



**ST. Mary's University**  
**School of Graduate Studies**

**Challenges and Prospects of E- Payment Services: in  
Commercial Bank of Ethiopia, Addis Ababa Area**

**BY**  
**SABA MEAZA**

**December, 2016**  
**ADDIS ABABA, ETHIOPIA**

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**ID NO. SGS/0357/2007B**

**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF  
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**December, 2016**

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## Declaration

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

Researcher's name Saba Meaza Zelele

Signature \_\_\_\_\_

Date of submission December, 2016

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## **Abstract**

*This study conducted with a main objectives to asses challenge's and prospects of E-payment of CBE and factors those strongly influence customer's decision to become and stay user. The mixed research technique is undertaken via questionnaires and interview to the selected respondents; Questionnaire was prepared to users of e-payment service and semi structured interview were prepared to the management staff of the bank. Descriptive method is employed using tables and percentages are used to illustrate the findings. The findings of the study show that the bank has faced some challenges relating with e-payment service. Lack of awareness, less responsiveness system, dependency on government network provider, heavy investment costs, poor telecommunication network infrastructure and electric power interruption challenges are the serious ones. All these factors affected the development of the service as expected. In this study, the management is advised to review its staff's knowledge on the basic features of service and monitoring strategy should also be designed on how the service support to deliver. CBE has to keep working to retain the good attitude of customer towards the e-payment services by keeping up meeting and exceeding customer's expectation. Further awareness and confidence of customers on the service should be raised by involving educational institutions in the awareness creating activities. The banks management commitment on the introduction of the service should also be stretched to the extent of convincing top government officials to declare and enforce usage of the service as a national agenda.*

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## **Acronyms**

- ATM** - Automated Teller Machine
- CBE** - Commercial Bank of Ethiopia
- CHRD**- Corporate Human Resource Development
- E-payment**- Electronic Payment
- GPRS**- General Packet Radio Services
- GPS** - Global Positioning System
- GSM**- Global System for Mobile
- ICT** - Information and Communication Technology
- PIN** - Personal Identification Number
- POS** - Point Of Sale
- SPSS**- Statistical Package for Social Scientists
- USSD** – Unstructured Supplementary Service Data
- WWW**- World Wide web

# Chapter One

## 1. Introduction

### 1.1. Background of the study

Commercial Bank of Ethiopia (CBE) was established in August 1942 as a state bank of Ethiopia by proclamation with the aim of providing commercial bank services to the public. By the year 2025, Ethiopia's giant financial institution Commercial Bank of Ethiopia (CBE) set a vision to become world class bank through achieving business growth and service excellence. The bank stated in its mission that, the bank deploys highly motivated, skilled and disciplined employees capable of providing banking products and services that meet international best practices and standards. In recent years the bank has identified several strategy areas those have to be enhanced to achieve its vision. Of those crucial elements, the two major areas that are believed to be worked on to achieve service excellence are human resource development and technology (Commercial Bank of Ethiopia, 2016).

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, Supaporn and Adisorn, 2012).

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Currently information and communication technology (ICT) is radically changing the way business is done. E-payment service is now thought to hold the promise of a new commercial revolution by offering an inexpensive and direct way to exchange information and sell or buy products or services. This revolution in the market place has set in motion a revolution in the banking sector for the provision of payment service systems that are compatible with the demands of the electronic market place (Balachadher, Santhan, & Norazlin, 2000).

The bank introduced e-banking with the intention to improve bank's efficiency and competitiveness, so that existing and potential customers can benefit from a greater degree of convenience in effecting transactions. To some extent this service is believed to increase the level of convenience offered by the bank. When combined with new services, it can also expand the bank's target customers beyond those in traditional markets (Commercial Bank of Ethiopia Annual report, 2014).

Therefore, the main purpose of this study is to investigate CBE's e-payment services challenges to give efficient service and awareness for customers.

