ASSESSING THE EFFECT OF E - PAYMENT SERVICES ON CUSTOMERS' SATISFACTION: THE CASE OF COMMERCIAL BANK OF ETHIOPIA, HOSSANA DISTRICT

MASTER OF BUSINESS ADMINISTRATION

BY

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DECLARATION

I hereby declare that this thesis MBA dissertation is my original work and has not been presented for degree in any other university, and all sources of material used for this thesis/ dissertation have been duly acknowledged.

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This is to certify that the thesis entitles "***Assessing the Effect of E - Payment Services on Customers' Satisfaction: the case of Commercial Bank of Ethiopia, Hossana District***", submitted in Partial Fulfillment of the Requirements for the Degree of Master's with specialization in Business Administration, the Graduate program of the Department of management, and has been carried out by Tagesse Biru Minuta ID – GSE- 024/11, under our supervision, therefore we recommend that the student has fulfilled the requirements and hence hereby can submit thesis to the department.

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As members of the board of Examiners of the final master's degree open defense, we certify that we have read and evaluate thesis prepared by Tagesse Biru Minuta under the title "***Assessing the Effect of E - Payment Services on Customers' Satisfaction: the case of Commercial Bank of Ethiopia, Hossana District*** " and recommend that it be accepted as fulfilling the thesis requirement for the degree of Master of Business Administration.

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ACRONYMS AND ABBREVIATIONS

ATM	Automated Teller Machine
CBE	Commercial Bank of Ethiopia
E-banking	Electronic banking
E – Payment	Electronic payment
ICT	Information and Communication technology
NBE	National Bank of Ethiopia
PDA	Personal Digital Assistant
POS	Point of sale
SPSS	Statistical Package for Social Science
SWIFT	Society for Worldwide Interbank Financial Telecommunication

ABSTRACT

The main objective of this study was to assess the effect of E - Payment services on customers' satisfaction: the case of Commercial Bank of Ethiopia, Hossana District. The study employed descriptive and explanatory research design along with mixed approach. Depending on the organizational structure and branch distributions, the combination of sampling techniques such as purposive, stratified, systematic and simple random were used. Primary data was collected using semi - structured questionnaire. 354 E – payment service customers, moreover, relevant document was reviewed. Descriptive statistics such as frequency mean and standard deviation and inferential statistics such as multiple linear regression analysis were utilized to analyze the quantitative data with the help of Statistical Package for Social Science version 20. The finding of the study revealed both the E – payment service delivery and customer satisfaction were at moderate stage. On the other hand, from the regression analysis result, 60.0% of the variation in the customer satisfaction was directly attributable to the independent variables security, speed, ease of use, accountability and credibility. Moreover, statistically there was moderate relationship between E – payment service quality dimensions and customer satisfaction, however, there was strong relationship between ease of use of E – payment system service with customers' satisfaction. Therefore, it is imperative to pay more attention on the quality of the E –payment service delivery in order to make the E – payment service delivery implementation more efficient. Thus, this study suggests that the CBE has to work hard in order to enhance the E – payment service delivery in collaboration with the government and ethio – telecom.

Key Words: *Customer satisfaction, E – payment service,*

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The rapidly growing information and communication technology (ICT) is knocking the front door of every organization in the world. As a result, in the face of rapid expansion of electronic payment (E-payment) systems throughout the developed and the developing world, Ethiopian's financial sector cannot remain an exception in expanding the use of the system (Gardachew, 2010). The author also pointed out that technological innovations play a crucial role in banking industry by creating value for banks and customers, that it enables them to perform banking transactions without visiting the brick and mortar banking structure. On the other hand according to Turban (2008) E-Payment has enabled banking institutions to compete more effectively in the global environment by extending their products and services beyond the restriction of time and space and mirroring the development of E-commerce.

Moreover, in the last few years, application of information technology in business strategies has become at the very heart of competitive process. Electronic payment application systems have evolved from a simple system involving various institutions and related regulations providing payment instruments and infrastructures allowing for interconnections between various partners or business units in fulfilling their business or social obligations (Sumanjet, 2009). The payment system is an operational network governed by laws, rules and standards that links bank accounts and provides the functionality of monetary exchange using bank deposits (Summers, 2012).

E – Payment is a financial exchange that takes place online between payer and payee. The content of this exchange is usually some form of digital financial instrument (credit card, debit card, online transfer or electronic money) that is backed by a bank or electronic payment service intermediary (Teerapat, 2012). Wondwossen and Tsegai (2005) observed that there is a correlation between increase in point of sales volumes and rise in demand deposits. Moreover, "Automated electronic payments act as a gateway into the banking sector and as a powerful engine for growth. Such payments draw cash out of circulation and into the bank accounts, providing low cost funds that can be used to support bank lending for investment- a driver of overall economic activity. The

process creates greater transparency and accountability, leading to greater efficiency and better economic performance.

On the other hand, electronic payment is very convenient for consumer. In this regard, Worku (2010) emphasized the fact that electronic payment lowers costs for businesses. The more payments that is processed electronically, the less money is spent on paper and postage. Offering electronic payment can also help businesses improve customer retention. "A customer is more likely to return to the E – commerce site where his or her information has already been entered and stored".

However, electronic payments, despite its numerous benefits, come up with its own challenges even in the developed world. The problems militating against E - payment as listed by Ogedebe & Babatunde (2012) revolve around integrity, non – reputation, reliability, confidentiality, and authorization. The system which is still in its early stage requires a lot of information and education of the public to enable them appreciate the laudable programmer put together by government to protect their interests. If they are properly and adequately educated, the chances of total acceptability of the programme can be assured.

The history of E – banking (E - payment service) in Ethiopia is traced back with the introduction of ATM in the country. Undoubtedly, CBE introduced ATM for local users in 2009 in Addis Ababa. Following CBE Dashen bank also introduces ATM to its customers and move aggressively in expanding the services (Getachew, 2009). But according to the CBE banks' report of October 2019, the bank has more than 21 million customers and out of these 2,239,000customers have mobile, CBE birr and internet banking access and 5.6 million are ATM users. This number indicates that CBE have large number of E – payment users. Despite CBE is pioneer in introducing E – banking in the country, the proportion of E – payment service users to its total customer remain unsatisfactory. Therefore, the researcher was intended to investigate the effects of E – payment services on customer satisfaction.

1.2 Statement of the Problem

The fascinating growth of ICT has changed the mode of transaction of business in unprecedented manner in many parts of the world (Gardachew, 2010). Such development has also substantially changed the manner in which the banking business has been carried out. The traditional payment instruments like cash check and letter of credit replaced by electronic payment systems, because as

Gardachew argued the existing traditional cash based payment system has severely ragged the stability and developmental capacity of the economy. This mode of payment system resulted in inefficient use of financial resources, inequitable risk – sharing among agents, actual losses for users, and loss of confidence in the financial system. Furthermore, the economy has also suffered from high printing cost of currency.

However, Studies revealed that E – payment system has a great impact on customer satisfaction in e – commerce industry. In this regard, Mesfin (2019) argued that E - payment product such as automatic teller machine (ATM), mobile banking (MB), internet banking (IB), and CBE birr have strong relationship with E - payment service customer satisfaction in CBE.

The study is designed to investigate the effect of e-banking services on customer satisfaction of Commercial bank of Ethiopia and also to assess whether customers are influenced by e-banking services or not. To do that, the following research questions are formulated.

Research Questions

The study attempted to address the following basic questions:

1. What is the level of customers' satisfaction on the E – payment services of the CBE Hossana District?
2. How E – payment services dimensions influence customer satisfaction in the CBE Hossana District?
3. To what extent do the E – payment service dimensions correlated with customer satisfaction in the CBE Hossana District?

1.4 Objectives of the Study

1.4.1 General Objective

The general objective of the study was to assess the Effect of E - Payment Services on Customers' Satisfaction: the case of Commercial Bank of Ethiopia, Hossana District.

1.4.2 Specific Objectives

The specific objectives of this study were:

1. To assess the level of customers' satisfaction on the E – payment services of CBE Hossana District.
2. To investigate the influence of E – payment services dimensions on customer satisfaction in the CBE Hossana District.
3. To assess the extent of the correlation between the E – payment service dimensions and customers' satisfaction in the CBE Hossana District.

1.5 Hypothesis of the Study

On the basis of the above objectives and empirical review literatures, the researcher sought to get the answer by hypothesizing the second and the third objectives. Therefore, this study addressed the following null hypotheses of the form "no difference" and tested using the 5% level of precision, customary level used when working on significance effect relation and difference (Ajay & Micah, 2014; Plotts, 2011).

$\mathbf{H_1}$: Statistically there is no significant effect of security characteristics of E – payment system on customer satisfaction of E – payment service product users.

$\mathbf{H_2}$: Statistically there is no significant effect of speed of E – payment system on customer satisfaction of E – payment service product users.

$\mathbf{H_3}$: Statistically there is no significant effect of accountability of E – payment system on customer satisfaction of E – payment service product users.

$\mathbf{H_4}$: Statistically there is no significant effect of ease of use of E – payment system on customer satisfaction of E – payment service product users.

$\mathbf{H_5}$: Statistically there is no significant effect of credibility of E – payment system on customer satisfaction of E – payment service product users.

$\boldsymbol{H_6}$: Statistically there is no significant correlation between E – payment service quality dimensions and customers satisfaction in the CBE Hossana District.

1.6 Significance of the study

As CBE is the first to introduce E-payment services. It's very important to the bank at this level to assess its approach of providing the service and to outlook customer's insight towards the services.

This study is significant to identify the level of satisfaction of customers in using E-payment service and providing possible recommendation to the bank regarding ways to improve the services.

The findings of the study have a great importance in filling the knowledge gap that exists among stakeholders. The stakeholders involved include the commercial bank of Ethiopia, other concerned individuals and organizations. In addition, the study will be used as a reference material for further studies that could be done on this area of research and will try to identify those that are not covered in this study.

1.7 Scope of the Study

There are a number of effects of the overall process of E - payment services on customer satisfaction. However; it is unquestionable limiting the scope of the study in order to make it manageable and reliable. Therefore, the study has geographical, methodological, and variable scope. Geographically, the study was confined to to assess the effect of E – payment service on customers' satisfaction in commercial bank of Ethiopia specifically on selected branches within Hossana district. The researcher chose CBE due to the fact that CBE accounts more than 50% of the total bank customers' in Ethiopian banking industry. In addition to that, Hossana district includes more than 61 branches and Hossana district includes branches found in Hadya, Kembata, Silte & Gurage zone. Methodologically, from this district, the study involved 13 branches by using the combination of purposive, stratified, and simple random sampling techniques. The researcher used convenience sampling technique to select each branch and each respondent. In terms of variables, five types of E-payment system products were chosen such as Mobile banking, Card banking (ATM services), internet banking, POS and CBE Birr service, because, these all are available E-payment system products that the customers are using in CBE.

1.8 Limitation of the Study

This study focused on assessing effect of E – payment service on customers' satisfaction in CBE Hossana district in some selected branches. So, it might be difficult to refer the finding of the study for branches of CBE. The other limitation of the study was related to the sampling procedures which limit the generalization of the research findings. Finally, there are some other variables that can affect E-payment services which were not included in this study. Therefore, future researches are recommended to address the above stated limitations.

1.8 Organization of the Study

The study was organized into five chapters. The first chapter deals with background of the study, statement of the problem, objective of the study, the research questions, significance of the study, scope of the study, and organization of the study. The second chapter presents prior related literatures conducted on challenges and prospects of E – payment system and related topics. The third chapter explains the research methodology; research design and approach, target population, sample size determination and sampling techniques, method of data collection and instruments, validity and reliability of the instruments, data collection procedures, method of data analysis, and ethical considerations. The fourth chapter interprets and discusses the results of the analysis. Finally, the fifth chapter deals about conclusions and recommendations of the study based on the findings.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Theoretical Review

2.1.1 Definition of E – Payment

E-Payment is a form of banking service where funds are transferred through an exchange of electronic signal between financial institutions, rather than exchange of cash, checks, or other negotiable instruments (Kamrul, 2009). E-banking, also known as Electronic Funds Transfer is simply the use of electronic means to transfer funds directly from one account to another rather than by check or cash (Malak, 2007). The term of E-payment often refers to online banking/Internet banking which is the use of the Internet as a remote delivery channel for banking services (Furst and Nolle, 2002). The content of this exchange is usually some form of digital financial instrument (credit card debit card online transfer or electronic money) that is backed by a bank or electronic payment service intermediary (Teerapat, et al., 2012). With the advancement in telecommunication, electronic payment systems are rapidly replacing the traditional modes of payment that involved personal contact between buyers and sellers. Electronic payment systems entail online financial transactions that utilize some form of a digital financial device, such as e-tokens, e-cash and checks (Stefan et al., 2000).

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

means of payment) are held, processed and received in the form of digital information, and their transfer is initiated via electronic payment instruments. Electronic payment is a subset of e-commerce transaction to include electronic payment for buying and selling goods or services offered through the internet (Sumanjeet, 2009).

2.1.2 E – Payment System

The emergence of Information and Communication Technology (ICT) had completely changed the lives and operations of individuals and organization respectively. ICT and Digital technologies had made great evolutionary development in finance, economics, operational costs (Slozko & Pello, 2015) and enhanced organizational performance (Ali, 2010). The era of ICT and digital innovations has come along with a dynamic change in the world business environment, whereby business transactions are constantly shifting from cash-based transactions to electronic-based ones (Mohamad, et al., 2009). Also, the global proliferation of the internet and its rapid use over the years had contributed much in facilitating electronic commerce in global business environment (Fernandes, 2013).

Consequently, as transactions among business partners continue to proffer on the E - commerce platform, an electronic payment solution emerged to replace the former cash-based payment systems (Dennis, 2004). The advent of this development in the global business environment challenged most organizations to automatically switch from the conventional paper-based money transactions to an electronic payment system which is widely known as the e-payment system. Generally, electronic payment can be defined as a platform used in making payments for goods/services purchased online through the use of internet (Roy &Sinha, 2014).

Subsequently, with the introduction of e-payment system, the world payment system turned out to align with the current trend of cashless transactions among individuals, businesses and governments (Odi& Richard, 2013). As a result of this, the world payments system is gradually changing from coins and paper based money to electronic forms that provide more convenient, fast and secured process of making payments among individual and organizations (Premchand & Choudhry, 2015).

