1	0.94	0.67	0.85	0.79
	EFOR_EXP2	0.51			
	EFOR_EXP4	0.93			
Social Influence	SOC_INFL1	0.59	0.53	0.81	0.76
	SOC_INFL2	0.86			
	SOC_INFL3	0.53			
	SOC_INFL4	0.85			
Trust	TRUST1	0.92	0.85	0.94	0.91
	TRUST2	0.92			
	TRUST4	0.92			
intention to adopt	BEHAV_INTEN2	1	1	1	1

Indicator Items Removed Which Are Below 0.5: Efor-Exp3, Trust 3, Behav_Inten 1, Behav_Inten 3 And Behav_Inten4

- a. All item Loadings > 0.5 indicates indicator Reliability (Hulland, 1999 p.198)
All Average Variance extracted (AVE) > 0.5 as indicates Convergent Reliability (Bagozi and YI(1988]:Fornell and Larcker(1981])
- b. All Compositreliability (CR)>0.7 indicates internal Consistency (gefen, et al 2000)
- c. 2000)
- d. All Cronbach's alpha > 0.7 indicates reliability (Nunnaly, 1978)

From the above table 10 in analyzing the reliability of the indicators as stated by (Hulland, 1999, Hair & Anderson 2010), factor loadings should be statistically significant and preferably greater than 0.7. EFOR-EXP3, TRUST 3, BEHAV_INTEN 1, BEHAV_INTEN 3 AND BEHAV_INTEN 4 were excluded due to their low loading and lack of statistical significance. Concerning the others, all items were retained. Furthermore, it is possible to conclude that all items have loadings greater than 0.7, suggesting internal consistency.

(Fornell and Larcker(1981) explained that the AVE (average variance extracted) is the amount of indicator variance that is accounted by the underlying items of construct and should be higher than 0.5. As seen also in Table 10, AVE for each construct is above the expected threshold of 0.5, ensuring convergent validity.

The most usual criterion is rho-A, providing an estimate for the reliability based on the indicator intercorrelations and assuming that all indicators are equally reliable (Nunnly, 1978 and

Henseler et al., 2009). To evaluate construct's reliability, two indicators were used – composite reliability (CR) and Cronbach's alpha (rho-A). According to Hair and Anderson (2010), CR quantifies the reliability and internal consistency of each construct and the extent to which the items represent the underlying constructs. Additionally, CR takes into account that indicators have different loadings (and Cronbach's alpha not), being more suitable for PLS, which prioritizes indicators according to their individual reliability (Gefen, et al 2000, Henseler et al., 2009). As seen in Table 10, CR and rho-A for each construct are above the expected threshold of 0.7, showing evidence of internal consistency.

Table 11: Indicators Item Cross Loading

	PERF- EXP	EFE0-EXP	SOC-INF	TRU ST	INTENTION TO ADOPT
PER_EXP1	0.565	0.061	0.592	0.083	0.160
PER_EXP2	0.864	0.193	0.840	0.067	0.231
PER_EXP3	0.527	0.033	0.546	0.070	0.140
PER_EXP4	0.870	0.193	0.836	0.036	0.230
EFOR_EXP1	0.158	0.936	0.157	0.071	0.186
EFOR_EXP2	0.184	0.505	0.188	0.012	0.087
EFOR_EXP4	0.138	0.932	0.130	0.096	0.196
SOC_INFL1	0.565	0.061	0.592	0.083	0.160
SOC_INFL2	0.855	0.198	0.858	0.068	0.225
SOC_INFL3	0.499	0.041	0.535	0.085	0.137
SOC_INFL4	0.856	0.181	0.854	0.054	0.211
TRUST1	0.127	0.089	0.126	0.920	0.588
TRUST2	0.043	0.053	0.056	0.923	0.512
TRUST4	0.044	0.055	0.069	0.919	0.543
BEHAV_INTEN2	0.268	0.200	0.258	0.597	1.000

Table 12: Discriminant Validity (Fornell-Larcker Criterion)

	EFE0-EXP	INTENTION TO ADOPT	PERF-EXP	SOC-INF	TRUST
EFE0-EXP	0.817				
INTENTION TO ADOPT	0.200	1.000			
PERF-EXP	0.190	0.268	0.725		
SOC-INF	0.187	0.258	0.725	0.985	
TRUST	0.072	0.597	0.080	0.092	0.921

* The diagonals are the square root of the AVE of the latent variables and indicates the highest in any column or row

Additionally, another criteria that assesses discriminant validity is the cross loadings, that should be lower than the loadings of each indicator (Hair & Anderson, 2010). This was also analyzed and we verified that any indicator has loadings with lower values than their cross loadings (table 11). And finally to assure discriminant validity, the square root of AVE should be greater than the correlations between the construct (Henseler et al., 2009). This can be verified also in Table 12 using Fornell-Larcker Criterion for all constructs. We conclude that all the constructs show evidence of discrimination.