## **1.2 Statement of the problem**

The fascinating growth of Information Communication Technology 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 conducted. In this regard the traditional payment instruments, like cash, check and letter of credit has now been replaced by modern day electronic payment systems. Garedachew also argue that, the existing traditional cash based payment system has severely ragged the stability and developmental capacity of the economy. The mode of payment results in inefficient use of financial resources, inequitable risk-sharing among agents, actual losses for participants, and loss of confidence in the financial system. Further the economy has also suffered from high printing cost of currency.

Traditional banking is characterized by physical decentralization, with branches scattered around populated areas to give customers easy geographical access (Ainin et al., 2005). E- Banking does away with the need for most visits to the bank. However, according to Locket & Littler (1997), physical banks assure customers that their banks has substantial resource and guarantee the security of their savings.

CBE research department argue that Commercial Bank of Ethiopia is among financial institution with strong financial base and variety of services. It is the first bank to introduce e-payment service in this country, though it takes the initiation to introduce the new payment system it is not used by customers as expected so far, as the researcher observed that in many branches of CBE customers are reluctant to use this service. It can be said that, e-payment service, which refers to

use of modern technology that allows customers to access banking service electronically whether it is to transfer fund, to pay bills, or to obtain commercial information and advices are not widely used by customers in CBE. This research therefore, tried to investigate the factors that are related with challenges and prospects of e-payment services in the case of Commercial Bank of Ethiopia..

### **1.2.1 Research questions**

Based on this background, this study raised the following questions that are answered by the outcome of the study;

- Is the customer's have awareness to use e-payment services?
- Is the customer's ability to use e-payment services?
- What perceptions have observed in the e-payment service from customer's perspective?

## **1.3 Objective of the Study**

### **1.3.1. General objective**

The main objective of the study is to asses challenge's and prospect of E-payment of CBE.

### **1.3.2. Specific Objectives**

The specific intends to meet the following specific objectives:

- To asses awareness of customer on E-payment service.
- To assess the ability of e-payment users.
- To assess the perception quality of e-payment users.

#### **1.4. 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 tried to provide information for the bank that could be used as an input for future management decisions regarding to e-payment services. The study is also expected to be a greater input for further studies in the area of e-payment services. As there is gap of studies and literatures related to e-payment services in Ethiopian context, this study is a base for future researchers as a reference.

#### **1.5. Scope of the study**

The study was focuses on Commercial Bank of Ethiopia in Addis Ababa area. This bank were selected from the total population; based on its familiarity with technological innovations, it is the first to introduce ATM service for local user and also in Addis Ababa area easily accessible to get valid information.

#### **1.6 Limitation of the study**

The basic limitation of this study is first only considers customers and management perspective of e-banking and it does not take in to consideration what perspective do all bankers employees have on the technology. Second it does not include bank customers who do not use the current e-banking which would help to compare the attitude of e-banking users and nonusers towards e-banking. Third it is due to heavier competition among banks to provide satisfactory service to their customers and to attract new ones, most staff member of banks are too busy because of this and other related factors, like unfamiliarity of the bank community with the existing technology (e-payment system), gathering information for the present researcher was difficult. Last the study only covers one city that is Addis Ababa city.

## **1.7. Organization of the study**

This study is organized in five chapters. The first chapter consists of the background of the study, statement of the problem associated with research questions, objective, significance, scope, limitation of the study, and organization of the study .The second chapter consist of literature review of related empirical and theoretical part. The third chapter includes research design and methodology part. The fourth chapter covers data analysis and interpretation. The last chapter consists of conclusions, and recommendations.



## **Chapter Two**

### **Literature review**

This chapter deals with a brief description of both theoretical and empirical review on the challenges of e-payment services.

### **2.1. Theoretical Review**

#### **2.1.1. Overview of E- Payment service**

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 leading the way.

E-payment (electronic 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 Josphine, 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 -economical 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.

### **2.1.2. E-Payments**

Electronic payment is a subset of and e-commerce transaction to include electronic payment for buying and selling goods or services offered through the internet. Contrary to the general misconception electronic payments as referring to online transactions on the internet, there are actually many forms of electronic payments. 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, Supaporn and Adisorn, 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 ).