2.1.3 Overview of E- Payment Services

For the past two decades, the banking sector has chosen a new service channel based on the progress of information technology-internet to respond to the changes in customer preference and needs, increasing competition from non-banks, changes in demographic and social trends, and government deregulations of the financial service sector (Byers and Lederer, 2001). In the research for sustainable competitive advantages in the technological financial service industry, banks have acknowledged the value to differentiate themselves from other financial institution through new service distribution channels (Daniel, 1999). These days, banks use different schemes to satisfy their customers. Among these, E -banking is loading the way.

E-payment is mostly referred to automated payment or banking channels that allows delivery of banking services in an effective, efficient and convenient way via electronic channels such as Automatic Tellers Machine (ATM), Point of Sale (POS) Terminals, Mobile phones and Internet banking (Alexa, 2005).

E-business has been continuously growing as a new industry during the last decade (Hoeck, 2001). The banking industry has been leading this trend in recent years, and now all banking transactions completing through internet application is sometimes called e -banking (Boss et al, 2000; Smith, 2006; Hwang et al, 2007; Shin, 2008). E-banking has revolutionized the way business is transacted by globalizing the business enterprise. E-banking technologies have proliferated in recent years, and the availability of a wide range of products has led to increasing adoption among consumers. These technologies include direct deposit, computer banking, stored value cards, and debit cards (Servon and Kaestner, 2008).

Along with the entrance in the Internet and in the e-business age of the new economy in general, certain fundamental transformations of the social - economic structure are produced. The development of the interconnectivity of computers in the internet in all segments of society, has led to a more obvious tendency of companies to use these networks in order to carry out a new type of commerce, the electronic commerce, through the internet.

2.1.4 Types of E - payment Systems

Generally, there are quite a number of e-payments services that have been developed within the payment system around the globe. These include electronic cheques, e-cash, credit cards and electronic fund transfers (Ken & Will, 2002). According to Hsiao-Cheng, Kuo-Hua and

Pei-Jen (2002), there are four major categories of electronic payment systems: online credit card payment, electronic cash, electronic cheques and small payments. They further stressed that each of these systems has its own advantages and disadvantages. They further stressed that each type could be accessed through these four distinct qualities viz: Technological aspect, Economic aspect, Social aspect and Institutional and law aspects.

Some E - payment systems are simply electronic versions of existing payment systems (e.g. online credit card). Some others are based on digital currency, which enables storage and exchange of values digitally (Wondwossen and Tsegai, 2005). With the growing complexities in the e-commerce transactions, different electronic payment systems have appeared in the last few years. At least dozens of electronic payment systems proposed or already in practice are found (Marthy, 2002).

2.1.4.1 Online Credit Card Payment System

Online credit card payment system is the most common type of payment system for e-commerce. (Wondwossen and Tsegai, 2005). This payment system has been widely accepted by consumers and merchants throughout the world, and by far the most popular methods of payments especially in the retail markets(Laudon, 2002). This form of payment system has several advantages, which are never available through the traditional modes of payment. Some of the most important are: privacy, integrity, compatibility, good transaction efficiency, acceptability, convenience, mobility, low financial risk and anonymity. However, online credit card payment seeks to address several limitations of online credit card payments for merchant including lack of authentication, repudiation of charges and credit card frauds (Sumanjeet, 2009).

2.1.4.2 Electronic Cash (Digital Cash)

Electronic cash (e-cash) is a new concept in online payment system because it combines computerized convenience with security and privacy that improve on paper cash. E-cash is an electronic or digital form of value storage and value exchange that have limited convertibility in to other forms of value and require intermediaries to convert (Sumanjeet, 2009). Electronic cash has got some similarities with real money such as privacy, transferability and convenience, low transaction cost, good acceptability, authority, like real money, digital cash is totally anonymous. However, there is also a type of digital cash called an identified e-money, which reveals the identity of the person who first withdrew the money from the bank. But unlike real cash, digital cash

cannot be instantly converted to other form of value without the involvement of a third party like bank. Privacy in digital cash is achieved using blind signature without the involvement of TTP. This is in contrast with other e-payment systems (Wondwossen and Tsegai, 2005).

2.1.4.3 Mobile Payments

Mobile payment (m-payment) is an electronic payment done using mobile devices. One of the main uses of m-payment is in mobile commerce (m-commerce). Instead of using cash or cards a consumer can use a mobile phone to pay for a wide range of services and goods. There are 5 million of cell phones around the world. Japan is the leading country to introduce mobile payment and it is a major payment system in Japan. Smart phone can be equipped with NFC (Near Field Communication) to communicate with reader an out 4cm away. Other approaches of mobile payment include free cash: make the payment from phone, pay pal mobile opopay, Google g pay, based on text messages (Maurizio Marek, 2011).SMS (Short Message Service), WAP (Wireless Application Proteocol) and Bluetooth application are the technology that enabled m-commerce. M-payment is used for online payments and for POS (Point of Sale) transactions. Mobile devices are also used at POS terminals, vending machines, ticketing machines (Wondwossen and Tsegai, 2005).

2.1.4.4 Smart Card based E-payment System

Smart cards are receiving renewed attention as a mode of online payment. They are essentially credit card sized plastic cards with the memory chips and in some cases, with microprocessors embedded in them so as to serve as storage devices for much greater information than credit cards within built transaction processing capability (Rajesh and vikas, 2002). In e-payment smart cards are used either as storage of money or to enhance e-payment security. To use smart card it is necessary to have a smart card reader, a hardware device that communicated with the chip on the smart card. The reader can be attached with PCs, electronic cash register, etc. these are actually stored-value cards in which prepayment or currency values are electronically stored on the card chips(Sumanjeet, 2009).

2.1.5 Types of E-payment Card

A payment card is a plastic card containing information that can be used for payment purposes, usually emitted from a financial institute (Maurizio, 2011).

In general payment cards offer: getting cash from ATM (Automatic Teller Machine), pay directly to sellers with POS (Point of Sale), and pay online over the past years, different types of electronic banking services have emerged in the Banking sector (Adriana, 2006). There are different types of electronic payment cards.

1. Credit Cards

A credit card is a plastic card issued to the users to lent money for purchase of goods and services. The customer type the card number, expiry date and billing address on the order form and the vendor can verify the details and be confident of payment.

The credit card payment on the online network can be categorized into three types:

(a) Payment using plain credit card details

(b) Payment using encrypted credit card details

(c) Payment using third party verification.

2. Debit Card

A Debit card is a banking card that can be used in Automated Teller Machine and point of sale. A Debit card is linked to an individual's bank account, allowing funds to be withdrawn at ATM and point of sale without writing a cheque. A Debit card holder pays directly through bank for his/her purchases. It replaces physical cash and cheque. In debit card system customers deposit in advance into the bank and withdraw at the time of purchase. There are two types of debit card which are used in real world:

(a) Online debit card

(b) Offline debit card

3. Smart Card

A smart card was first produced in 1977 by Motorola. It is a thin, credit card sized piece of plastic which contains a half-inch-square area that serves as the card's input-output system. A smart card contains a programmable chip, a combination of RAM and ROM storage and can be refilled by connecting to the bank. It is known as smart card because the ability of chip to store the information in its memory makes the card smart (Rachna, 2013).

4. Secure Electronic Transaction (SET)

Secure electronic transaction is a system of online payments for ensuring the security of financial transactions on the internet. The SET specification is an open, technical standard for commerce, developed by VISA and master card. It facilitates secure payment card transactions over the internet. Digital certificate create a trust change throughout the transactions, verifying cardholders and merchant validity (Rachna, 2013).

5. Cyber Cash

Cyber cash is a web based service that automatically processes and verifies customer's credit card information then debiting the customer's account and crediting the merchant's account electronically. Cyber cash servers act as a gateway between the merchant on the internet and bank's secure financial network. For the purpose of security in electronic payments system this system uses the digital signatures (Rachna, 2013).

6. Net Bill

Net bill is a micro payment system. Net bill payment system uses internet for purchasing goods and services and makes secure and economical payments for them. The net bill server maintains account for both consumers and merchants, which allows customers to pay merchants for goods to be delivered. The goods are delivered in digital form. There is money tool software which verifiesreceipts of goods. Therefore, net bill system of electronic payment enables the communication between money tool, the merchant server and net bill servers (Rachna, 2013).

7. First Virtual Holdings

First virtual is one of the first internet payment system that offered a third party verification method to make payment over the internet. The first virtual payment system is unique in the sense that it does not use encryption. A fundamental philosophy of the payment-system is that certain information should not travel over the internet because it is open network. This information's basically related with credit card information. Instead of using credit card numbers, the transactions are complete by using a first virtual PIN, which is issued by first virtual company. These PIN numbers can be sent over the internet because it works like Id and no merchant can charged the user's account without receiving a confirmation e-mail from him (Rachna, 2013).

Internet-based payments: - It relies on an existing bank account and providing access and funds- transfer capabilities remotely via email or web application. Moreover, according to(Alabar &Timothy, 2012) cited by (Assefa, 2013). Internet banking allows customers of a financial institution to conduct financial transactions on a secure website operated by the institution, which can be a retail or virtual bank, credit union or society. It may include of any transactions related to online usage. Banks increasingly operate websites through which customers are able not only to inquire about account balances, interest, and exchange rates but also to conduct a range of transactions (Alabar& Timothy, 2012).

Mobile payments: - mobile phone based applications using chip, SMS, or WAP or other software driven mobile interface providing access to an existing bank account or credit card account. As per Tiwari(2007) cited by Assefa (2013) 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 such as a mobile phone or Personal Digital Assistant (PDA).

Correspondent banking or branchless banking: third-party systems in which a non-bank retail outlet serves as the agent for an existing bank using POS terminals already present in the retail outlet.

Point of Sale terminal (POS): It is an electronic device used to process card payments at retail locations. It reads card information and it process payment on that card for the transaction effected immediately. This is an important infrastructure for an effective e-payment system and will enhance efficient cashless policy.

2.1.6 E – payment Products

The normal types of electronic banking services basically mentioned in the literature include SMS banking, mobile banking (m-banking), Automated Teller Machines (ATMs), telephone banking, personal computer banking, internet banking and electronic check clearing systems (Mishra, 2009). But in this study automatic teller machine, mobile banking, internet banking, and CBE birr will be considered for assessing customer satisfaction on E – payment system provided by CBE in the study area.

2.1.6.1 Automated Teller Machine (ATM)

Among the noticeable budgetary touch-focuses, Automated Teller Machine (ATM) has been considered as a standout amongst the most critical segments of E - managing an account framework. ATM is a terminal conveyed by a bank or any money related establishment which empowers the clients to withdraw money, make offset enquiries, request bank statements, exchange stores furthermore store money. The ATMs are essentially self-overhauled saving money terminals and are gone for giving quick and advantageous administrations to the bank's clients (Rasiah, 2010). Basically, it is an electronic terminal which gives clients the chance to acquire managing an account administration at whatever time. To withdraw money, make stores or exchange trusts between records, a purchaser needs an ATM card and an Individual Personal Identification Number (PIN).

2.1.6.2 Point of Sale Transfer Terminal (POS)

A point – of - sale (POS) terminal is a computerized replacement for a cash register which is much more complex than the cash register. The POS system can include the ability to record and track customer orders, process credit and debit cards, connect to other systems in a network, and manage inventory. The POS system allows customers to make retail purchases with a check card. The card looks like credit card but does not function like it. The amount purchased is transferred immediately from the account of the debit card holder to that of the store (Malak, 2007).

2.1.6.3 Mobile/Telephone banking

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

Studies revealed that Mobile payment services have become increasingly important in daily lives due to multiple planned and unplanned events. In this regard, Arpan(2020) pointed out that cost, usefulness, trust, social influence, credibility, information privacy and responsiveness factors are more important to increase the usage satisfaction of mobile payments services.

2.1.6.4 Internet Banking

Internet banking refers to the use of the internet as a delivery channel for banking services, which includes every single customary service, for example, balance enquiry, statement of records requisition, trust transfer to other records, charges payment and a new banking service, for example, electronic bill presentment and payment without going to a bank (Mukherjee &Nath, 2003). As indicated by Chau& Lai (2003), the quick development and notoriety of the internet service has created great opportunities and threats to companies in different business sectors, to endorse and deliver their items and services utilizing internet as a circulation channel. As stated by Pikkarainen, et al.(2004) internet banking is a web entrance, through which clients can utilize various types of managing an account administrations running from bill installment to making speculations. Aside from money withdrawal, web account management (internet banking) offers the client a complete access to any kind of keeping money exchange at the snap of a mouse (De Young, 2001).

E-payment system as means of fast tracking the implementation of government policies through the elimination of delays in government payment system and minimizing interactions between government officials and contractors eliminate opportunity for corruptive tendencies. This is with the view of achieving economic and efficient transactions in government finances and improves quality of reporting system (Ogedebe, 2012).

2.1.6.5 CBE Birr

Commercial Bank of Ethiopia (CBE) officially launched its mobile money services dubbed CBE birr on December 11, 2017 after successfully testing its functionality for six months. It is a mobile based banking whereby the bank selects, trains and authorizes agents to provide banking services on behalf of the bank through a mobile phone. It is deployed as a means of extending financial services to the unbanked segment of the public. Customers may no longer need to travel long distances to visit CBE branch as they can get the service from the nearest CBE agents through CBE Birr. A CBE Birr customer can deposit, withdraw, transfer money, make payments, buy mobile airtime and pay bill using a mobile phone in a very simple and convenient way (www.combanketh.et/CBE).

2.1.7 Benefits of E – Payment

2.1.7.1 Benefits from business point of view

Customer satisfaction and customer service delivery on the elements for any business profitability. E-payment enables business and banks in particular to serve customer anywhere and anytime through any delivery channel the customer selects, in effect increasing accordingly of business.

E-payment services are beloved to reduce the need for caring cash and more funds access by anywhere, anytime in as the money kept in banks is accessible as the money in customer product.

Businesses save on operational and processing expenses mainly due to reduction in technological costs, for example, the use of the Internet and the acquisition of computers and other machines. Expenditures in paper and postage are cut down along with time spent in executing personal transactions. According to a survey by Booz, Allen and Hamilton, an estimated cost provide in the routine business of a full service branch in USA is $1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM (Automated Teller Machine) banking and 1.5 cents for Internet Banking (Nathan 1999; Pyun et al., 2002). In Nordea, Finland, one online transaction costs the bank an average of just 11 cents, compared to $1 for a transaction in a branch (Echikson, 2001). Average payment in internet bank or via direct deposit cost 4 times less than payment in branch. On actual cost side in the bank point of view direct debit payment cost 16 times less and payment in internet bank 7 times less than payment in branch. This indicate that E banking contribute a significant financial benefit to banks to which implement E banking. In addition to this E banking reduce the capital expenditure and staff cost of the bank.