4.4.2. Structural Model

From the measurement model analyzed on 4.4.1 the assessment of construct reliability, indicator reliability, convergent validity and discriminant validity of the constructs are satisfactory, thus it is possible to analyze the structural model.

The model under analysis is UTAUT by Venkatesh et al. (2003), with an additional variable of trust; using age, gender and technological awareness as moderator between the independent and dependent variables.

4.4.2.1. Measuring the value of R^2

The coefficient of determination measures the overall effect size and variance explained by the constructs for the structural model. In this study, the inner path model was 0.431 which is 43.1%. This means that the four independent variables namely performance expectancy, effort expectancy, social influence and Trust statistically explains 43.1% of the proportion of the variance.

Table 13: Model Summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.660 ^a	.435	.415	.892	.435	22.101	13	373	.000	.946

a. Predictors: (Constant), TRUST4, SOC_INFL4, SOC_INFL3, EFOR_EXP4, EFOR_EXP2, TRUST1, SOC_INFL1, PER_EXP2, TRUST2, EFOR_EXP1, PER_EXP3, PER_EXP4, SOC_INFL2

b. Dependent Variable: BEHAV_INTEN2

Table 14: Anova Test

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	228.409	13	17.570	22.101	.000 ^b
Residual	296.526	373	.795		
Total	524.935	386			

a. Dependent Variable: BEHAV_INTEN2

b. Predictors: (Constant), TRUST4, SOC_INFL4, SOC_INFL3, EFOR_EXP4, EFOR_EXP2, TRUST1, SOC_INFL1, PER_EXP2, TRUST2, EFOR_EXP1, PER_EXP3, PER_EXP4, SOC_INFL2

4.4.2.2. Estimation of Path Coefficients (β) and T-statistics

Both the Direct and indirect relationship of the hypothesis the significance of the path coefficient and T-statistics values were tested using a bootstrapping procedure of 5000 subsamples with no sign changes was carried out for this study; and the β value had to be verified for its significance level through the T-statistics test as presented in Table 13 & table 14,

4.4.2.3.Hypothesis testing for Direct Relationship

Table 15: Direct Relationship for Hypothesis Testing

Hypothesis	Relationship	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	5.0%	95.0%	P Values
H1	PERF-EXP -> INTENTION TO ADOPT	0.645	0.172	3.865**	0.375	0.931	0.000
H2	EFEQ-EXP -> INTENTION TO ADOPT	0.121	0.037	3.268***	0.061	0.181	0.001
H3	SOC-INF -> INTENTION TO ADOPT	-0.452	0.170	2.771***	-0.733	-0.185	0.001
H4	TRUST -> INTENTION TO ADOPT	0.578	0.046	12.493**	0.500	0.652	0.000

Note **P<0.05,
***P<0.001,

In H1, we predicted that Performance Expectancy (PE) being moderated by age, gender and technological awareness will have significant and positive relation with intention to Adopt. Thus as predicted, the findings in Table 15 confirmed that Performance Expectancy (PE) have significantly relation with Intention to adopt by ($\beta = 0.172$, $T = 3.865$, $p < 0.05$). Hence, H1 was supported.

Next when we look at H2, we predicted that Effort Expectancy (EE) being moderated by age, gender and technological awareness will have significant and positive relation with intention to Adopt. And the findings in Table 15 shows that Effort Expectancy (EE) have significant relation to intention to adopt in that ($\beta = 0.037$, $T = 3.268$, $p < 0.001$). Hence, H2 was supported.

Thirdly in our H3 stated that Social Influence (SI) being moderated by age, gender and technological awareness will have significant and positive relation with intention to Adopt. And as assumed Social Influence (SI) have significant relation to intention to adopt in that ($\beta = 0.170$, $T = 2.771$, $p < 0.001$). Thus, H3 was supported.