### **2.1.3. E-Banking**

Electronic banking (E-banking) varies amongst researchers partially because Electronic banking refers to several types of services through which bank customers can request information and carry out most retail banking services via computer, television or mobile phone (Daniel, 1999;Mols; 1998; Sathye, 1999). E-Banking refers to electronic banking; it's like e-business in banking industry. It's also called "Virtual Banking " or "online Banking". Different authors have defined it in different ways based on their understanding of the application of electronic banking. According to Daniel (1999), electronic banking is electronic connection between the bank and customer in order to prepare manages and control financial transactions. Sathye (1999) also asserted that electronic banking can be defined as a variety of the following platforms: (a) Internet banking (or online banking), (b) telephone banking, (c) television-based banking, (d) mobile phone banking, and (e) PC bank (or offline banking).

### **2.1.3.1. Importance of E-banking**

Electronic banking (E-banking) reduces the transaction costs of banking for both. Customers prefer E banking for conveniences, speed, round the clock services and access to the account from any parts of the world (Cheng, 2006). E-banking offers benefits to banks as well. Banks can benefit from lower transaction costs as E-banking requires less paper work, less staffs and physical branches (Cheng, 2006). E-banking leads to higher level of customers' satisfaction and retention (Poatoglu & Ekin, 2001).

### **2.1.3.2. Benefits from the business 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 carrying cash and more funds access by anywhere, anytime in as the money kept in banks is accessible as the money in customer product. This would conclude keep the cash at banks to re longer time.

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.

### **2.1.3.3. Benefit from the customer 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 Josphine, 2005).
- Access to multiple choices that the customer can choose.
- The customer determines the level of service
- Engages and empower customers.

### **2.1.4. Type of E-payment Cards**

Payment card is a device that enables the card holder to make payments by electronic transfer of funds. Over the past years, different types of electronic banking services have emerged in the Banking sector (Adriana, 2006).

#### **2.1.4.1. 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.

#### **2.1.4.2. 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 pay 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

#### **2.1.4.3. 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).

#### **2.1.4.4. 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).

#### **2.1.4.5. 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).

#### **2.1.4.6. 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 verifies receipts of goods. So, net bill system of electronic payment enables the communication between money tool, the merchant server and net bill server (Rachna, 2013).

#### **2.1.4.7. 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).

### **2.1.5. ATM**

Automatic teller machine also known as automated banking machine/ a cash machine/ cash point is a computerized telecommunication device that enables the customers of the bank to access their account for withdrawing cash, depositing cash, checking balance, paying utility fees and to carry out other financial transactions without the need of visiting bank premises (Nimako and Gyamfi,2013).

ATM and debit card transactions take place within a complex infrastructure. To the consumer and merchant, they appear to be seamless and nearly instantaneous. But, in fact, a highly complex telecommunications infrastructure links consumers, merchants, TM owners, and banks. The common attribute of all ATM and debit card transactions is that the transaction is directly linked to the consumer's bank account—that is, the amount of a transaction is deducted (debited) against the funds in that account (Fumiko, Richard, & Stuart, 2003).

An ATM transaction typically involves withdrawing cash from an ATM machine. The consumer presents an ATM card, which is issued by the bank holding his or her checking account, at an ATM terminal, which may or may not be owned by the same bank. The consumer enters a personal identification number (PIN) to verify identity, the checking account is checked for adequate funds, and if everything is satisfactory, cash is issued. All of this is routed across one or more ATM networks.

ATM is generally believed to benefit both banks and customers by increasing customers satisfaction, reduce transaction and over head costs, improve return on investment and increase competitiveness (Burani,2012). According to Nimako and Gyamfi(2013), like any other self-service technology, ATM enables customers to become co producer rather than service receiver.

### **2.1.6. POS**

A point- of –sale (POS) terminal is a computerized replacement for a cash register. 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. Generally, a POS terminal has as its core a personal computer, which is provided with application-specific programs.

Formerly known as cash registers, a POS system's hardware may be as basic as a computer, operator display, receipt printer and cash drawer. Input devices include a touch screen and magnetic stripe reader for cards.

However, it is the software that will drive the operation and provide the detailed reports that you need to you make informed business decisions.

POS system saves money by helping to improve productivity and reduce the time spends away from other key areas of business. This guide is intended to help educate users on the process, to make a more informed decision.