2.1.7.2 Benefit from customers point of View

E-payment systems offer the main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of E-payment for corporate customers are as follows (Rachna, 2013).

- ✓ Reduced costs in accessing and using the banking services.

- ✓ Increased comfort and timesaving - transactions can be made 24 hours a day, without requiring the physical interaction with the bank.
- ✓ Quick and continuous access to information- Corporations will have easier access to information as, they can check on multiple accounts at the click of a button.
- ✓ Better cash management- e-banking facilities speed up cash cycle and increases efficiency of business processes.
- ✓ Convenience: All the banking transactions can be performed from the comfort of the home or office or from the place a customer wants to.
- ✓ Speed: The response of the medium is very fast; therefore customers can actually wait till the last minute before concluding a fund transfer.
- ✓ Funds management- Customers can download their history of different accounts and do a ―what-if‖ analysis on their own PC before affecting any transaction on the web. This will lead to better funds management (Alexa, 2005).
- ✓ Access to multiple choices that the customer can choose.
- ✓ The customer determines the level of service
- ✓ Engages and empower customers.

2.1.8 Dimensions of E – Payment Service Quality

Electronic payment systems are required to bring the necessary infrastructure to facilitate payment over the Internet. They are becoming an essential part of, and are greatly necessary for, further development of electronic commerce and electronic business and off a curse; payment must have the following characteristics to become accepted around the world (Dospinescu, 2012; Abrazhevich, 2001).

Many of the literature dealt with the concept and dimensions of the E – payment service characteristics/quality. Security (Adewoye, 2013; Adewoyee& Oni, 2010), perceived speed (responsiveness) (Adewoye& Oni, 2010; Tella & Olasina, 2014), Ease of payment (Tella & Olasina, 2014), convenience (Adewoye, 2013), anonymity (Adewoye, 2013), and traceability (Tella & Abdulmumin, 2015) are among the dimensions. These dimensions affect customer satisfaction and loyalty to E – payment service deliveries.

In this study, six dimensions of E – payment service qualities such as speed and efficiency (Abili & Jafarnejad, 2014); security and trust (EssafiRaida and Neji, 2013); information and accountability

(Khosravi and Anvari, 2013); ease of use (Guriting and OlyNdubisi, 2006);credibility (Slade et al., 2015); and confidentiality (Meharia, 2012) will be considered.

2.1.9 Customer Satisfaction

Customer perception and satisfaction surrounding a service encounter play a vital role for getting the success of any new technology, therefore E – payments services get adopted only when customers have positive perception and usage satisfaction towards mobile payments services (Teoh et al. 2013). Literature indicates that adoption of online transaction is highly governed by customer satisfaction and their choices of method of transaction (Dahlberg et al., 2008). However customer or user satisfaction typically emerges over multiple service encounters whereas usage satisfaction is generated at the context of service encounter (Wixom and Todd, 2005). Such a measure for customer satisfaction would be typically captured as the sum or average of different usage satisfaction out of numerous service encounters. Typically, most of the past literature measures overall customer satisfaction since measuring usage satisfaction is difficult due to access to the customer at the moment of service consumption. However firms typically ask users to rate their service encounters after a service is consumed as it helps in service improvements and can create positive or negative user generated content which is a better measure for usage satisfaction.

On the other hand, customer satisfaction and quality has long played an important role in the survival and success in today`s competitive market (Sheaufen& Mei Lian, 2009). Customer satisfaction has attracted the most attention in the marketing literature, since it has an important impact on customers` behaviors and purchase intentions (Sanayeie, et al.,2012). Customer satisfaction is an emotional or cognitive reaction with a certain focus (expectation, product, consumption experience, etc.) at a certain time (after consumption, after selection, based on experience) (Cote & Giese, 2002). In a credible categorization, regarding the expected quality, customer requests are formed in three levels or layers and the realization of each qualitative layer depends on the satisfaction of the previous one to increase persistent customer satisfaction. These layers include basic quality (the minimum value that prevents dissatisfaction), efficiency quality (performance necessities that ignoring them dissatisfies the customers), and motivational quality (features that ignoring them does not dissatisfy the customers, but realizing them by a manufacturer causes tangible customer satisfaction) (Moeinzad, 2012).

2.1.10 Measuring Customer Satisfaction

Customer satisfaction is measured at the individual level, but it is almost always reported at an aggregate level. Customer satisfaction is an ambiguous and abstract concept and the actual manifestation of the state of satisfaction will vary from person to person and product/service to product/service. The state of satisfaction depends on a number of both psychological and physical variables which correlate with satisfaction behaviors such as return and recommend rate. The level of satisfaction can also vary depending on other options the customer can compare the organization's products (David, 2010).

It is also well recognized that measuring service quality is more difficult than to measure good's quality because of the unique characteristics of services. The main characteristics of services in general and banking services in particular are the following (Parasuraman, Zeithmal, & Berry, 1998):

- It is intangible, since services are not material and cannot be touched
- The production and consumption of service happens at the same time, which means that it is produced upon request.
- Service cannot be stored.

2.1.11 Relationship between Customer Satisfaction and E – Payment Service Quality

In the era of stiff competition of the banking industry, both private and state banks are in the game of market arena in terms of providing service quality in every aspect of their competitive strategies because the awareness of their customers are developed in selecting whose bank provides better quality of services as per the satisfaction level they expected to achieve so that different banks designed winning strategies of rendering best service quality to enhance their customer satisfaction over existing competitors in the market rivalry (Surafel, 2016).The relationship between expectation, perceived service quality and customers satisfaction have been investigated in a number of researches (Zeithaml et al, 1988). They found that, there is very strong relationship between quality of service and customer satisfaction (Parasuraman et al, 1985; 1988).

The higher level of perceived service quality results in increased customer satisfaction. When perceived service quality is less than expected service quality customer will be dissatisfied (Jain & Gupta, 2004). Research has indicated that service quality has been increasingly recognized as a critical factor in the success of any business (Parasuraman et al., 1988), and the banking industry in this case is not exceptional. They also found out that the performance of the service provider on

core and relational dimensions of services was an important driver for customer satisfaction in retail banking.

Many banks consider technology as a route for service quality improvements; while others consider it as a cost-effective new service delivery tool whatever the underling strategy nobody questions the importance of technology and adoption by banks. Moreover, it is important to assess how customer fined themselves, among these technologies from ATMs to Mobile banking, Internet banking and POS terminals and can meet real customer needs (Surafel, 2016). The relationship between customers' satisfaction upon using E – payment products with E – payment system service quality dimensions are presented below.

2.1.11.1 Speed

E - Payment service users believed that when payments or transactions are done electronically, it responds faster to their need than any other traditional methods used for payments (Lin, 2013). The same is expected in terms of resolution to problems encountered during a service experience. Speed and responsiveness may also influence the satisfaction of customer based on any online transaction. The higher the responsiveness of the system to the inputs provided by the user, lesser is the user's time and effort which is utilized to meet the objectives and more is likely to be his satisfaction from the service encounter. Responsiveness also comes into play if an automated transaction does not fulfill intended consequences and required human intervention due to technical or process related problems. A quicker human intervention in such problems was perceived to impact usage satisfaction positively. In this regard, Arpan (2020) found out there is a significant and positive impact of responsiveness of E – payment service on customer satisfaction in using customer products – mobile payment.

2.1.11.2 Security

In this digital world, security plays a very important factor to maintain the relationship between merchant, users and with payments system (Siau et al. 2004; Mallat, 2007). Security is one of the major concerns for customers. In E –payment system, users have their own private key or secret code for the online transaction it developed perceived security in E – payments or transactions. In these digital environments, it required to maintain mechanisms of authentication, authorization, non-repudiation between users and payments services (Shon and Swatman, 1998). Perceptions surrounding security is often identified as one of the biggest challenges for all the users of digital

services and smart technology products as they capture a lot of data and so digital identity systems are sometimes used to enable better security for such platforms (Stadler 1999; Mir et al. 2019). If users have concerns surrounding how others may access and use the information that is shared in a digital service, they tend to use it lesser (Weerakkodyet al.2017).

2.1.11.3 Accountability

The nature of responding and accountability is being committed to answering questions and requests (Khosravi and Anvari, 2013). The tendency of organizations accountability means to help customers and provide services as promised (Moeinzad, 2012). Information is also one of the most basic levels of internet banking. The bank introduces the services related information and its bank operations through public or private networks (Ahmadi, 2011). Informing and providing necessary trainings to customers can be investigated from different angles. However, what seems most essential is learning and training e-banking and e-payment services. The advantages of appropriate information and providing training to customers not only reduce costs, but it can also have social, economic, and cultural impacts, like reducing the cost of publishing bills, health, and control (Golnabi, 2013). In this regard, Arpan (2020) found out significant and positive impact of information privacy of E – payment system on customer satisfaction in using mobile payment.

2.1.11.4 Ease of use

For any digital service, adoption is often impacted by ease of use of the service, as has been illustrated in adoption literature like TAM. Mobile payments services are easy to use therefore it should provide a positive attitude to usage satisfaction (Guriting and Oly Ndubisi2006). If mobile payments service is easy to use then it will remove any kind of transaction errors and it is one of the important aspects of any online financial transactions (Flavianet al.2006).

Literature indicates that despite the progress of different adoption literature, Ease of use from TAM remains one of the critical factors which drive technology usage (Ran et al., 2013). Extending this argument that users who use a technology are likely to be having greater usage satisfaction, if the platform is easier to use as compared to other platform. Therefore, one can propose there is a positive relationship between ease of use and customer satisfaction.

2.1.11.5 Credibility

Credibility of a service provider comes out of trust on the service provider that the organization will not attempt to do anything that will harm the interest of the different stakeholders. This is driven by the trust on the service provider. The trust that an individual may have on the service provider has positive impacts on the usage intention of a digital service (Slade et al., 2015). It also defines a behavioural intention to use an information system like mobile payments services (Amin, 2008). Extending the argument based on inductive evidences, Kapoor et al.(2014) hypothesized that if the service provider has greater credibility, the usage satisfaction would be higher for a digital service like E - payments. Therefore, it can be proposed that there is a positive relationship between credibility of E – payment service and customer satisfaction.

2.2 Brief Historical Development of E-Payment System

The history of e-payment can be traced back to 1918 the time when currency was first moved in United States (U.S) by the Federal Reserve Bank with aid of telegraph. However, that technology has not been widely used in US until the time when their Automated Clearing House (ACH) was incorporated in 1972. Since from that time, the electroniccurrency became widespread. This enabled U.S commercial banks and its central treasury with an alternative to cheque payment (Graham, 2003).

Credit card industry can also be traced to 1914 when department stores, oil companies, western Union and hotels start issuing cards to their customers to enable them to pay for goods and services. After about 40 years of credit card evolution, there have been increasing numbers of credit cards usage as they have become more acceptable by people as a medium of payment especially in transportation. Initially, credit cards were all paper-based payments, until in the 1990s when such cards were transformed to electronic completely. Due to the increasing number of credit cards usage, the industry has grown rapidly which lead to the introduction of a debit card too. Debit and credit cards are now used in transactions payments for all types of purchases and or services rendered all over the world (Mohamad et al. 2009).

2.3 Development of E-payment in CBE

Electronic payment is an automated payment or banking channels that allows delivery of banking services in an effective, efficient and convenient way via electronic channels such

as ATM, POS terminals, mobile phones, internet and personal computers. The CBE is a first to introduce electronic payments in the country when it launched proprietary ATM system in 2002.

However, the bank found it important to set up a new solution for electronic payment services which is capable of supporting its business growth requirements. Accordingly, the bank has implemented card payment services, mobile payment, and internet banking (E - Payment procedure, CBE, 2012). According to the newly revised E-payment procedure of the bank, electronic payment is spreading rapidly as it leads to much lower costs and greater competition in the financial services.

The adoption and growth of e-payment facilities is becoming imperative towards creating a cashless society. The most recognized drivers for growth of e-banking include convenience, reliability, wider availability; affordability and usefulness of the services are increasingly sought for ease of livelihood of the populace at large. Electronic payment assists in attracting unbanked individuals into the banking system allowing improvement in personal money management along with enhanced financial empowerment (CBE, 2016).

2.6 Review of Empirical Studies

Some related studies are conducted by different researchers in different parts of the world. However, there are limited numbers of studies conducted in Ethiopia on the effect of E – payment services on customers' satisfaction the case of CBE. In this study some of the empirical studies related to E – payment services with respect to customers 'satisfaction are presented.

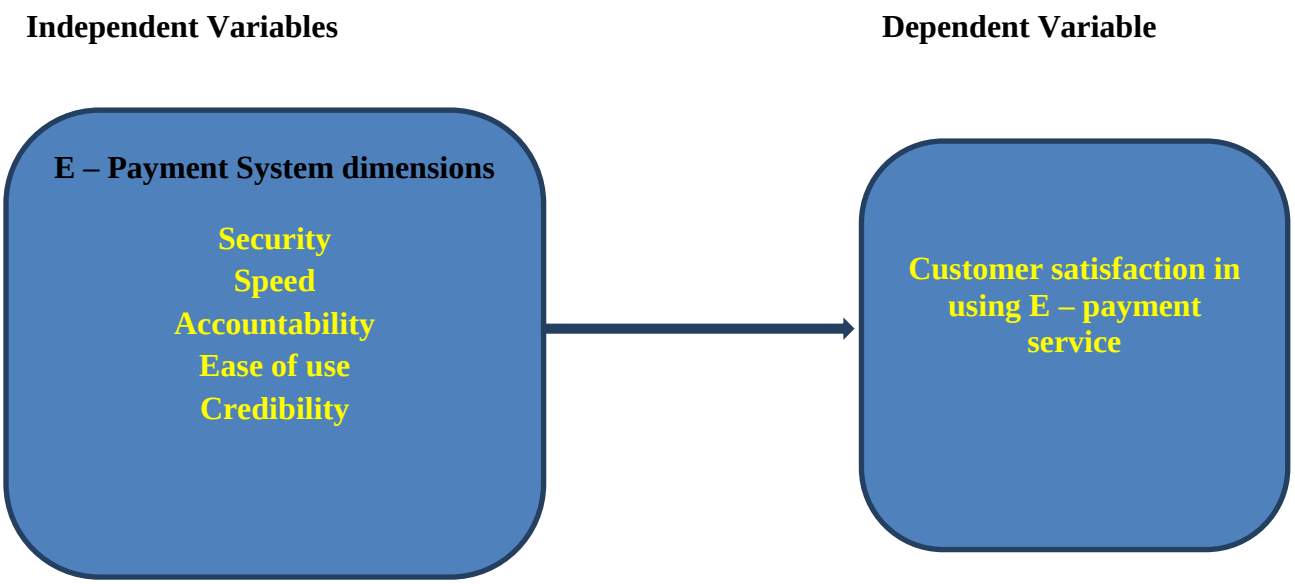
Mesfin (2019) used the four quality dimensions automated teller machine; mobile banking, internet banking, and CBE birr to investigate the effect of E-payment system variables on customer satisfaction in using E – payment services in the Commercial Bank of Ethiopia. In addition the research investigated major challenges encountered by the bank in delivering the service that might reduce the level of customer satisfaction in using the technology. The result shows that the product of E - payment (automated teller machine, mobile banking, internet banking, and CBE birr) have strong relationship with E - payment customer satisfaction in CBE. More over the finding revealed customer satisfaction in using E - payment service has a relation with age and educational level. The major challenges that the bank faced in providing the service are; service interruption due to internet connectivity and electric power problem, lack of Information and Communication infrastructures and lack of customer awareness in using the technology.