Finally the H4 prediction was that Trust (T) being moderated by age, gender and technological awareness will have significant and positive relation with intention to Adopt. And Trust as

predicted have significant relation to intention to adopt by having a value of ($\beta = 0.046$, $T = 12.493$, $p < 0.05$). Thus, H4 was supported as shown in Table 15.

4.4.2.4. Hypothesis testing for Indirect Relationship /Moderators/

Table 16: Indirect Relationship for Hypothesis Testing

Hypothesis	Relationship	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	5.00%	95.00%	P Values
H5	AGE TO PER-EXP -> ITA	0.11	0.052	2.131**	0.024	0.194	0.033
	AGE TO EFO-EXP -> ITA	-0.012	0.056	0.212	-0.104	0.081	0.832
	AGE TO SOC-INF -> ITA	0.008	0.058	0.148	-0.087	0.104	0.883
	AGE TO TRUST -> ITA	-0.02	0.057	0.376	-0.114	0.074	0.707
H6	GENDER*PER-EXP -> ITA	0.16	0.05	3.226***	0.076	0.24	0.000
	GENDER * EFO-EXP -> ITA	0.007	0.057	0.137	-0.088	0.098	0.891
	GENDER * SOC-INF -> ITA	0.005	0.056	0.1	-0.088	0.095	0.92
	GENDER * TRUST -> ITA	0.025	0.05	0.53	-0.056	0.106	0.596
H7	AWERENSE TO PER-EXP -> ITA	0.055	0.051	1.074	-0.029	0.138	0.283
	AWERENSE TO EFOR-EXP -> ITA	0.123	0.055	2.172**	0.029	0.211	0.03
	AWERENSE TO SOC-INF -> ITA	0.109	0.056	1.864	0.012	0.199	0.062
	AWARENSE TO TRUST -> ITA	0.039	0.049	0.791	-0.041	0.122	0.429

Note **P<0.05, ***P<0.001,

In H5, the hypothesis set was that Age will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt. And our finding in Table 16 explains that the moderation of Age is significant and positive to Performance Expectancy and intention to adopt at ($\beta= 0.052$, $T=2.131$ and $P<0.05$); but to the other while the relation stays positive the significance level is low.

The next hypothesis which is H6 states that Gender will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt. However the analysis shows that Gender only positively and significantly moderates the relation between Performance Expectancy and Intention to adopt with a value of at ($\beta= 0.05$, $T=3.226$ and $P<0.001$); but to the other while the relation stays positive the significance level is low.

At last H7 was predicted to show that Technology Awareness will positively moderate the relationship between (PE,EE,SI,and Trust) and intention to adopt. And the finding in table 14 clearly shows that the moderation effect of Technology Awareness is to Effort with intention to adopt significantly and positively at a given value of ($\beta= 0.055$, $T=2.172$ and $P<0.05$). But to the other while the relation stays positive the significance level is low.