POS can considerably cut down on shrink, the inventory that disappears due to theft, waste, and misuse by employees. The difference between honesty and dishonesty is two steps: Need & Opportunity. You cannot control the need to steal, but you can control the opportunity to steal, by keeping your eye on what was sold as reported by a POS system.

POS will insure every item is sold for the correct price when ringing items using a touch screen with preset price keys. Staffs will stop charging the wrong price (and/or stop guessing), and you can change those prices easily.

You can focus on selling higher-margin items by reviewing detailed sales reports. Then boost the sales of those high-profit items by promoting both those and any under-performing dishes in your restaurant setting.

Eliminate separate credit authorization terminals (and reduce the extra phone lines). Integrated credit makes every terminal a credit card authorization center, for faster, easier server access. This eliminates manual fund reconciliation because “register” and credit card totals are automatically balanced. And it will consolidate daily transactions for single batch transmission to the bank, and yield cost savings through reduced credit card fees.

### **How POS Increases Control**

At any point of the day, POS can instantly tell you how many of a particular product have sold today (or last week, or last month), and how much money receipts you have in your cash drawer. Detailed sales reports make it much easier for you to keep the right stock on hand. Use historical data to better forecast your needs. Detailed sales data by menu item allows you to quickly validate actual stock against expected inventory levels. You can pinpoint potential areas of waste and/or theft. Clear inventory information helps make purchasing requirements more accurate – not just based on past experience or estimates.

Time and attendance functionality will result in increased productivity and gives you easy access to all labor-related information. And Labor Management software will typically include all labor-tracking functions. Training mode reduces your time with employee training, making new employees productive quickly.



Guest check tracking ensures full accountability by server and allows for almost all “exceptional” situations – split checks, discounts, tax-exemption coupons, promotions, etc. The pre-check process ensures that you charge for every item served; and nothing comes out of the kitchen without getting posted first to a guest check.

### **How POS Improves Efficiency & Productivity**

Compared to using an electronic cash register or manual system, POS dramatically reduces the time you have to spend gathering sales figures or other repetitive but important paperwork, whether management, tax reporting, payroll, inventory control and more. This saves you time and gives you peace of mind. You can take advantage of the information collected in the POS system for accounting, time and attendance, labor scheduling, food and beverage management, and frequent diner programs.

A remote printer in the kitchen (or kitchen video system) provides instantaneous server-kitchen communication, eliminates mistakes, speeds up service and lets servers spend more time with customers. Table/server/wait list management capabilities combine maximum efficiency with improved customer service.

It enables to collect the names and addresses of your best customers as part of a standard transaction. Then use the list for targeted advertising or incentive programs.

This all sound good on paper, but you must be committed to using a POS to the fullest. If you do not take advantage of the appropriate training and on-going support, you will not realize the same benefits that others do. It is a tool that you will get out of it what you put into it (Santaclara, 2014).

### **2.1.7. Mobile Banking**

Mobile banking is a financial transaction conducted by logging on to a bank’s website using a cell phone, such as viewing account balances, making transfers between accounts, or paying bills. The cell phone stands at the center of many innovative developments in the field of electronic payments. In 2011, one hundred forty one million people worldwide are expected to pay via their mobile phones. According to a study by US analyst Gartner, a 38% increase is in store for so-called mobile payments. This extreme growth is largely driven by developing

countries, where a large percentage of the population owns a mobile phone, but no bank account. For the developing countries, mobile payments and mobile banking are a welcome chance to participate in methods of commerce that other countries have long taken for granted. Major global companies like Google are also banking on payments via cell phone. Cooperating with other global players such as the payment specialist Ingenico, their payment scheme “Google Wallet” embraces much more than payments alone.

Over the last 20 years, cell phones have become mass products. Cell phone technology has found its way into payment terminals. Based on GSM or GPRS technology, state-of-the-art terminals allow merchants to move their point of sale wherever they want. Especially merchants who engage in seasonal activities benefit from increased opportunities: Card-based payments at markets, fairs and other events make collecting payment and bookkeeping easier than ever and minimize the necessity for cash handling. As an additional benefit, card payments are proven to attract new customer groups. But even stationary merchants – traditionally not a target group for mobile payment – can benefit from them. They allow new check-outs to be quickly set up, and can thus function as queue busters during rush-hour shopping. Dwindling costs make this an ever more attractive option (Ingenico, 2012).