Tesfaye and Dereje (2019) in assessing determinants of customers' E – payment utilization in the CBE, the case of Nekemte town revealed that among the demographic related factors customer's education and income level have positively influenced their E – payment utilization activities, whereas among the institutional related factors, network interruption and service charge levied by the bank has a negative influence while the customer satisfaction and cost reduction concern has a positive influence on their E-payment utilization activities. Lastly, among the customer related factors both perceived risk and lack of willingness to use the service has a negative influence on their E-payment utilization activities in the study area.

2.7 Conceptual Framework of the Study

Based on the reviewed literatures, the following conceptual framework, relating customers' satisfaction in using the five E – payment products with the E – payment service delivery is formulated below.

Figure 2.1: Conceptual Framework of the Study



Source: Adapted from Mesfin (2019) and Tesfaye and Dereje (2019)

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter deals with an overview of background of the organization, research design, research approach, target population, sources of data, sample size determination and sampling techniques, data collection instruments, validity and reliability of instruments, procedures of data collection, variables and measurements, method of data analysis, and ethical consideration.

3.1 Research Design

Descriptive survey and explanatory research designs were employed to carry out the study. This is because it is believed that descriptive survey design helps to examine the what, where, and when of a phenomenon. Moreover, it helps to gather relevant data in detail and to make detailed analysis (Creswell, 2012). In line with this, Creswell (2006) stated that descriptive research gives a better and deeper understanding of a phenomenon, which helps as a fact-finding method with adequate and accurate interpretation of the findings. Furthermore, it also helps to gather data at a particular point in time with the intention of describing the nature of existing condition or identifying standards against which existing conditions can be compared or determined the relationship that exists between specific events.

As to the explanatory design, it captures the causal relationship between variables (Saunders et al., 2007). In explanatory study a situation or problem leads to the explanation of the relationship between variables, i.e., it seeks answers to why and how types of questions by identifying causal \

factors and outcomes of the target phenomenon (Bhattacherjee, 2012). This design was chosen because it is one of the correlational research designs that are used in social science research (Creswell, 2012). More specifically, it enabled the researcher to describe what type of relationship that has been existed among different variables related to the topic under investigation. It was also convenient to gather data from a relatively large sample of respondents at one point in time. Moreover, it helped to investigate the current situation of the E – payment services for customers of E – Payment products and more importantly, it was used to describe the effect of the independent variables on the outcome variable using the correlation statistical test including the strength and the direction of the relationship between them so as to provide more information

about effect relationship. Finally, it helped to make interpretations or draws conclusions from the statistical test results.

Therefore, from the above point of view, the researcher attempted to assess the effect of E – payment services on customers' satisfaction in the case of CBE Hossana District.

3.2 Research Approach

The researcher used quantitative approach to answer the research questions. This was based on the assumption that quantitative method was enough to address the research problem. A quantitative research enables the researcher to collect objective and numerical data to apply statistical tools and used to establish relationships of the variables used in this study.

3.3 Target Population

The target population of this study was the five E – payment product customers in CBE Hossana district 13 selected branches was considered as a target population for this particular study. According to Human Resource data base on June 30, 2020, there are 68,426 ATM users; 6,269 POS users; 53, 748 Mobile banking users; 7,456 internet banking users; and 9,283 CBE birr users.

13 branches of CBE under Hossana district, namely, Wolkite, Gubrie, Yejoka, Agena, Bekur, Hossana, Emdibir ,Gummer, Butajira ,Worabe, Durame, Lera, Wachamo branches. Customers of these branches who have been using any of the five E – payment product users in Hossana District were considered as target population of the study.

3.5 Data Sources

The study used both primary and secondary data sources. Primary data was collected using questionnaires from customers of the four E – payment products – ATM, Mobile banking, Internet banking, and CBE birr based on their satisfaction about the provision of the E – payment system. The other primary data source was from business and operation managers of the selected branches using interview.

Secondary data source also gathered from annual reports of the CBE, documents on E – payment system and customers' utilization of E – payment products, from journals, articles.

3.6 Sample Size Determination and Sampling Techniques

3.6.1 Sample Size Determination

The sample size of the five E – payment products customers mentioned above from the Hossana District Branches was determined as follows. Since the populations of the E – payment service product users are very large, the researcher used sample size determination formula developed by Cochran (1963) cited in Israel (2003) to yield a representative sample of proportions.

Since the variability in the proportion was not known that was adopted the usage; therefore, assume p =.5 (maximum variability). Furthermore, it was desired to have a 95% confidence level and ±5% precision. The resulting sample size was demonstrated as:

$$n = \frac{Z^2 pq}{e^2} = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = \frac{0.9604}{0.0025} = 384.16 \cong 384$$

Where, n = is number of sample size; Z = the standard normal curve deviate usually set as 1.96 which corresponds to the 95% confidence level; e = level of precision = 5%

Therefore, the sample size of the study for E – payment product customers in the selected branches was 3844. In order to determine the number of customers from each of the E – payment product users, the researcher used proportional allocation rule (Ajay & Micah, 2014):

$n_i = \left(\frac{N_i}{N}\right)(n)$, where i = 1, 2, 3… 13; n = 384; n_i = sample size of customers from each of the E – payment products; N_i = total number of customers in each of the E – payment products; and N = 145,202

For ATM users: $n_{ATM} = \left(\frac{N_{ATM}}{N}\right)(n) = \left(\frac{68{,}426}{145{,}202}\right)(384) = 180.9588 \cong 181$

The remaining sample size of the E – payment products were calculated accordingly and summarized in Table 3.1 below.

Table 3.1: Population and Sample Distribution E – payment Service Product Customers

No	Type of E – payment product	Total no of users	Sample size	Percent
1	ATM	68,426	181	47.1
2	POS	6,269	17	4.4
3	Mobile banking	53,748	142	37.0
4	Internet banking	7,456	20	5.2
5	CBE birr	9,283	24	6.3
Total		145,182	384	100.0

Source: Human Resource data base on June 30, 2020

In general, the study was conducted using a total of 384 respondents including participants in interview.

3.6.2 Sampling Techniques

As of CBE portal intranet report of June 30, 2020, the bank has 1600 branches across the country. These branches are restructured into 30 districts. By taking into account the time and cost constraints (cost of data collection and analysis) and all branches of CBE use the same procedure, no significant difference in E-payment implementation practice among branches and districts the researcher selected Hossana District purposively and conveniently. But to select the number of E – payment product users from each of the selected branches, the combination of proportionate stratified, systematic, and simple random sampling techniques were used. The researcher chose these techniques, because as Kothari (2004) pointed out, stratified sampling technique was applied in order to obtain a representative sample when the population from which the sample to be drawn does not constitute a homogenous group. In this study, stratified sampling technique was used to categorize branches of the bank in terms of grades, grade 1, grade 2, grade 3, and grade 4. As to the selection of customers, systematic simple random sampling technique was employed where the type of the E – payment product users, ATM, MB, IB, POS and CBE birr, were taken into account.

3.7 Data Collection Instruments

In order to get valid data regarding the effect of E - Payment services on customers' satisfaction: the case of Commercial Bank of Ethiopia, Hossana District, two types of questionnaires were prepared consists of both open and close-ended questions. In addition to the questionnaire, data was collected from different published and unpublished materials.

Data collection tools depend on the nature, the objective, and the method of data analysis and the scope of the study. The availability of data, time, personal and other facility also influence the selection of tools used for the study. Therefore, questionnaires, interview and document review were served as data collection instruments.

3.7.1 Questionnaire

Structured and self-administered questionnaires were prepared and used to collect data from E – payment products users from the selected branches of CBE. The questionnaires were comprised of five sections. The first section dealt about the demographic characteristics of customers consists of gender, age, educational background, duration of E – payment product usage for customers.The second section focused on items concerning customer satisfaction while using the E – payment products such as ATM, mobile banking, internet banking, POS and CBE birr. Finally, the third section dealt about the characteristics of E – payment system and its delivery.

The questionnaires were structured in close-ended and open – ended types. The closed – ended items of the questionnaires were measured using the 1 – 5 point Likert scales such as strongly disagree (SDA = 1), disagree (DA = 2), undecided (UN = 3), agree (A = 4), and strongly agree (SA = 5).

3.7.2 Document Review

Documents related to challenges and prospects on the E – payment services along with documents related with customers utilization and satisfaction on the five E – payment products – ATM, mobile banking, internet banking, and POS and CBE birr. Moreover, annual reports of CBE also reviewed.

3.8 Validity and Reliability of the Instruments

3.8.1 Validity

Validity is “the extent to which the measuring instrument measures the characteristics or dimensions that the researcher intends to measure” (Thatcher, 2010). Data collection instruments, questionnaire and document review were designed by taking in to consideration of the basic research questions. Based on the definition and different perspectives of validity, the items in the three instruments were reviewed by the advisors.

3.8.2 Reliability Test

The reliability of an instrument, as defined by Twycross and Shields (2004), is "the consistency, stability and repeatability of results, i.e. measurements are free from random error, provide consistent data". This has been ensured if all items in each section were measuring the same construct, i.e., if consistent results has been obtained in identical situations but in different circumstances. Therefore, the researcher used this test to ensure the internal consistency of the items in the questionnaire in each section. To measure the reliability Cronbach alpha values were used (Pallant, 2005). The Cronbach alpha provides a coefficient of inter-item correlations. This is a measure of the internal consistency among the items in the tool. It is the average correlation among all the items in question, and is used for multi-item scales/questionnaire. The reliability test was conducted using the rule stated in (Baharin et al., 2015). That is, Cronbach's Alpha value that ranges from 0.9 – 1.0 taken as excellent, 0.8 - 0.89 as very good, 0.7 - 0.79 as acceptable, 0.6 - 0.69 questionable while 0.5 - 0.59 as a poor and the value less than 0.5 as unacceptable.

As it has been stated in the earlier sections, questionnaires were used on which descriptive and inferential statistics analyses were employed. But, the validity of the inferences drawn from these statistical analyses using the items in the questionnaire depends on the consistency or dependability of the measuring instrument – each item. Therefore, the reliability of the items in the questionnaire was checked using pilot test before running the actual study. This was done by selecting 30 E – payment product users, five from each randomly from the selected branches. But, the selected customers used for the pilot tests were excluded while the actual data collection process was conducted. The reliability test for the whole items in the questionnaires was done using SPSS version 20.

As indicated in Table 3.2 below, the Cronbach's Alpha result shows that the reliability of the variables in the questionnaires filled by the sampled customers is at least 0.712. This implies that the reliability of the instrument is more than the acceptable standard. Hence, all items in the questionnaire were suitable and employed to conduct the actual study.

Table 3.2: Reliability Test Results of the Variables

No	Category	Variable	Cronbach's Alpha	No of items
1.	E – payment system characteristics or dimensions	Security	.787	4
		Speed	.781	4
		Ease of use	.752	4
		Information	.714	3
		Credibility	.712	3
2.	Customer satisfaction with E – payment system services	Items on the overall E - payment System service satisfaction	.804	7

Source: Author construct from Survey Data of SPSS output, 2021

3.9 Data Collection Procedures

The questionnaires were presented to the respondents of the study so as to attain the required information. All participants included in this study were appropriately informed about the purpose of the study and their willingness and consent was secured before the commencement of administering questionnaire. In all data collecting process of the study privacy was maintained and the information was kept confidential.

Data from files, office manuals, annual reports and policy papers have been taken to get useful information that was appropriate for secondary data source review.

3.10 Variables and Measurements

3.10.1 Dependent Variable

Customer satisfaction was considered as the dependent variable of the study. Seven items related to the five E – payment service quality dimensions which were measured in 1 – 5 point Likert scale was prepared and the mean scores were served as values for dependent variable for each participant customer in the multiple linear regression model.

3.10.2 Independent Variables

The independent variables were E –payment service quality dimensions such as speed and efficiency; security; information and accountability; ease of use; and credibility adapted from (Arpan, 2020; Fatemeh et al., 2015). Items in each of the independent variables were measured using a 1 – 5 point Likert scale. Furthermore, demographic characteristics such as nominal

categorical dummy variable: gender; ordinal categorical dummy variables: age; educational background; occupation; and duration of E – payment product usage (for customers) were taken as independent variables. The selection of independent variables was based on the prior researches and published literature related to the study.

3.11 Methods of Data Analysis

After the collection of the data, necessary arrangements were made and organized according to their characteristics and items. The data analyses involved the analysis of information gathered through questionnaire, and document review. The data were analyzed on the basis of the research questions. Accordingly, descriptive statistics analysis and inferential statistics analysis were employed. All the collected quantitative data were analyzed using Statistical Packages for Social Science (SPSS) version 20.

3.11.1 Descriptive Statistics

In this section the data collected through questionnaire were analyzed by using descriptive statistics such as frequency, mean, and standard deviation. This was done in order to determine the effects of E-payment service on customer satisfaction in CBE; to examine the influence of E – payment service delivery on customer satisfaction; Moreover, in order to describe the characteristics of the respondents in terms of gender, age, and educational background, work experience frequency counts and percentage were employed.

3.11.2 Inferential Statistics

The study employed inferential analysis to assess the impact of E – payment services on customer satisfaction in using the five E – payment products. This was done using multiple linear regression model analysis with the view to measure the extent of the significance of each of the characteristics of E – payment system/services on customer satisfaction.