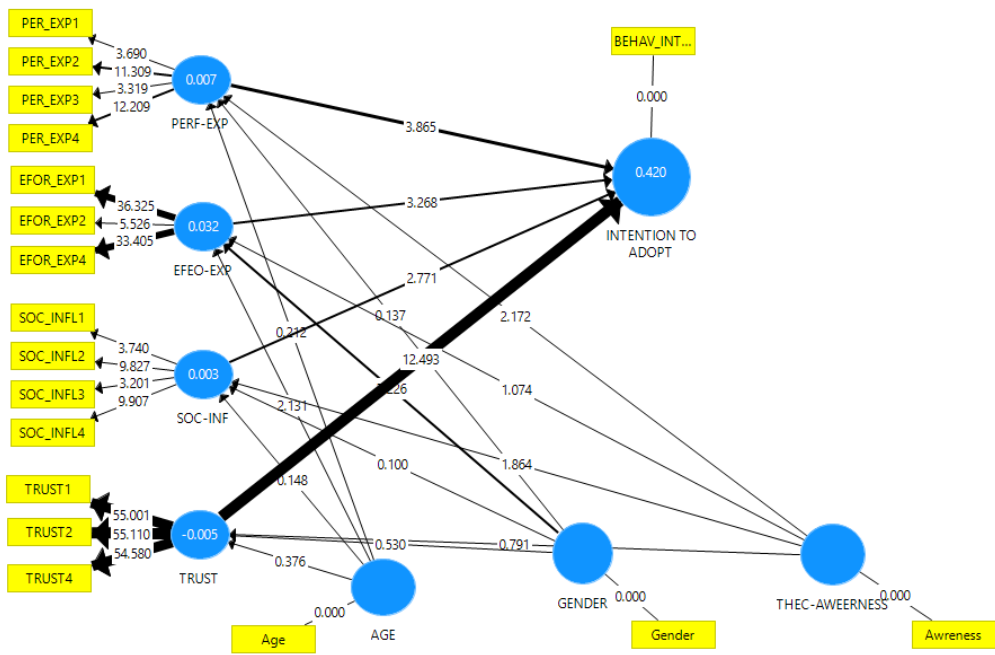


Figure 4: Bootstrapping of the structural model

4.5. Analysis and discussion on problems faced by CBE to provide reliable and efficient e-payment system from interview.

One of the data tool used to collect the primary data was the use of structured interview questionnaire made with the director of payment service, manager of business development and the managers of the randomly selected eight branches which took approximately 15-20 minutes based on the interviewee, the findings are as stated below.

1. Does CBE provide all payment channels for e-payment system compared to other banks?

The response for the above question by all the interviewees is YES, stating all the channels provide by CBE as ATM, Mobile Banking, Internet Banking, CBE Birr and POS

2. Do these channels work 24/7 properly?

The response for the above question by most of the interviewees is NO,

3. If your answer is no the above question, what do you think the problem is? And how do you think that it affects your business customers' intention to use these channels?

When they say No to the second question, it doesn't mean that all the channels fails all the time, but due to power failure and internet network disruption as well as the bank intranet connection and server capacity at some points there are failures of service provision, And to some extent due to the interruption in network a refund for incomplete transaction with a deduction in balance might take up to a week based on the branches number of ATMs and the agility of the concerned staff in making the adjustment; thus it greatly affects our customers trust and expectation in need of time which leads to choosing the conventional banking than the online banking.

4. Based on gender and age, who are willing and using your e-payment channels mostly and effectively?

We can say based on age that younger customers of both gender mostly men effectively tends to use the service but it doesn't means that the older once are not, few with higher educational background and with connection to using other technological equipment tend to use them too. However due to insecurity of their money being stolen or miss use of their

money by themselves only compared to the customer base of the bank we can say few of them uses some of the channels effectively

5. How do you make your customers aware about the benefits of e-payment channels?

The means used by the bank to promote use of these payment channels are through brochures, TV and radios, face to face while the customers approach to use the conventional banking service, door to door for organizations employees who use salary payment services.

6. What do you think are the main factors that drive your business customers to utilize e-payment system?

When it comes to actual use of these channels as a means electronic payment system, even if the registered users' number is higher but the contrary is low, so to these few users what mostly drive them are convenience for payment which is avoiding long waiting lines, not leaving their workplace, less cost etc

7. What do you think are the main factors that hinder your business customers to utilize e-payment system?

Even if the channels are available for the facilitations of e-payment system in creating a cashless society, the problems that pop-up are:

- a. Lack of financial institutions link for faster transfer of money on point of sales
 - b. The lack of well framed law of cashless transaction on cyber security
 - c. There is lack of knowledge/awareness on how to use both from the sellers and buyers
 - d. A law that forces use of e-payment channels for the transaction
 - e. Lack of Trust between different parties engaged in these transactions/disputed transactions
 - f. interruptible power and internet connection
 - g. insecurities of losing money
8. How do you relate those factors that motivates and hinder use of e-payment system?

Even if CBE has set the platform for e-payment system, and few customer are eager to use them for business because they are convenient, fast, less cost still when we see the challenges, the engagement level will decrease, if not enforced our habit to see the physical cash over take us, so unless we minimize the challenges, eating the fruit becomes more

harder than anticipated. So the challenges and the benefits co-exist, if my money is not secure from hackers I better have it in my pocket.

9. What are the problems that CBE face as a financial institute in providing reliable and efficient e-payment system channels?

The problems we face today in giving growth to the embryonic e-payment system of our country, as a state bank we have at least provided the channels, however frequent interruptible power and internet connection, a law that enforces use of e-payment channels for the transaction, and mostly customers awareness and trust of the system and lack of financial institutions link for faster transfer of money on point of sales are the major once.