The main role of a payment system is to provide a way of transferring value between different parties in the economy. As such, it determines partly economic transaction costs. Its design will be optimal if organized to allow quick and effective value transfers while imposing a minimum of additional costs and risks. High costs of the payment process may seriously affect economic activity in that transactions are rendered too expensive and, as a consequence, reduced. Conversely, lower costs through efficient payment systems could have a positive impact on economic growth. The use of any payment system involves direct and indirect costs. Direct costs are the fees charged by financial payment service providers. Indirect costs include those related to the complexity of transaction processes, speed of transactions, risk and uncertainty, and opportunity costs for the buyers and sellers involved. The modalities of the payment system also affect the cost structure as they determine the financial loss to both parties in case either one of them defaults on the terms of the contract. For the reasons described above, online payment services involve a complex set of practical and analytical challenges. These include the technological capabilities of service providers, commercial relationships, issues of regulation and law (buyer and seller protection), security considerations including identification issues, such as

authentication and verification, and co-ordination among a variety of parties with different and sometimes competing interests (OECD, 2008).

Mobile phone can be always or is always portable due to inherent design, allow users to interact in activities such as travel or meeting people, while transactions via mobile devices are equipped with Internet .i.e. it's always on (Zahra, Atusa, Hamideh, Hoda, & Marjan, 2012).

Not only is mobile phone in all places, Global Positioning System (GPS) may be created to recognize phone and tries to personalize based on existing services. Identifying the location of Internet users, provides a special advantage for mobile commerce over wired e-commerce. Using this technology, the mobile commerce providers will enable to receive and send information to a particular place. i.e. it's location-centric.

Users of the service are not limited by time or space, access to electronic activities. For example, people who are stuck in traffic or waiting in the queue will be enable to buy their favorite Internet-based activities or managing their daily transactions through mobile commerce applications .Consumers can have special comfort that can improve their quality of life. By making services more comfortable, the customer will be more loyal. It is convenient to make business (Zahra, Atusa, Hamideh, Hoda, & Marjan, 2012).

Mobile phone have much higher influence than personal computers so that mobile commerce producers to design more creative and more customized lifestyle tool. For example, using demographic data collected by wireless service providers, and information on the current location of the mobile users can do more targeted advertising. Advertising messages can be customized based on the information provided through consultation with the user's initial or previous users' shopping habits.

Mobile phone provides to support the secure mobile phone transactions where personal computers are almost unknown. One person always uses mobile devices and it is ideal for Personal -based target marketing, through the technology of Global Positioning System (GPS), service providers can recognize a user carefully (Zehara, Atusa.et.al, 2012).

Mobile banking technology is creating opportunity to the financial industry of the unbounded in Africa. Majority of the population do not use formal financial service. Encouraging financial can boost economic growth. From the banks point of view, mobile banking reduce employees costs.

### **2.1.8. Internet Banking**

Technology development particularly in the area of information technology is revolutionizing the way business is done. Nowadays, the internet plays an important role in the financial and banking services. It is widely noted that the internet banking is a form of self-service technology (Dixit, 2010).

Internet banking can also be considered as an internet portal, through which customers can use different kinds of banking services including bill payment and making investment. The growing popularity of personal computers, easy access to internet and World Wide Web (WWW), has increased the use of internet by banks as a channel for receiving instructions and also delivering their products and services to the customers. The success of internet banking is determined not only by banks or government support but also by customers' acceptance of it (Hosein, 2010).

Generating internet banking in below to benefit by additional revenue, improve customer service, extend marketing, and increase cost saving. Banks enjoy these benefits as well. Banks can derive revenues over and above their offline revenues by charging for online services and value-added services, such as providing a portal for financial services linked to short-and long-term insurers, links to stock brokers, and links to foreign banks.