3.11.2.1 Multiple Linear Regression Model

Regression Model is a statistical tool that allows researchers to examine how multiple independent variables affected a dependent variable (Abdel - Salam, 2008). Multiple regression analysis was carried out to analyze the impact of each of the five E – payment service quality dimensions on the outcome variable – customer satisfaction. That is to examine whether there is statistically

significant impact and contribution differences among the independent variables on the dependent variable.

The equation for the regression model was expressed as:

$$\boldsymbol{Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \varepsilon}$$

is called a Multiple Linear Regression Model with 5 – independent variables.

Where: Y= customer satisfaction *(*dependent variable), x_1 = security, x_2 = speed, x_3 = ease of use, x_4= accountability, x_5= credibility are the independent variables, i = 0, 1, 2... 5 are called the regression coefficients, and $\boldsymbol{\varepsilon}$ is the error term or residual.

3.11.2.2 Assumptions for Multiple Linear Regression Model

Statistically, in order a multiple linear regression model shows the relationship between the dependent variable and multiple (two or more) independent variables and the validity of the inferences drawn from this model analysis depends on its assumptions being satisfied. Therefore, the following assumptions diagnostic test was carried out and presented in chapter four.

1. The sample must be representative of the population (This is called *Sample size Test*).
2. For any specific value of the independent variable, the values of the dependent variable are normally distributed. (This is called the *normality* assumption.)
3. The variances (or standard deviations) for the dependent variables are the same for each value of the independent variable. (This is called the *equal variance* assumption.)
4. There is a linear relationship between the dependent variable and the independent variables. (This is called the *linearity* assumption.)
5. The independent variables are not correlated. (This is called the *non-multicollinearity* assumption.)
6. The values for the dependent variables are independent. (This is called the *independence* assumption.)

As stated in (Pallant, 2005, p. 143, Abdel – Salam, 2008; Bluman, 1998, p. 503). These assumptions were tested before running the actual study interpretation.

3.11.2.3 Correlation Analysis

A correlation is a statistical test to determine the tendency or pattern for two (or more) variables or two sets of data to vary consistently. The statistic that expresses a correlation statistic as a linear relationship is the product– moment correlation coefficient. It is also called the bivariate correlation, or simply r, and it is indicated by an "r" for its notation. According to Duncan and Dennis (2004), correlation coefficient can range from -1 to +1.The value of -1 represents a perfect negative correlation while a value of +1 represents a perfect positive correlation. A value 0 correlation represents no relationship. Different Authors suggested different interpretations of the values of the correlation coefficients; however, the researcher used Samithambe (2019) and the results of correlation coefficient may be interpreted as follows:- roughly categorized r values as, $-.20 \leq r < 0 \; and \; 0 < r \leq .20$ as very weak and negligible correlation; $-.20 > r > -.35 \; and \; .20 < r < .35$ weak correlation, but to be considered; $-.35 \geq r > -.50 \; and \; .35 \leq r < .50$ fair or moderate; $-.50 \geq r > -.70 \; and \; .50 \leq r < .70$ strongly considerable high correlation and $-.70 \geq r > -1.00 \; and \; .70 \leq r < 1.00$ very strongly considerable correlation. In this study to ascertain whether a statistical significant relationship exists between each of the five E – payment system service characteristics such as security, speed, ease of use, accountability and credibility with customer satisfaction or not, the Pearson Product Moment Correlation Coefficient was used.

3.12. Ethical Considerations

Taking the severity of the ethical considerations in mind, this study was done with the highest importance placed on ethics, confidentiality, and secrecy. Confidentiality and secrecy of the respondents were emphasized to protect their privacy and dignity. Moreover, permission to administer questionnaires and conduct interviews for research purposes also sought from the relevant authorities. Respondents were informed of privacy and confidentiality. Thus, the researcher was clearly presented the purpose of the study and how confidentiality and anonymity of the participants were protected; informing them that involvement in the study was voluntary; and was free from any intended risk; and their names and the names of their places were kept anonymous.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

This part of the study deals with the analyses, interpretations, and discussions of the data gathered from sampled CBE, Hossana District on assessing effects of E-payment services on customers 'satisfaction. It consists of three parts. The first part presents demographic characteristics of the respondents. The second part deals with the analysis and discussions of the descriptive statistics on the E – payment product users. The third part concerns the inferential statistics, the regression analyses on the impact of E – payment service quality on customer satisfaction. Therefore, the results of the whole analyses were presented, interpreted and discussed accordingly.

In general, in this study a total of 384 questionnaires were distributed, but 354 were completed and retrieved successfully, representing 92.3% response rate.

4.1. Demographic Characteristics of the Respondents

Table 4.1: Customers' Demographic Characteristics

Variables		Frequency	Percent
Gender	Male	240	67.8
	Female	114	32.2
Age	20 – 29 years	95	26.8
	30 – 39 years	119	33.6
	40 – 49 years	105	29.7
	50 – 59 years	19	5.4
	Above 59 years	16	4.5
Educational Background	Primary school(grade 1 – 8)	36	10.2
	Secondary school (grade 9 – 12)	83	23.4
	Diploma	89	25.2
	Bachelor Degree	103	29.1
	Master	33	9.3
	Other	10	2.8
Occupation	Government employee	126	35.6
	Private organization employee	107	30.2
	Own business	56	15.8
	Student	43	12.2
	Other	22	6.2

Source: Author construct from survey data, 2021

The above Table 4.3 shows that, among 354 respondents, 240 (67.8%) were male and 114 (32.2%) were female. This implies that majority of the sampled respondents were males. This result is

supported by prior researchers (Kwashie, 2012; Fikerselassie, 2017 and Simon, 2016) on the same topic that their finding showed male E-payment customers took the higher proportion.

Concerning age categories, more than half of the respondents' age 214 (60.5%) was categorized in the range of ages 20 – 39, whereas 40 and above years old customers were 140(39.5%). This result implies that more respondents of this study were youngsters. In this regard, different studies also indicated that, youngsters were more closed to technology than others age groups so that, the bank should have to go different age groups in order to duplicate its service. In this regard, similar result was obtained in prior studies by Fikerselassie (2017) and Surafel (2016) who found that youngsters were more users of E- payment services.

In the case of educational background 235(66.4%) of the respondents were diploma and above holders, while 119 (33.6%) have primary and secondary school educational status. In respect to occupation side, out of the total respondents majority 126 (35.6%) were government sector employees, 107(30.2.2%) were private sector employees; 56 (15.8%) were engaged in their own business; 43 (12.2%) were students; whereas 22 (6.2%) were engaged in other occupation. This implies that the E – payment service was dominated by government sector employees in most of the selected CBE in Hossana district.

Table 4.2: Customers Profile in using Electronic Payment System Products

No	Item	Indicators	Reply	Perc.
1.	Which type of electronic payment system do you use mostly?	Automated Teller Machine (ATM)	354	100
		Point of Sale (PoS)	22	6.2
		Mobile Banking (MB)	300	84.7
		Internet Banking (IB)	222	62.7
		CBE Birr	150	42.4
2.	For how long do you use the E – payment product you chose in question #1?	Below 2 years	31	8.8
		2 – 4 years	318	89.8
		5 and above years	269	75.9

Source: Author construct from survey data, 2021

As depicted in Table 4.2, all respondents are ATM users, followed by mobile banking users and internet banking users, but few customers was point of sale users. This might be due to scarcity of it might be procedures of the CBE. On the other hand, among the five E – payment product users, POS users are minimum this is due to the fact that the CBE provide this service individually for enterprises of different sectors. In this regard most of the line and operation managers' interviewee confirmed that most of the enterprises do not have POS individually. Regarding to respondents'

experience in using on E-payment service, the mean value of experience was 2 - 4 years, next to this 5 and above years of respondents' experience respectively. This result indicates that, most of the respondents have 2 and above years' experience with E-payment services. The fining of this study is in contrast with the finding of Nitin and Aditi (2017) who conducted their study on the effect of electronic payment on customer satisfaction and the result of their study shown that 42% respondents have their account from less than 5 years, 32% respondent have their account more than 5 years, but less than 10 years and rest of 26% respondent have more than 10 years. It conclude that as per our survey the mostly respondent have their accounts in bank within last 5 years and others have their accounts less or more than 10 years in their respective banks.

4.2 Descriptive Statistics

Descriptive analysis provided frequency counts and percent for profile of customers in using E – payment service products; the mean and standard deviation for each variable in order to depict the level of agreement on the level of E – payment products users satisfaction on the E – payment services; challenges of E – payment services; and prospects of E – payment services in the Commercial Bank of Ethiopia. The mean and standard deviation were calculated for the study variables. The mean indicates the extent of the sampled respondents averagely agrees or did not agree with the different statements whereas standard deviation shows the variability of an observed response from the mean score of the whole sample respondents.

All the questions on the study variables were prepared using a Likert scale in the form of interval scale leading the researcher to obtain a single variable for the constructs based on Al-Sayaad et al. (2006) which summarized as follows. Scaled Likert Criterion: Mean range Response Option; 1.00 to 1.80 represent very poor service quality, 1.81 to 2.60 stands for poor service quality, 2.61 to 3.40 refers to moderate service quality, 3.41 to 4.20 represent high service quality, and 4.21 to 5.00 stands for very high service quality that served to measure the E – payment characteristics and for the challenges as well as for prospects. Since the objective of the study was assessing challenges and prospects of E – payment system services considering customer satisfaction. These mean ranges are further interpreted as follows: mean ranges from 1.00 to 1.80 very low satisfactions; from 1.81 to 2.60 as low satisfaction; from 2.61 to 3.40 as moderate satisfaction; from 3.41 to 4.20 as high satisfaction; and from 4.21 to 5.00 as very high satisfaction. The mean interpretation for the independent and dependent variables are summarized in Table 4.5 below.

Table 4.3: Mean Score Interpretation

No	Variable	Mean Range	Interpretation	Source
1.	Independent [E – payment service Dimensions]	1.00 – 1.80	Very low quality	Al-Sayaad et al. (2006)
		1.81 – 2.60	Low quality	
		2.61 – 3.40	Moderate quality	
		3.41 – 4.20	High quality	
		4.21 – 5.00	Very high quality	
2.	Dependent [Customer Satisfaction]	1.00 – 1.80	Very low satisfaction	
		1.81 – 2.60	Low satisfaction	
		2.61 – 3.40	Moderate satisfaction	
		3.41 – 4.20	High satisfaction	
		4.21 – 5.00	Very high satisfaction	

Source: Author construct from review literature, 2021

4.2.1 E – payment System Characteristics

4.2.1.1 Security

Table 4.4: Respondents view on security characteristics of E – payment service

No	Items on security	Mean	St.d.
1.	E-payment system is the most secured payments.	3.54	.865
2.	E-payment system is secured from hacker(s) that can threats bank website.	3.63	.666
3.	E-payment provides great security for payment and other transactions.	3.59	.744
4.	The privacy and integrity of personal information can be compromised.	3.60	.743
n = 354	**Grand Mean**	3.59	.445

Source: Author construct from SPSS output, 2021

The results of the analysis depicted in Table 4.4 above shows that the level of agreements of the respondents towards E-payment service on security characteristics. In item 1 the respondents were asked to give their response on 'E-payment system is the most secured payments.' so, according to the analysis of the survey data the mean score value is 3.54 with standard deviation of .865 indicating that majority of the participants were agreed that the E – payment service delivered with high quality by the CBE is the most secured payment service in Ethiopia. Regarding the 2nd item majority of the respondents were agreed that the E – payment system is highly secured from hackers that can threats bank website, because the mean score of their responses is 3.63 with standard deviation of .666. In the case of the 3rd item similar to the above item the mean value is 3.59 with standard deviation of .744 indicating that most of the respondents were agreed that the CBE E – payment service provides great security for payment and other transactions. Finally, the mean score of the 4th item is 3.60 with standard deviation of .743 indicating that majority of the

participants from the selected branches in Hossana district agreed on the privacy and integrity of personal information that could be compromised.

In general, the grand mean of the overall respondents is 3.59 with standard deviation of .445 which implies that most of the respondents in the selected branches of CBE Hossana district agreed on the security service provided by E – payment service. The finding of this study is nearly similar to the finding of the study by Nitin and Aditi (2017) who conducted their study on the effect of electronic payment on customer satisfaction and the result of their study shown that 70% respondent says that online payment service secured but 30% respondent says that service is not secured. It concluded that online payment service was more secure in comparison of cash payment. Reason behind it that online payment service save the time and provide cash back facility in some cases.

4.2.1.2 Speed

Table 4.5: Respondents view on speed of the E – payment service

No	Items on speed/responsiveness	Mean	St.d.
1.	E-payment facilitates any payment timely.	3.00	.879
2.	E – Payment system facilitates receiving of money from different sources within a very short time.	3.48	.776
3.	The speedy alert that payment has been paid is fantastic.	3.26	.918
4.	Overall, customers are cherished receiving alert for early payment.	3.27	.921
n = 354	**Grand Mean**	3.25	.568

Source: Author construct from SPSS output, 2021

Table 4.5 above shows the results of the level of agreements of the respondents towards E-payment service delivery on responsiveness characteristics. The responses of the respondents on item 1 mean value is 3.00 with standard deviation of .879 indicates moderate service provision or quality by the E – payment facilities in accomplishing payment timely. As to item 2, the mean score of the respondents' responses on the stated item is 3.48 with standard deviation of .776 implying that the service quality was moderate. Therefore, the E – payment system in facilitating the process of receiving from different sources was not done in a very short period of time to some extent there was dalliance. Concerning the 3rd item, the mean score is 3.26 with standard deviation of .918 indicates the provision of the indicated that the service quality was moderate. Therefore, it can be said that in most of the selected banks the responsiveness of the payment service speed was not as such fast. Regarding the 4th item the mean value of the respondents' responses was 3.27 with standard deviation of .921 indicating that the service quality was moderate. Therefore, majority of

the respondents confirmed that most of the customers of E – payment product users were cherished moderately in receiving alert for early payment.

In general, the grand mean of the whole items response is 3.25 with standard deviation of .568 indicating that the responsiveness or speed of the E – payment service characteristics is at its moderate stage.