10. What are you working on now to enhance your customer choice of e-payment channels?

Currently including digitalization as one of the pillars of the bank we are rigorously working on increasing the number of e-payment channel users through creating awareness and actual use such as payment of electric and water bill, e-tax payments, motivating customers who came to bank for less birr than ten thousand to use ATM, promoting CBE-Birr agent and merchant service by recruiting potential users found within the public and mostly upgrading the our data base system to a higher standard for faster and reliable and uninterrupted intranet connection.

In general from the interview what we can infer is that the pioneer bank in introducing various e-payment channels has provided to its customers such as ATM, POS, Mobile Banking, Internet Banking, Cbe Birr Agent and merchant Services with a slight network and power failures but mostly working 24/7; however these slight incidents of interruption of service are hindering what the customers expects from these channels in creating an easy way of life coming to their money and time, in that while customers expect convenience, speed, less cost and quality of service for most of them who know how to operate such technology how are young and eager patience might come handy, but for the rest it becomes a means to backslide to the conventional way of doing banking, which is going to branches and waiting in line.

In addition to the above statement the major problems in having a smooth e-payment system are like Lack of financial institutions link for faster transfer of money on point of sales,

meaning that to do business customers has to have an account in all the banks found in Ethiopia, and also the lack of well framed law of cashless transaction on cyber security becomes a barrier of trust and insecurity for those involved in the transaction and adding the interruption as a means to disputed transactions.

Most studies in these field states that lack of knowledge/awareness on how to use both from the sellers and buyers effects their intention to engage in such life style, changing their habit of believing is having the cash at hand but if there exists a law that forces use of e-payment channels for the transaction the channels created by the bank for smooth operation of e-payment would come a dream true, in that CBE is currently working including digitalization as one of its three major strategic pillar and creating at any cost awareness to its customers.

CHAPTER FIVE

5. Summary of Findings, Conclusions, Limitations, and Recommendation of the Study

5.1. Summary of Findings

The main objective of the study was to examine the factors affecting the intention to adopt e-payment system in the case of CBE business customers in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT) model by Venkatesh et al. (2003) with an additional variable of trust; using PLS-SEM technique.

Within the study the four independent variables namely Performance Expectancy, Effort Expectancy, Social Influence and Trust being moderated by Age, Gender and Technological Awareness will have a positive and significant relationship with the dependant variable Intention to adopt was hypothesized.

The study has used SMART PLS 3 and SPSS 20. For data analysis and the finding shows regarding the demographic profile of the respondents that the majority of the respondent's gender was 56% for male and 55% of the respondents were at the age of 18-35. Also when we see the educational level it stands at 50% at degree holders while the income level was about 27% at an income level of 6000-9000 birr. In addition to these the study tried to see from the respondents on table 5, we can see that the majority respondents at 34.9% have relationship with the bank for more than four years followed by 29.2% with 2-4 years, Table 7 also explains 47.3% of the respondents' awareness about the provision and service of CBE is little which is contrary to 34.9% rate of long stay as a customer with the bank. Also table 8 shows that 65.6 % of the respondents' are not currently using the channels as a payment means and when we see the future use on table 8, it shows as a promise of future use at 67.2%. so when we see the relation we can say that the more customers are aware of the service the more they tend to use them regardless of their stay as a customer to the bank.

The next analysis done was to check whether the assessment of construct reliability, indicator reliability, convergent validity and discriminant validity of the constructs are satisfactory or not and it is found that they are satisfactory, showing it is possible to summerise that all items have loadings greater than 0.7, suggesting internal consistency, and the AVE for each construct is

above the expected threshold of 0.5, ensuring convergent validity. And also CR and rho-A for each construct are above the expected threshold of 0.7, showing evidence of internal consistency thus it was possible to analyse the structural model.

In analyzing the structural model the inner path model (R^2) was 0.431 which is 43.1%. This means that the four independent variables namely performance expectancy, effort expectancy, social influence and Trust statistically explains 43.1% of the proportion of the variance.

Both the Direct and indirect relationship of the hypothesis the significance of the path coefficient and T-statistics values were tested using a bootstrapping procedure of 5000 subsamples with no sign changes was carried out for this study; and the β value as shown in table 15 and 16 were found. In general regarding both the direct and indirect relation hypothesis we can say that Trust is not moderated by the moderators but still have the highest T-stat followed by performance expectancy moderated by age and gender, then Effort Expectancy moderated by technological awareness lastly with Social Influence moderated by none of the moderators significantly and positively have relation to intention to adopt e-payment system.