On the internet, customers serve themselves, negating the need for frontline staff. Savings are gained from reductions in staff, reduction in branch sizes, and reduction in consumable costs: such as paper, ink cartridges, and other stationery.

It also creates opportunities for acquiring new customers. Customers looking for the flexibility and convenience offered by internet banking will be attracted to banks providing the best services. Existing customers can be sold products that they do not have in their portfolio such as a second credit card, life insurance, and home loans among others.

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).

## **Internet Banking- Benefits and Challenges in an Emerging Economy**

Many corporate and consumers in some developing countries either do not trust or do not have access to the necessary infrastructure to be able to process e-payments.

The ability to strengthen public support for e-finance: historically, most e-finance initiatives in developing countries have been the result of cooperative efforts between the private and public sectors. For example, Singapore's successful Trade Net system was a government-sponsored project. If the public sector does not have the necessary means to implement the projects it is essential that cooperative efforts between public and private sectors, along with the multilateral agencies like the World Bank, be developed to facilitate public support for e finance related initiatives.

Confidentiality, integrity and authentication are very important features of the banking sector and were very successfully managed the world over in pre-internet times. Communication across an open and thus insecure channel such as the internet might not be the best base for bank-client relations as trust might partially be lost.

There are some serious implications of international e-banking. It is a common argument that low transaction costs potentially make it much easier to conduct cross-border banking electronically. For many banks, cross border operations offer an opportunity to reap economies of scale. But cross-border finance also needs a higher degree of cross-border supervision. Such cooperation may need to extend to similar supervisory rules and disclosure requirements (for efficiency and to avoid regulatory arbitrage) and some harmonizing of legal, accounting and taxation arrangements. (Internet banking- benefits and challenges in an emerging economy (Rachna, 2013).

### **2.1.9. Challenges in E-payment**

The key challenge in using e-payment services are the following;

#### **2.1.9.1. Lack of Ability**

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

### **2.1.9.2. Lack of Security**

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

### **2.1.9.3. Lack of Trust**

Electronic payments have a long history of fraud, misuse and low reliability as well as it is new system without established positive reputation. Potential customers often mention this risk as the key reason why they do not trust a payment services and therefore do not make internet purchases (Lietaer, 2002).

### **2.1.9.4. Lack of Awareness**

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

### **2.1.9.5. Perception of Service Quality**

Perceived quality is a form of attitude, related but not equal to satisfaction, and results from a consumption of expectations with perceptions of performance. The customer's perception of quality of service is based on the degree of agreement between expectations and experience (Kandampully, 1998).

### **2.1.9.6. Pricing Mechanism**

The current business models and pricing mechanism are inadvertently promoting a less efficient system. In general, the prices of payment transactions do not reflect the cost of production of the respective payment services. It therefore does not provide the right price signals for the consumers to utilize the more effective and efficient payment services. In fact, payments via cheques, which incur a large variable cost, should be higher in terms of fee. In practice however,

it remain popular due to perceived lower cost for payment compared to the other means of payments (Adnan, 2008).

#### **2.1.9.7. Lack of adequate Infrastructure**

The e-Payment system is partially implemented. If it is to be fully implemented, a number of IT infrastructures will have to be put in place. These include but not limited to Laptop, desktop, scanners, good internet connectivity, training and global software. The provision of basic Information Technology infrastructures according to Ovia [8] is a major challenge.

#### **2.1.9.8. Lack of skill manpower**

The e-payment system need skill and knowledge to develop. So there is less knowledge to implement the technologies (Alhaji Ibrahim H, 2009).

The same challenges may also face by CBE to implement the e-payment facilities. The good thing is that the benefit out weighted the challenges in many parameters. Especially CBE have huge potential customers for such service to offer different products with the help of technology to their customers. So in CBE there are huge customer cannot be addressed awareness for all, different customers have different perception of quality services it is also a challenge, different customers also have different ability this also another challenge.

## **2.2 Empirical review**

### **2.2.1 Challenges in E-payments in Malayisa**

The issues and challenges in the transition from paper-based payments to e-payments in Malaysia are multi-faceted. These generally include the areas of infrastructure and systems, business process and operating procedures and consumers' mindset, awareness and confidence.