4.2.1.3 On Ease of Use

Table 4.6: Respondents view on the ease of use of the E – payment service

No	Items on ease of use	Mean	St.d.
1.	E-payment makes payment easier than before.	3.27	.931
2.	E-payment system has reduced errors in the payment of transaction and other payments to a barest minimum.	3.03	.949
3.	E-payment is rigid and inflexible.	3.36	.814
4.	Overall, E-payment system is an easy means of a payment.	3.33	.855
n = 354	**Grand Mean**	3.25	.578

Source: Author construct from SPSS output, 2021

The Table 4.6 above, results shows the level of agreements of the respondents towards E - Payment service on ease of use characteristics. The characteristics dimension's result in item 1 the mean value of the respondents is 3.27 with standard deviation of .931 implying that the service quality was moderate. Regards to reduction of error, majority of the respondents agreed moderately with mean score of 3.03 and standard deviation .949 implying that in most of the selected branches the payment of transaction and other payments were at moderate quality service. As to rigidity, most of the respondents were agreed with mean value of 3.36 and standard deviation of .814 indicating that to some extent the E – payment service implementation was under gone its activities in a moderate service quality stage. Finally, concerning the means of payment, majority of the respondents agreed moderately that the overall E – payment service was the easy way for making their transaction due to its moderate service quality. Therefore, the overall items average level of agreements of the respondents on ease of use characteristics dimension was 3.25 with standard deviation .578; it is within the range of 2.61 to 3.40. This implies that most of the respondents in the selected branches of Hossana district were agreed that the E – payment service delivery in terms of ease of use was moderate.

4.2.1.4 Accountability

Table 4.7: Respondents view on accountability of the E – payment service

No	Items on accountability	Mean	St.d.
1.	The bank introduces E – payment service related information and its operations through public or private networks.	3.52	.757
2.	The bank keeps information privacy of E – payment system for customers.	3.60	.780
3.	The bank is committed to answering questions and requests on E – payment system for customers.	3.20	.859
n = 354	**Grand Mean**	3.44	.447

Source: Author construct from SPSS output, 2021

The Table 4.7 above, results shows the level of agreements of the respondents towards E - payment service on accountability characteristics. The E – payment service quality characteristics result is ranged from the lowest mean 3.20 (The bank is committed to answering questions and requests on E – payment system for customers.) to the highest mean 3.60 (The bank keeps information privacy of E – payment system for customers.)Therefore, the average level of agreements of the respondents on accountability with mean score was 3.44 with standard deviation of .447; it is within the range of 3.41 to 4.20. This implies that most of the respondents in the selected branches in Hossana district were agreed on the accountability of the E – payment service delivery. Therefore, the quality of the E – payment service delivery was at its high level.

4.2.1.5 On Credibility

Table 4.8: Respondents view on credibility of the E – payment service

No	Items on credibility	Mean	St.d.
1.	I have trust on the E – payment service providers.	3.34	.745
2.	I prefer using E-payment service instead of visiting branch for making my transaction.	3.42	.753
3.	The E- Payment system provides its service as promised/ordered without mistake.	3.35	.786
n = 354	**Grand Mean**	3.37	.399

Source: Author construct from SPSS output, 2021

Table 4.8 above, results shows the level of agreements of the respondents towards E -payment service on credibility characteristics of the quality. The characteristics of credibility dimension's with respect to trust is the lowest mean 3.34 with standard deviation of .745 indicating moderate level of trust on the E – payment service delivery. As to the preference of the E – payment rather than visiting branch, most of the respondents agreed highly with mean score of 3.42 with standard

deviation of .753 indicating the service quality was high. Regarding the promise of the E – payment service delivery, most of the respondents were agreed moderately with mean score of 3.35 and standard deviation of .786 implying that the E- payment system provision was implemented highly. In general, the grand mean of the whole items is 3.37 with standard deviation .399 indicating that in most of the selected branches of Hossana district customers were convinced that the E – payment service delivery is credible to them at moderate level.

In general, among the five E – payment service characteristics results, speed and ease of use characteristics mean score were the lowest, whereas the security characteristics average level of quality of the service delivery was the highest. This implies that most of the respondents in the selected CBE branches in Hossana district rely on the security of the E - payment service delivery relative to the other characteristics.

4.2.2 Customer Satisfaction with E – payment System Services

Table 4.9: Responses of customer satisfaction on E – payment service

No	Items	Mean	St.d.
1.	The introduction of E – payment system in CBE has positive effect on service delivery.	3.41	.915
2.	The current E - payment system is stimulating me.	3.65	.753
3.	My expectations before the use of E – payment have been met currently.	3.44	.823
4.	I am satisfied with the service that is provided on time as promised.	3.63	.747
5.	I am satisfied with sufficient material that is kept to avoid the interruption of service provision.	3.70	.743
6.	The costs charged on E – payment system of the bank is not beyond my expectation.	3.75	.689
n = 354	**Grand Mean**	3.60	.504

Source: Author construct from SPSS output, 2021

Table 4.9 shows the level of customer satisfaction to the overall introduction of electronic payment system of the bank. Majority of the respondents mean score is 3.41 with standard deviation of .915 indicating moderate level satisfaction towards the positive effect of the introduction of the E – payment system. Most of the respondents were stimulated by E – payment system and confirmed by their responses mean score 3.65 with standard deviation of .753. Regards to the expectation, most of the respondents agreed with mean score of 3.44 and standard deviation .823 which is less than one implies to some extent the expectation of the customers was met. Based on the above result depicted in Table 4.11 most of the respondents were satisfied with the service that was provided on time as promised moderately which is confirmed by their responses mean

score of 3.63 and standard deviation of .747. On the other hand, the mean and the standard deviation 3.70 and .743 respectively indicated that most of the respondents were satisfied with sufficient material that is kept to avoid the interruption of service provision moderately. Finally, concerning the costs charged on E – payment system of the bank, most of respondents were agreed that the cost was not beyond their expectation implying that the cost charged for the E – payment service delivery was fair. In general, since the mean score of the six items on the level of satisfaction of the customers is 3.75 with standard deviation of .689, most of the customers in the selected branches of CBE Hossana district are satisfied moderately by the E – payment system service provided. In this regard, almost all business and operation managers pointed out that our customers were moderately satisfied with the E - payment services; sometimes they were very dissatisfied due to poor network infrastructure, power interruption, and high waiting time especially during holiday and Sunday. This result is concurred with the prior studies done by Mesfin (2019) that found out that the mean score of 3.60 with standard deviation .504, despite the difference, and also with other similar studies by Sherefedin (2018) who found out mean score of 3.42 with standard deviation of .761 and Sintayehu (2015) and his study revealed mean score of 3.3 with standard deviation of .693. Moreover, the finding of this study also supported by the finding of Asya (2013) who found out 60% of the customers were satisfied by the delivery service of E – payment. It is also supported by the finding of Nitin and Aditi (2017) who conducted their study on the effect of electronic payment on customer satisfaction and the result of their study shown that 40% respondent is the Average Satisfied, 38% respondents are fully satisfied and the 22% respondent says they are not satisfied. They concluded that most of the customers were satisfied with their bank online payment system and rest of the customers was satisfied averagely from their bank online payment service.

4.3. Diagnostic Test: Evaluation of Multiple Linear Regression Model

As aforementioned in the previous section, method of data analysis, multiple linear regression model assumptions; model fitness test; significance of the independent variables as a whole; significance impact of individual independent variable; predictor model and its interpretations are presented and discussed.

4.3.1. Evaluation of Model Assumptions

In order a multiple linear regression model shows the relationship between the dependent variable and multiple (two or more) independent variables and the validity of the inferences drawn from this

model analysis depends on its assumptions being satisfied. Therefore, the assumptions were checked before running the actual regression analysis using SPSS version 20 software. The diagnostic test for the whole regression model is attached in the Appendix part. In this section, the evaluation of the assumptions of multiple linear regression model and model fitness test analyses are presented and discussed using the outputs of the SPSS.

Assumption 1 - Sample Size Test

The issue at stake here is generalizability. That is, with small samples one may obtain a result that does not generalize (cannot be repeated) with other samples. If results do not generalize to other samples, then they are of little scientific value. Different authors tend to give different guidelines concerning the number of cases required for multiple regression. Tabachnick and Fidell (cited in Pallant, 2005) give a formula for calculating sample size requirements, taking into account the number of independent variables that one wish to use: $n > 50 + 8m$ (where m = number of independent variables). Thus, the present study consists of 5 independent variables; $50+8(5) = 90$ which is less than observed respondents (sample size). i.e. $50+ 8(5) = 90 < 354$. Based on the criteria, the sample size of the participants exceeds the minimum that led to run the multiple linear regression analysis. Hence, the sample size assumption met.

Assumption 2 - Normality Test

There are several methods of assessing whether data are normally distributed or not. They fall in to two categories: statistical and graphical. To check whether the residuals have a normal distribution, the normal probability plot or normal P-P of regression standard residual and histogram should be used. Scores on each variable should be normally distributed. This was checked by inspecting the histograms of scores on each variable. Therefore, the scattered plots of residuals against each E – payment service characteristics and customer satisfaction dimension were analyzed and the test results of this study as illustrated in Figure 4.2 below show that the residuals were normally distributed.

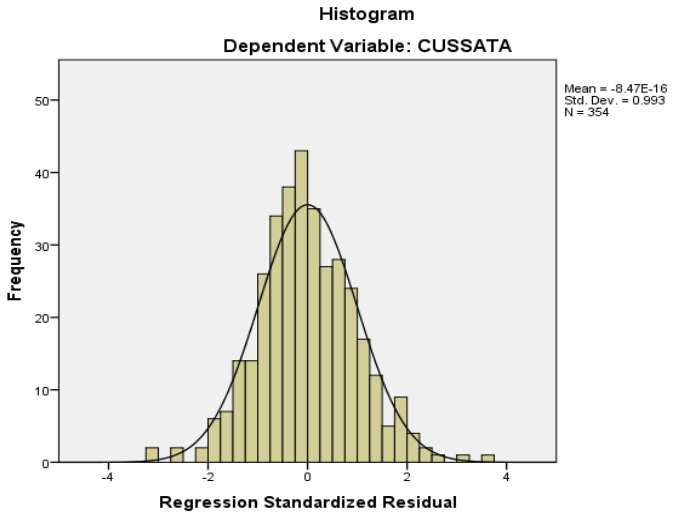


Figure 4.2: Regression Standard Residual Histogram

Assumption 3: Linearity Test

The relationship between the dependent and the independent variables should be linear. In other words, the value of Y is proportional to the independent variable X. Since the goodness of the model depends on how well it predicts Y, the linearity of the response(Y) and Predictors(X), p – p plot graph could be implemented. As indicated in (Torres – Reyna, 2007, p. 16), if the whole plots show 45^0 pattern, it indicates that the model seems to be doing a good job in predicting Y. As it can be seen in the graph given below, the plots go along the straight line, Figure 4.3, and the plots form 45^0 pattern. Therefore, the linearity assumption was met.

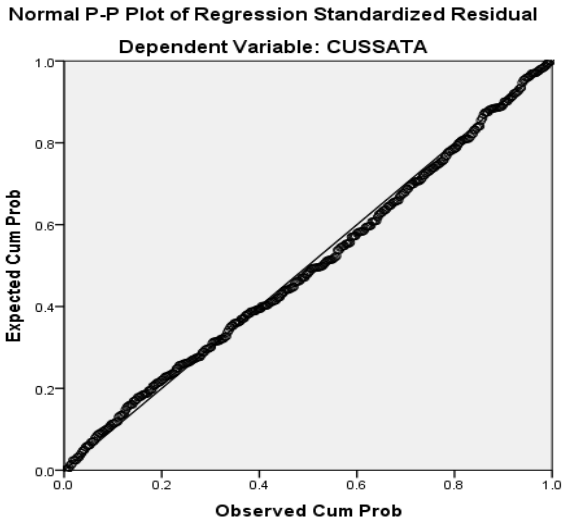


Figure 4.3: Linearity p – p plot graph for CUS - SAT, Customer Satisfaction

Assumption 4: Homoscedasticity Test (equal variance assumption)

For every value of the independent variable (X), the distribution of the dependent variables (Scores) must have approximately equal variability. To test this assumption regression standardized residuals and regression standardized predicted value plots were used, because, they detect model's lack of fitness and unequal variances. As indicated in (Abdel – Salam, 2008, p. 16/42; Torres – Reyna, 2007), any trends or patterns in the plots indicate lack of fitness and unequal variances which lead to a potential problem in the model. The scatter plot for the dependent variable – customer satisfaction is given below in Figure 4.4.

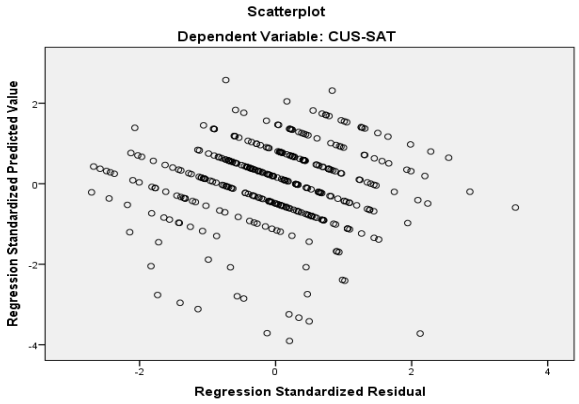


Figure 4.4: Scatter plot for homogeneity of variance for CUS-SAT

Assumption 5: Non - Multicollinearity Test

The independent variables should not be very strongly correlated. That is, the predictor variables should not have a strong relationship with each other. Multicollinearity occurs when several independent variables correlate at high levels with one another, or when one independent variable is nearly linear combinations of the other independent variables (Keith, 2006 cited in plots, 2011).

Table 4.10: **Non – Multicollinearity test of the Independent Variables**

Variable	Collinearity Statistics	
	Tolerance	VIF
SEC	.497	2.011
SP	.637	1.570
EU	.612	1.634
AC	.535	1.869
CR	.641	1.561

Source: Author construct from SPSS output, 2021

The five independent variables in the model should not be highly correlated. To test this assumption it was used the more precise approach, assessing the tolerance and its reciprocal values (VIF, variance inflation factor) in the output results of the regression analysis for model fitness. The tolerance value is the indication of the percent of variance in the predictor that can't be accounted for by the other predictors, very small value indicated that a predictor is redundant. If the tolerance value of each predictor is greater than 0.10, then it indicates the non – multicollinearity for each predictor if not it shows the existence of multicolinearity. As (Diem Ngo, 2012, p.9; Pallant, 2005, p. 150; Torres – Reyna, 2007, p.21) showed that, if the VIF value of each predictor is less than 10, then it indicates the non – multicolinearity of the predictors if not it suggested a problem. When such situation, tolerance less than 0.10 and VIF greater than 10, is happened the regression model estimates of coefficients became unstable and the standard errors for the coefficients could get inflated. In other words the model loses its statistical validity. As it can be seen in the above Table 4.12, there was no multicolinearity amongst the five independent variables the model for the customer satisfaction. Therefore, the non – multicolinearity assumption was met.