And from the interview findings we can conclude that even if the pioneer bank introduced various e-payment channels has provided to its customers such as ATM, POS, Mobile Banking, Internet Banking, Cbe Birr Agent and merchant Services with a slight network and power failures but mostly working 24/7; however these slight incidents of interruption of service are hindering what the customers expects from these channels in creating an easy way of life coming to their money and time, in that while customers expect convenience, speed, less cost and quality of service for most of them who know how to operate such technology how are young and eager patience might come handy, but for the rest it becomes a means to backslide to the conventional way of doing banking, which is going to branches and waiting in line.

In addition to the above statement the major problems in having a smooth e-payment system are like Lack of financial institutions link for faster transfer of money on point of sales, meaning that to do business customers has to have an account in all the banks found in Ethiopia, and also the lack of well framed law of cashless transaction on cyber security becomes a barrier of trust and insecurity for those involved in the transaction and adding the interruption as a means to disputed transactions.

Finally in accordance with the complete analysis of the measurement models and structural model, it was determined that both models were confirmed. All of the hypotheses were statistically significant and hence were all accepted. The results of this study support a picture of the factors affecting the intention to adopt e-payment system

5.2. Conclusion

The study examined what factors among Performance Expectancy, Effort Expectancy, Social influence and Trust moderated by Age, Gender and technological awareness affects CBE's business customer's intention to adopt e-payment system by incorporating the Unified Theory of Acceptance and Use of Technology (UTAUT) model by Venkatesh et al. (2003), with an additional variable of trust Uchenna Cyril. Eze (2008).

The first hypothesis was that Performance Expectancy by being moderated by Age, Gender and technological Awareness will have significant and positive relation with intention to Adopt. Thus as predicted, the finding confirmed that Performance Expectancy (PE) have significantly relation with Intention to adopt by ($\beta = 0.172$, $T = 3.865$, $p < 0.05$) and the moderation of Age and Gender is significant and positive to Performance Expectancy and intention to adopt.

In previous studies in technological adoption taking Performance Expectancy as a variable, their finding shows that Performance Expectancy has significant relation to adoption of technology,(Tella and Olasina 2014),(Recardo, Stella and Darly 2016) which agrees with the finding this study.

Next when we look at H2, we predicted that Effort Expectancy (EE) being moderated by age, gender and technological awareness will have significant and positive relation with intention to Adopt. And the findings in Table 15 shows that Effort Expectancy (EE) have significant relation to intention to adopt in that ($\beta = 0.037$, $T = 3.268$, $p < 0.001$). Hence, H2 was supported. And when we compare our finding with previous studies of the same field ,(Recardo, Stella and Darly 2016) on their study of intention of adoption of mobile payment in light of UTAUT, they found out that Effort Expectancy demonstrated a positive significant relation and also (Tero ,Kari Heikki,2004) and (Akinyemi, Asani, and Adigun,2013) in their study their finding reveled that EE is positively significant to affect consumers acceptance of online banking which support the finding of this study.

Thirdly in our H3 stated that Social Influence (SI) being moderated by age, gender and technological awareness will have significant and positive relation with intention to Adopt. And as assumed Social Influence (SI) have significant relation to intention to adopt in that ($\beta = 0.170$, $T = 2.771$, $p < 0.001$). Thus, H3 was supported.

The comparison of this finding with other studies like (AsratMolla, 2017) on consumers intention to adopt ATM banking system in Ethiopia banking industry supports the significant and positive relation with intention to Adopt on social influence.

Finally the H4 prediction was that Trust (T) being moderated by age, gender and technological awareness will have significant and positive relation with intention to Adopt. And Trust as predicted have significant relation to intention to adopt by having a value of ($\beta = 0.046$, $T = 12.493$, $p < 0.05$). Thus, H4 was supported as shown in Table 16. (Reza Shafei and ValaMirani, 2011) in their study of the effect of risk on e-banking adoption, they found out that perceived risk has significant effect on intention to adopt, Also a study on An Investigation of Users' Acceptance and Satisfaction of E-Banking System as a solution towards a Cashless Economy in Nigeria by (Akinyemi, Asani, and Adigun,2013) shows the same result as trust having a significant relation to intention to adopt.