Thus, as the model assumptions test indicated in the above output results of the SPSS and discussion all assumptions were met and hence the multiple regression model for customer satisfaction with the five independent variables was ready to be tested for model fitness test.

4.3.2. Model fitness and Significance of each of five independent Variables as a Whole

Model fitness test is a statistical test to check whether the regression model is fit for the data or not. To test this, F – test analysis of variance [ANOVA] for the overall model fitness test with 5 % level of significance was used as (Abdulaziz et al., 2011) did. Therefore, the significance of the independent variables as a whole is summarized in Table 4.12 below.

Significance test of the coefficients as a whole

Model Hypothesis to be tested:

$\boldsymbol{H_o}$: $\boldsymbol{\beta_i = 0}$ Means all the five independent variables of customer satisfaction X_i& $Y$are not linearly related.

$\boldsymbol{H_1}$: $\boldsymbol{\beta_i \neq 0}$ [At least one of theβ_i's is different from zero for i = 1, 2, 3, 4, 5] – Means X_i& $Y$are linearly related with $\alpha = 0.05$, level of significance.

Decision Rule: If 1 – p > 0.95, then it shows at least one of the coefficients in the model is significant. Reject $\boldsymbol{H_o}$ and conclude that, the model fit the data (i.e. the model is useful for

prediction purposes, where p = the sig. value in the output. If 1 – p < 0.95, then this shows all the coefficients in the regression model are zero. In this case the null hypothesis should be accepted. Conclude the model does not fit.

Multiple linear regression model does a good job of describing the relationship between the dependent variable (customer satisfaction) and the independent variables (E – Payment service characteristics), if large proportion for sample coefficient of determination, R^2, be ensured. Such a test was accomplished by the means of analysis of variance (ANOVA) which enables us to test the null hypothesis of no linear relationship between X and Y.

Table 4.11: ANOVA output part I: CUS - SAT with the five independent Variables

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	53.831	5	10.766	104.542	.000[b]
	Residual	35.839	348	.103		
	Total	89.670	353			
a. Dependent Variable: CUSSATA						
b. Predictors: (Constant), CRA, SECA, ACA, SPA, EUA						

Source: SPSS output, 2021

As it can be seen from the above Table 4.11, the F calculated value = 104.542 of the model with its degree of freedom (5, 348) for customer satisfaction as a whole is .000 < 0.05 implies that with the confidence (1 - α) is very close to 100%, where $\alpha =$ sig. p - value. The above null hypothesis was rejected and hence, it could be said that at least one of the coefficients $\beta_i's$, in the model, are significant for the model. In other words, the variable Y (CUS - SAT) was better if it was a function of at least one of the five variables $X_i's$ rather than only with β_0.Therefore, X_i and Y were linearly related and that the model was fit the data. In other words, the five independent variables and CUS - SAT – the dependent variable were related. Hence, the regression model was fit and could predict the impact of each of the five independent variables on the customer satisfaction. Concerning the remaining SPSS outputs, significance impact of individual independent variable; predictor model, its interpretations and contribution of each independent variable in R^2 are presented and discussed in the next sub - topic.

4.4. Results and Discussions on Regression Analysis

Among the objectives of this study was investigating the impact of each of the E – payment service characteristics on customer satisfaction. Therefore, the regression analyses results are presented, interpreted and discussed accordingly.

4.4.1. Regression Model Analysis Results on Customer Satisfaction

4.4.1.1. Model Summary: capacity of the whole independent variables in explaining CUS - SAT

Table 4.12: Model Summary: Explaining Capacity of E – Payment Service Dimensions on CUS – SAT

Model Summary[b]							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.775[a]	.600	.595	.32091	.600	104.542	.000
a. Predictors: (Constant), CRA, SECA, ACA, SPA, EUA							
b. Dependent Variable: CUSSATA							

Source: SPSS output, 2021

In the above Table 4.12, the R – value for the model indicates the multiple correlations which are the equivalent of Pearson's r rather than representing the magnitude and direction of the relationship between two variables. It shows the strength of the relationship between the outcome variable (dependent) and the independent variables as a whole predicted by the model. It tells us how well the model predicts the outcomes (sometimes researchers say how well the model fits the data). Therefore, the numerical value R = .876 indicates the existence of strong positive relationship between the dependent variable – CUS - SAT and the predictor variables.

The R square value, .768 indicates that the percentage of the variation of the dependent variable was directly attributable to the independent variables. Therefore, as (Pallant, 2005) indicated that, the explaining capacity of the CUS-SAT model with the indicated independent variables was 76.8%, whereas, the remaining 23.2% of the variation was explaining by other independent variables which were not included in this study.

The Adjusted R square, the most useful measurement of the success of a model, which is better than the R square value. Because R square value tends to somewhat over – estimate the success of the model when applied to the real world, and also the Adjusted R square value takes in to account the number of variables in the model and the number of observations, participants – E – payment service product customers of CBE in Hossana District, upon which the model was based on (Diem and Puente, 2012). Therefore, the adjusted R square value for CUS-SAT model was .765. So, it can be said that CUS-SAT model had accounted for 76.5% of the variance in explaining the customer satisfaction.

4.4.1.2. Significance of individual independent variable and its impact on CUS-SAT

In order to identify which regression coefficient (or independent variable) has significant impact for the model (for the dependent variable), the output of the coefficients table of the SPSS was used. The test of significance was conducted by the t – p – value.

Table 4.13: Impacts of each E – Payment Service dimensions on CUS-SAT

Coefficients[a]							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			Zero-order
1	(Constant)	-.919	.219		-4.206	.059	
	SECA	.212	.040	.192	5.340	.004	.366
	SPA	.192	.032	.217	5.978	.000	.412
	EUA	.268	.034	.307	7.809	.000	.588
	ACA	.287	.037	.273	7.820	.002	.399
	CRA	.370	.042	.314	8.752	.000	.481
a. Dependent Variable: CUSSATA							

Source: SPSS output, 2021

Predictor Model and its Interpretation

According to the result obtained from the SPSS, in Table 4.13 above, under the Sig. column, the p – values of all the independent variables are less than .05, level of significance. Meaning, the five independent variables – SEC, SP, EU, AC, and CR had significant impact on the customer satisfaction.

In general, the information contained and discussed in above sections 4.4.1.1 and 4.4.1.2 characterized the goodness and the usefulness of the model to predict the impacts on customer

satisfaction based on the five E – Payment service characteristics. Therefore, the regression model becomes the predictor model (forecast model) with equation:

Predictor model:

$$\widehat{\boldsymbol{Y}}(\boldsymbol{CUS-SAT})=-.\mathbf{919}+.\mathbf{212}\boldsymbol{SEC}+.\mathbf{192}\boldsymbol{SP}+.\mathbf{268}\boldsymbol{EU}+.\mathbf{287}\boldsymbol{AC}+.\mathbf{370}\boldsymbol{CR}$$

Forecasting the impact is making predictions about the dependent variable based on the relationships observed in the estimated regression. Therefore, the above predictor model is interpreted in terms of unstandardized coefficients and presented below.

Predictor Model Interpretation

In the predictor model,$\beta_i's$, the unstandardized beta coefficients tell us about the direction of the impact relationships between the outcomes, CUS-SAT and the five independent variables. i.e., Unstandardized B coefficients show absolute change of the dependent variable CUS-SAT if the independent variable size changes by one unit. Since all the B coefficients, are positive, so are their relationships with the dependent variable. That is, as the mean score of each independent variable increases, the mean score of the CUS-SAT also increases. Implying the customers becomes more satisfied. In addition, these β values give us also an idea of influence each independent variables has on CUS-SAT if the impact of the other independent variables are held constant. For example, β(SEC) = .212 in Table 4.15: as the mean score of the level of SEC increases by one unit, holding the other independent variables constant, the mean score of CUS-SAT increases by .212 units. Implying that, as the E – Payment service characteristics – security in the selected Hossana District branches is deserved, the E – Payment service product users (customers) becomes more satisfied. The same argument works for the other variables.

Significance Impact of each independent variable for CUS-SAT model

Hypothesis Test Results of the impact of each E – Payment service characteristics

One of the objectives of this study was to examine the extent of the E - Payment services offered by the CBE impact on the satisfaction of customers in the case of Hossana District Branches. That is, to test the hypotheses [1 – 5]: Each of the E – Payment service characteristics has no significant and positive impact on the five E – payment service products customer satisfaction. The SPSS output coefficient table, Table 4.15 was used. Therefore, the hypotheses results in relation to the prior research findings are discussed as follows:

1. **Impact of security on Customer Satisfaction**

Hypothesis 1: Security of E – Payment service has no significant impact on customer satisfaction.

As indicated in Table 4.15, the result of the analysis indicated that security (β = .212, p=.004 < .05) is statistically significant. This implies the stated hypothesis 1 should be rejected. Therefore, it can be inferred that security has significant and positive impact on the customer satisfaction in the selected branches of CBE Hossana District. This finding is supported by Mekides (2019); Mesfin (2019) who found that that security has a positive and significant effect on customer satisfaction. It is also supported by other authors (Mohammed et al., 2018; Hammoud et al., 2018; Sadaf, 2017). On the contrary, Amelework (2016) reported that reliability has a positive and insignificant effect on customer satisfaction towards E-banking services.

2. **Impact of speed on Customer Satisfaction**

Hypothesis 2: Speed of E – Payment service has no significant impact on customer satisfaction.

As indicated in Table 4.15, the result of the analysis indicated that responsiveness (β = .192, p=.000 < .05) is statistically significant. This implies the stated hypothesis 2 should be rejected. Therefore, it can be inferred that speed of the E – payment service has significant and positive impact on the customer satisfaction in the selected branches of CBE Hossana District. The finding of this study is in line with the findings of Mesfin (2019) and Hammoud et al.(2018) who reported that responsiveness has high positive and significant impact on customer satisfaction. It is also supported by other authors Areeba et al.(2016); Surafel (2016) and Gezahegn (2015) who found out that responsiveness has positive and significant effect. On the contrary, Tizazu (2012) reported that responsiveness has a negative and insignificant effect on customer satisfaction towards E- payment services. On the other hand, Mohammed et al.(2018) found out that responsiveness has positive and no significant impact on customer satisfaction.

3. **Impact of ease of use on Customer Satisfaction**

Hypothesis 3: Ease of use of E – payment service has no significant impact on customer satisfaction.

As indicated in Table 4.15, the result of the regression analysis indicates that assurance (β = .268, p=.000 < .05) is statistically significant. This implies the stated hypothesis 3 should be rejected. Therefore, it can be inferred that ease of use has significant and positive impact on the customer

satisfaction in the selected branches of CBE Hossana District. The study is not supported by Simon (2016) who reported that ease of use has a negative and no significant impact on customer satisfaction towards E-banking services.

4. Impact of information and accountability on Customer Satisfaction

Hypothesis 4: Accountability of E – payment service has no significant impact on customer satisfaction.

As indicated in Table 4.15, the result of the regression analysis indicates that empathy (β = .287, p=.002 < .05) is statistically significant. This implies the stated hypothesis 4 should be rejected. Therefore, it can be inferred that accountability has significant and positive impact on the customer satisfaction in the selected branches of CBE Hossana District. The finding of this study is concurred with Mesfin (2019); Mohammed et al.(2018); Hammoud et al.(2018); who found out that accountability has positive and significant effect on customer satisfaction.

5. Impact of credibility on Customer Satisfaction

Hypothesis 5: credibility of E – payment service has no significant impact on customer satisfaction.

As indicated in Table 4.15, the result of the regression analysis indicates that tangibility (β = .370, p=.000 < .05) is statistically significant. This implies the stated hypothesis 5 should be rejected. Therefore, it can be inferred that credibility has significant and positive impact on the customer satisfaction in the selected branches of CBE Hossana District. This finding is supported by Mekides (2019); Mesfin (2019); and Mohammed et al.(2018) who found out that credibility has positive and significant effect on customer satisfaction. But, in contrast with the finding of Fikresilasie (2017) that revealed credibility dimension has positive and no significant effect on customer satisfaction.

Contribution of each independent variable for CUS-SAT model

Once the independent variables are statistically significant, the degree of significance and their contribution for the dependent variables varied from variable to variable. So, in order to identify and compare the extent of the impact of each of the five E – payment service characteristics on customer satisfaction, standardized coefficients, Beta values were used (Table 4.15), because, it gives measure of the contribution of each independent variable. Their relative absolute magnitudes reflect their relative importance in predicting CUS-SAT. A large value indicates that a unit change

in this predictor variable has a large impact on the dependent variable. The percent of the impact of each of the five independent variables, SEC, SP, EU, AC, and CR was obtained by the equation that links R^2 = 0.768 as indicated in (Beaumont, 2010) analysis:

$$\boldsymbol{R^2_{0(SEC)(SP)(EU)(INAC)(CR)}} = \boldsymbol{Beta_{SEC}r_{0SEC} + Beta_{SP}r_{0SP} + Beta_{EU}r_{0EU} + Beta_{AC}r_{0AC} + Beta_{CR}r_{0CR}}$$

Where, $Beta's$ are the coefficients (standardized) of the independent variables, r_s are the zero order correlations which had been taken from the output of the coefficients' Table 4.15, Zero order is the Pearson correlation between each predictor and dependent variable (Brooks, 2008, p.6).The value of R^2 could be expressed as the sum of the product of each of the independent variables standardized Beta values by zero order correlation coefficient values respectively as:

.600× 100% = (.192×.366 + .217× .412 + .307× .588 + .273× .399 +.314 ×.481) 100%

60.0% ≈ 7.0% + 8.9% + 18.1% + 10.9 % + 15.1%

Therefore, the contribution or the impact of EU (ease of use) increased the customer satisfaction by 18.1% which was the highest impact, whereas CR, AC, SP, and SEC in that order uplifted the CUS-SAT by 15.1%, 10.9%, 8.9%, and 7.0% respectively. From these percentages, it can be inferred specifically that customers are highly satisfied by the ease of use of the E – payment service dimensions relative to the other dimensions and hence it is inevitable for the betterment of their transaction. The finding of this study is similar to the finding of Fenuga and Rasaq (2010) who was testing whether there was significant relationship between the level of automation banking services and improvement in delivery of services to their numerous customers in Nigeria. The study concluded that electronic payment has significant impact on the services render by the banking industry in Nigeria thereby improves customer service delivery, better management efficiency, increased profit, customer satisfaction and sustainability in Nigeria.

4.5 Correlation Analysis

Next to regression result, it is important to check the correlation between different variables on which the analysis is built. Pearson's Correlation matrix was used for the data to see the relationship between variables such as those between E – payment service quality dimensions (security, speed, ease of use, accountability and credibility) and customer satisfaction. That is the hypothesis test results described in Table 4.16 that shows Pearson's Correlation Coefficient Matrix

Hypothesis 6: Statistically there is no significant correlation between E – payment service quality dimensions and customers satisfaction in the CBE Hossana District.

Table 4.14: Pearson Correlation Matrix

Correlations							
		CUSSATA	SECA	SPA	EUA	ACA	CRA
CUSSATA	Pearson Correlation	1	.366**	.412**	.588**	.399**	.481**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
SECA	Pearson Correlation	.366**	1	.074	.307**	.178**	.048
	Sig. (2-tailed)	.000		.165	.000	.001	.368
SPA	Pearson Correlation	.412**	.074	1	.330**	.033	.224**
	Sig. (2-tailed)	.000	.165		.000	.531	.000
EUA	Pearson Correlation	.588**	.307**	.330**	1	.207**	.298**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
ACA	Pearson Correlation	.399**	.178**	.033	.207**	1	.065
	Sig. (2-tailed)	.000	.001	.531	.000		.222
CRA	Pearson Correlation	.481**	.048	.224**	.298**	.065	1
	Sig. (2-tailed)	.000	.368	.000	.000	.222	
	N	354	354	354	354	354	354
**. Correlation is significant at the 0.01 level (2-tailed).							

Source: SPSS output, 2021

Pearson correlations were conducted to determine the association between the five variables: SEC (security), SP (speed), EU (ease of use), AC (accountability), and CR (credibility) and customer satisfaction. As depicted in Table 4.16, all correlations are significant and positive at the $p < .05$ level. The correlation between security, speed, accountability, and credibility with customer satisfaction were moderate in size (r = .366**), (r = .412**), (r = .399**), and (r = .481**) respectively, while the correlation between ease of use of the E – payment service with customer satisfaction was strong with size (r = .588**).

Therefore, from the above results it can be inferred that to some extent the five E – payment system service dimensions related moderately with customer satisfaction and could shows consistency while implemented as desired. Hence, from this result it can be inferred that it is imperative to uplift the E – payment service delivery so as to enhance the satisfaction of the customers.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

This chapter is the final section that presents summary of major findings, conclusions, and recommendations of the study. It reports summary of the main findings of the study based on the results and discussions section. Then conclusion and recommendations were made based on the findings.

5.1 Summary of Major Findings

This study was conducted with the prime intent of assessing effects of E-payment services on customer satisfaction in the case of commercial bank of Ethiopia, Hossana district. Accordingly the researcher gathered data through primary sources and conducted analysis to point out major findings.

The study was conducted on the E – payment service products users in CBE Hossana district 13 selected branches was considered as a target population for this particular study. The study employed explanatory and descriptive research design along with quantitative method. To achieve the above objectives, questionnaire and document review were used. Descriptive statistics such as frequency, percentage, mean standard deviation and inferential statistics – regression analysis were employed to analyze the collected data using SPSS version 20 software. Based on the analyses, the study came up with the following major findings:

According to the result of the analysis, 100% of the respondents used ATM, 183 (84.7%) of the customers used mobile banking for E – payment service delivery, and 137 (63.4%) of the customers used internet banking. But among the five E – payment product users, POS users were minimum in number. Regarding the experience of using the five E – payment service products, majority of the customers 193(89.4%) used for at least 2 years.

From the regression analysis result the R square value, .600 indicates that the percentage of the variation of the dependent variable was directly attributable to the independent variables. Therefore, as (Pallant, 2005) indicated that, the explaining capacity of the customer satisfaction model with the

indicated independent variables was 60.0%, whereas, the remaining 40.0% of the variation was explaining by other independent variables which were not included in this study. On the other hand, the contribution or the impact of ease of use of the E – payment service increased the customer satisfaction by 18.1% which was the highest impact, whereas CR, AC, SP, and SEC in that order uplifted the CUS-SAT by 15.1%, 10.9%, 8.9%, and 7.0% respectively. From these percentages, it can be inferred specifically that customers are highly satisfied by the ease of use of the E – payment service characteristics relative to the other characteristics and hence it is inevitable for the betterment of their transaction.

As to the correlation analysis result, the correlation between security, speed, accountability, and credibility with customer satisfaction were moderate in size (r = .366**), (r = .412**), (r = .399**), and (r = .481**) respectively, while the correlation between ease of use of the E – payment service with customer satisfaction was strong with size (r = .588**). Therefore, from this result it can be inferred that to some extent the five E – payment system service dimensions related moderately with customer satisfaction and could shows consistency while implemented as desired. Hence, from this result it can be inferred that it is imperative to uplift the E – payment service delivery so as to enhance the satisfaction of the customers.

5.2 Conclusions

Even though the CBE has been taking different initiatives and actions to improve the challenges that hindered the E – payment service delivery while customers are using different E – payment system products in particular, ATM, MB, POS, IB and CBE birr, some unconvertible situation in the service and challenges are still prevailing in most of the branches, especially in branches of Hossana district, despite the promising prospects as the result of the ongoing service. In this regard, as evidenced from the result of the study customers of the five products users were not fully satisfied by the E – payment service delivery in most of the selected branches of the CBE Hossana district. Moreover, the result also confirmed the existence of some challenges that affected the delivery service. Therefore, from the findings of the study it can be safely conclude the following.

Most of the E - payment users were male, and lie between the age group of 20 - 39. This implies that youngsters are more closed to technology than others age groups. Therefore, from this result it can be concluded that the bank should have to go into different age groups in order to duplicate its

service. On the other hand, great significant of the number of the participant employees who served customers of the E – payment products have first degree and second degree. Therefore, from this result it can be inferred that majority of the selected branches are filled by qualified employees and served in the E – payment service for 2 – 4 years.

As to the satisfaction of the E – payment system products such as ATM, MB, POS, IB and CBE birr users were moderately satisfied by the system service in most of the selected branches. Therefore, even though, customers' utilization and satisfaction on E – payment services is one factor to increase the performance of the organization, from this result it can be concluded that CBE does not work properly on this area.

The utilization of E-payment system for instance in terms of security, ease of use, speed, accountability and credibility, to some extent, is enhancing the usage of the E – payment products by satisfying the need of customer at any time anywhere and by minimizing the lining up of the customers in the branch moderately. Therefore, from this result it can be concluded that the E – payment system characteristics are not in a position to serve customers as required and expected.

Since, except the ease of use of the E – payment system dimensions have moderate relationship with customer satisfaction, to some extent the five E – payment system service dimensions related moderately with customer satisfaction and could shows consistency while implemented as desired. Hence, from this result it can be inferred that it is imperative to uplift the E – payment service delivery so as to enhance the satisfaction of the customers.

5.3 Recommendations

In order to promote and develop viable E-payment service in CBE the following recommendations are forwarded:

- The bank should work strongly in collaboration with Ethio telecom to develop alternative network lines rather solely relaying on telecommunication networks which have frequent link failure.
- It is indispensable for the improvement of society's social and economic life to raise public awareness of the benefits of new technologies such as computer enabled networks, due attention as an important part of their task. Managers of financial institutions such as banks

should be bold enough to invest on ICT equipment and manpower training in the field to ensure competitiveness in modern world.

- Enterprises should also acquire the POS (point of sale) device to make it possible for customers to pay for goods and services using their visa card.
- Banks and other financial institutions in their own way should embark on educational campaigns to increase the public awareness about the benefits of E - payment. This will help to create a cashless society, reduce risk of being lost or stolen, and mitigate long queues in transacting business among others.
- The bank should provide adequate training for its entire E - payment customer before delivering the service.

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Appendix A

Wolkite University

College of Business and Economics Department of Management

Questionnaire to be filled by E – Payment Product Users

Dear respondent,

The objective of this study is to gather actual information that will help to assess "challenges and prospects of E-payment services of CBE with special consideration on customers' satisfaction". This study is undertaken as a partial requirement for the completion of Masters of Business Administration. All data that will be gathered through this questionnaire will be used for research purpose and remains confidential. Your honest and thoughtful response is invaluable. Therefore, you are kindly requested to respond to the questions with greatest confidence and to the best of your knowledge.

Thank you in advance for your time and kind cooperation!!

Kind Regards, Tagesse Biru,

Mobile: 0920277243; E – mail:

General Direction:

- No need of writing your name
- Use the “” mark to give your response accordingly in the box[bracket]
- Use the blank space if you need to add idea/s that is not mentioned in the questionnaire

Section I: Demographic Characteristics of the Respondents

1. **Gender**: Male [____] Female [___]
2. **Age Category (in year)**: 20 to 29 [___] 40 to 49 [___]

   30 to 39 [____] 50 to 59 [___] Above 59 [___]

3. **Educational Background**:

   Primary School (grade 1 – 8) [____] Secondary School (grade 9 – 12) [____]

   Diploma [____] Bachelor Degree [____]

   Master Degree [____] other (specify)_____

4. **Occupation:**

   Government employee [ ] Own business [ ]

   Private organization Employee [ ] Student [ ] other _____

Section II: Questions on profile of Electronic Payment System

Please fill the following table by putting a “√" in the spaces provided to show the type of electronic payment system you are using in the E - Payment services

No	Item	Indicators	Reply
1.	Which type of electronic payment system do you use mostly?	Automated Teller Machine (ATM)	
		Point of Sale (PoS)	
		Mobile Banking (MB)	
		Internet Banking (IB)	
		CBE Birr	

2.	For how long do you use the E – payment product you chose in question #1?	Below 2 years	
		2 – 4 years	
		5 and above years	

Section III: Items on Customer Satisfaction in using E – Payment System Products

Instruction: Below are lists of statements pertaining to customers' feelings. Please tick (√) the appropriate scale that indicates your agreement in the table below. The values of the scales are 5 = Strongly Agree (SA), 4= Agree (A), 3= Undecided (U), 2= Disagree (D), 1= Strongly Disagree (SD)

No	Variables / Items	Values of Scales				
		5	4	3	2	1
1.	**Automated Teller Machine (ATM)**					
A1	I am satisfied with ATM service deliveries as exactly promised.					
A2	I am satisfied with 24/7 services offered by ATM.					
A3	I am satisfied with the ATM machine which is available at any CBE.					
A4	I am satisfied in using ATM service because it is simple to understand.					
A5	I am satisfied in using ATM because it is not time consuming.					
A6	I am satisfied with the restriction on large volume of transaction by ATM.					
A7	I am satisfied by ATM language since it is easy to understand.					
2.	**Mobile Banking (MB)**					
B1.	I am satisfied with the financial transaction through mobile banking because it is as confidential as any other bank transaction.					
B2.	I am satisfied in using mobile banking since it allows me to perform all transactions that I could do physically.					
B3.	I prefer and satisfied in completing transactions through mobile banking because it is fast and easy.					
B4.	I prefer and satisfied by Mobile banking because it is the cheapest way of making transaction.					
B5.	I am satisfied with the mobile banking service since it is easily accessible for me.					
3.	**Internet Banking (IB)**					
C1.	I am satisfied with Internet banking service because it is easy to use.					
C2.	I am satisfied with Internet banking service since it serves securely for 365 days a year.					
C3.	I am satisfied in making transactions through internet banking service since it is safe.					
C4.	I am satisfied with internet banking service since it allows me to transfer money between accounts domestically and internationally.					
4.	**Point of Sale (POS)**					

D1.	I am satisfied with POS service because it is available when a need it.					
D2.	I am satisfied with POS service since it provides the service exactly as promised.					
D3.	I am satisfied with POS service since it is the most fastest transaction than the other payment system					
D4.	I am satisfied with POS service since it can be determined as one with good quality.					
5 .	**Commercial Bank of Ethiopia Birr (CBE birr)**					
E1.	I am satisfied with the availability of CBE birr service when I need it.					
E2.	I am satisfied with the CBE birr service since it is the cheapest way of making transaction.					
E3.	I am satisfied in using CBE birr service because it is not time consuming.					
E4.	I am satisfied with the restriction on large volume of transaction through CEB birr.					

Section IV: Items on E – payment System Characteristics/Factors and Customer Satisfaction with E – payment System

Instruction: Below are lists of statements pertaining to E – payment characteristics/dimensions and customer satisfaction with E – payment system. Please tick (√) the appropriate scale that indicates your agreement in the table given below. The values of thescales are 5 = Strongly Agree (SA),

4= Agree (A), 3= Undecided (U), 2= Disagree (D), 1= Strongly Disagree (SD)

No	**Variables / Items**	**Values of Scales**				
		5	**4**	**3**	**2**	**1**
I .	**Security**					
1 .	E-payment system is the most secured payments.					
2 .	E-payment system is secured from hacker(s) that can threats bank website.					
3 .	E-payment provides great security for payment/other transaction.					
4 .	The privacy and integrity of personal information can be compromised.					
II.	**Speed / Responsiveness**					
1 .	E-payment facilitates any payment timely.					
2 .	E – Payment system facilitates receiving of money from different sources within a very short time.					
3 .	The speedy alert that payment has been paid is fantastic.					
4 .	Overall, customers are cherished receiving alert for early payment.					
III.	**Ease of Use**					
1 .	E-payment makes payment easier than before.					
2 .	E-payment system has reduced errors in the payment of transaction and other payments to a barest minimum.					

3.	E-payment is rigid and inflexible.					
4.	Overall, E-payment system is an easy means of a payment.					
IV.	**Information and Accountability**					
1.	The bank introduces E – payment service related information and its operations through public or private networks.					
2.	The bank keeps information privacy of E – payment system for customers.					
3.	The bank is committed to answering questions and requests on E – payment system for customers.					
V.	**Credibility**					
1.	I have trust on the E – payment service providers.					
2.	I prefer using E-payment service instead of visiting branch for making my transaction.					
3.	The E- Payment system provides its service as promised/ordered without mistake.					
VII	**Customer Satisfaction with E – Payment System**					
1.	The introduction of E – payment system in CBE has positive effect on service delivery.					
2.	The current E - payment system is stimulating me.					
3.	My expectations before the use of E – banking has been met currently.					
4.	I am satisfied with the service that is provided on time as promised.					
5.	I am satisfied with sufficient material that is kept to avoid the interruption of service provision.					
6.	The costs charged on E – payment system of the bank is not beyond my expectation.					
7.	Overall, I am satisfied on E – payment system service of the bank.					

Thank you!!!