Within all these the value added by adding Trust as one of the independent variable is that, previous studies explained how trust is a fundamental element that should be not taken lightly as it deals with how customers trust the system, the parties involved, regarding their safety of money they put in as well as the confidentiality of their well-being. Thus adding it as one independent variable can explain how it affects the customers' intention to adopt a system and this is evidenced by the finding that its significance level is higher than the rest of the independent variables. (Chou et al. (2004).Zhou (2011)(Lim et al.,2006).Kniberg (2002).

5.3.Limitation of the study and Future research

The limitations are mainly in sampling and fewness of variables. In that the respondents were mainly young people (age of18 -33 years) and highly educated (50% percent are degree holders), whose behavior might differ somewhat from the population average; meaning they are generally more innovative and faster to accept new technologies and this may have biased the results which is seen more on the variable trust than performance expectancy or Effort Expectancy. And

also while business is made in every part of the country the study focuses only in Addis Ababa area selected branches.

Secondly the fewness of the independent variables has limited other issues that might affect intention to adopt e-payment systems which can relate to behavior and interest of individuals and also other users such as merchants, small and medium enterprises and governing organs.

Finally in order to enrich the model proposed in this study future researches should identify other relevant variables that can more explain behavioral intention to adopt e-payment system by increasing their population group and age with possible factors derived from different source of literatures regarding crating cashless-society and use of e-payment system.

5.4.Recommendations

The results of the study can be a guide for the providers of e-payment system in addressing gaps that hinders end users.

Firstly banking institutions should work on the level of trust customers has on e-payment which is the strongest relation found in the study. To do so banks; at various sessions should strongly promote and demonstrate to customers on how to use the platform and explain the main benefits as well as drawbacks of e-payment channels. And attend to customer complaints swiftly. And should also reduce user concerns about computer crimes, invasion of privacy and, overall, attempt to provide transactions without errors and allocate sufficient resources to correct it, if necessary and include money back guarantees and prominently displayed consumer satisfaction guarantees, so that consumers feel more comfortable and safe to use the system.

Secondly, financial institutions, policy makers and users can take financial advantage of the adoption. With the self-service consumer software-based service, banks can decrease costs with branches, by encouraging and supporting the usage of the platforms. Users can also decrease their costs, by not paying for transactions, benefiting from online exclusive products with higher profits, gains measured in convenience and efficiency decreasing long waiting lines and wastage of working time. In regards to policy makers, adoption of e-payment system will help in mitigating money laundering by providing transparency and traceability of transactions, which will in turn curb unethical and corruption in the country. In addition, in the future the adoption of e-payment system will allow to control cash transactions and pave the way to creating a cashless society.

Finally a well-designed framework of e-payment system will allow the in interlinking of the various banks found in Ethiopia. It will be important to create and enforce e-payment related laws that enforce the use of the system with a safeguard of cyber security for customers' money. This will pave the road for creating a cashless society giving attention in creating awareness to the public to enrich their expectancy in performance and effort to use, so when this two becomes easy the mindset of the social influence will decrease, which in general strengthens the economy of the country.

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Appendices

APPENDIX A

QUESTIONIARE
ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
MASTERS OF BUSINESS ADMINISTRATION

I am currently pursuing my postgraduate study in MBA program at Addis Ababa University. I am conducting a research entitled **“FACTORS AFFECTING ADOPTION OF E-PAYMENT SYSTEM: THE CASE OF COMMERCIAL BANK OF ETHIOPIA BUSINESS CUSTOMERS.”** The aim of this study is to assess the factors that influence the adoption of E-payment. The results of the study are anticipated to assist the understanding of the basic factors that affect the adoption of E-payment and help developing partners in creating a cashless society.

Therefore I would like to assure you that the information you provide will be used only for the purpose of the research. Your involvement is regarded as a great input to the quality of the research results. Hence, I believe that you will enlarge your assistance by participating in the study. Your honest and thoughtful response is valuable. Thank you for your participation.

Kind regards,

ErmiasMengistu

Student at Addis Ababa University

College of Business and Economics

MBA Program

General Instruction

This questionnaire contains four sections and three (3) pages that will be expected to take approximately 15 to 20 minutes to complete. You are kindly requested to respond to the questions based on the instructions under each section. If you have any comments or want to have further clarifications, please contact the researcher using telephone number 0912056711 . No need to write your name in the questionnaire.

Section A: Demographic Profile

Please indicate your response by ticking on the box

1. Gender: Male Female
2. Age: 18-35 36-49 50-65 Above 65
3. Educational Qualification:
Elementary High-School Diploma Degree Masters and above
4. How much is your monthly Income?
Less than 3,000 3,000-6,000 6,001-9,000 9,001-12,000 more than 12,000

Section B: Assessing Customers Information Regarding E-Payment Channels

5. How long has it been since you became customer of CBE?
Less than a year from 1-2 years from 2-4 years more than 4 years
6. How well do you know about E-payment Services that are being provided by CBE?
I Don't know Little Enough I know well
7. Do you use any of those E-payment channels? I am using I am not using
8. Do you intend to use them in the near future?
I will use I will not use

Section C: Evaluate the Factors Affecting E-Payment System In CBE

Instruction: Below are lists of statements pertaining to practice 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 1= strongly disagree to 5= strongly agree. Each choice is identified by numbers ranged from 1 to 5.

(1) = Strongly Disagree (2) = Disagree (3) = neither agree nor disagree;

(4) = Agree (5) = Strongly Agree

1. Performance Expectancy(PE)		1	2	3	4	5
1	I think using E-payment channels is useful to carry out my business					
2	I think using E-payment channels would enable me to conduct business more quickly					
3	I think that using E-payment channels would increase my Productivity.					
4	I think that using E-payment channels would improve my cash management.					
2. Effort Expectancy(EE)						
1	My interaction with E-payment system would be clear and understandable.					
2	It would be easy for me to become skilful at using E-payment system					
3	I would find E-payment system easy to use.					
4	I think that learning to operate E-payment system would be easy for me.					
Social Influence (SI)						
1	People who influence my behaviour think that I should use E-payment system					
2	People who do business with me think that I should use E-payment system					

3	People in my environment who use E-payment have more business interaction than those who don't use					
4	The important people (family/ relatives/ friends) support the use of e-payment channels					
3. Trust						
1	Having Trust on the bank plays an important role in using e-payment system					
2	I will use e-payment system if terms and conditions are clear.					
3	I believe using e-payment channels is vulnerable for theft					
3	My trust in E-payment system is not strong as compared to trust in offline service provided by the bank					
4. Behavioral Intention						
1	I intend to use E-payment Channels in the next months.					
2	I predict I would use E-payment Channels in the next months.					
3	I intend to receive payments in E-payment channels with- in the next month.					
4	I intend to perform a transfer on the platform of E-payment Channels					

Section D: Personal opinion

Please describe if there is any other factors that affects your user intention of e-payment channels than those describes above

THANK YOU FOR YOUR TIME!

APPENDIX B

INTERVIEW QUESTIONS

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

MASTERS OF BUSINESS ADMINISTRATION

INTERVIEW QUESTIONS

1. Does CBE provide all payment channels for e-payment system compared to other banks?
2. Do these channels work 24/7 properly?
3. If your answer is no the above question, what do you think the problem is? And how do you think that it affects your business customers' intention to use these channels?
4. Based on gender and age, who are willing and using your e-payment channels mostly and effectively?
5. How do you make your customers aware about the benefits of e-payment channels?
6. What do you think are the main factors that drive your business customers to utilize e-payment system?
7. What do you think are the main factors that hinder your business customers to utilize e-payment system?
8. How do you relate those factors that motivates and hinder use of e-payment system?
9. What are the prolems that CBE face as a financial institute in providing reliable and efficient e-payment system channels?
10. What are you working on now to enhance your customer choice of e-payment channels?

APPENDIX C**COMMERCIAL BANK OF ETHIOPIA****BRANCHES BUSINESS CUSTOMERS DATA LIST**

No,	Branch Name	No, of Customers
1	Addis Ketema	34,625.00
2	Africa Avenue	31,763.00
3	Atanatera	7,986.00
4	Dilgebeya	8,450.00
5	Eyesus Gedam	3,650.00
6	Jemmu	4,398.00
7	Kazanchies	7,625.00
8	Kerra	20,439.00
9	Megenagna	20,761.00
10	Menlik Hospital	2,983.00
11	Mexico	38,218.00
12	Misrak dil	12,548.00
13	Sheger	35,216.00
14	Silassie	38,712.00
15	Tekelehaimanot	47,623.00
16	Yohannes	27,651.00
	TOTAL CUSTOMERS	342,648.00