#### **E-payment Infrastructure and System Readiness**

Considerable capital investment and efforts are required to provide the enabling infrastructure to enhance migration to e-payments. Currently, the existing e-payment services and products are limited, inconvenient and not meeting customers' expectation thus requires continuous enhancements. The reach of payment systems also limited and should be enhanced to allow

payments to be made on a wider scale to reach the public. The scope of use of the point of-sale terminals should be extended further to cover wider sectors to encourage greater use of payment cards especially e-debit cards. Existing electronic channels such as ATM should be enhanced to include additional and attractive fund transfer and payment functionalities. Robust technology and strong internal control should be put in place to deter and prevent fraud and to protect and safeguard integrity of the systems. There is also lack of common technology standards between service providers to promote interoperability (Adnan, 2008).

### **Public Awareness and Confidence**

The other challenge is in developing and sustaining users' confidence and inculcating a change among the customers, apart from increasing public awareness and acceptance of the various payment channels available in the market. Consumers need to be continuously educated and motivated to change their payment habits by promoting the benefits of the use of e-payments.

Promotional activities and change management program should be put in place and continuously improved to increase public awareness and acceptance.

### **Pricing Mechanism**

The current business models and pricing mechanism in Malaysia are inadvertently promoting a less efficient system. In general, the prices of payment transactions do not reflect the cost of production of the respective payment services. It therefore does not provide the right price signals for the consumers to utilize the more effective and efficient payment services. In fact, payments via cheques, which incur a large variable cost, should be higher in terms of fee. In practice however, it remain popular due to perceived lower cost for payment compared to the other means of payments (Adnan, 2008).

### **Cross-border Issue and Jurisdiction of Supervision**

Most of the e-payment systems such as e-money systems are based on technology that is designed to extend the geographic reach of service providers and customers. Such market expansion can extend beyond national borders and are relevant to the cross-border conduct of electronic money. The service providers may face different legal and regulatory requirements when they deal with



customers across national borders. There may be uncertainties about legal requirements in some countries. In addition, there may be jurisdictional ambiguities with respect to the responsibilities of different national authorities.

Such considerations may expose all parties to legal risk associated with noncompliance with different national laws and regulations, including consumer protection laws, record-keeping and reporting requirements, privacy rules, and money laundering laws. Operational risk could arise for one dealing with a service provider located in another country, which for that reason may be more difficult to monitor. In dealing with foreign-based service providers, or with foreign participants in e-money activities, one is subject to country risk to the extent that foreign parties become unable to fulfill their obligations due to economic, social, or political factors (Adnan, 2008).

### **Money Laundering**

Development of e-money may also influence money laundering and other criminal activities. Its use for such purposes would depend upon the extent to which e-money balances can be transferred without interaction with the system operator, the maximum amount that can be held on an e-money device and its record-keeping capacity, and the ease with which e-money can be moved across borders (Adnan, 2008).

### **2.2.2. Challenges of in E-payments in Nigeria**

According to E Y Akinkoye (2011) in Nigeria cashless policy, despite its numerous benefits comes with its own challenges even in the developed world. This section looks at some of these challenges with specific focus on Nigeria;

#### **Challenges**

The problems militating against e-Payment as listed by Sumanjeet [7] generally revolve around.

- Integrity: to ascertain that transmitted financial information is unchanged in transit.
- Non-repudiation: to ascertain that all parties have non-deniable proof of receipt.
- Confidentially: to ascertain that transactions are protected from possible eavesdroppers.
- Reliability: to ascertain that there is reduced possibility of failure.
- Authorization: to ascertain that individuals are recognized and granted the desired rights and privileges.

Public Education and Acceptability- The system which is still in its stage requires a lot of information and education of the public to enable them appreciate the laudable programmers put together by government to protect their interests. The banks also need to be carried along in the implementation. If they are properly and adequately educated, then the chances of the total acceptable of the programmers can be assured. Furthermore, many see e-payment as an imposition.

- **Lack of Uniform Platform by Banks:-** There is no compelling law mandating the banks to use common software platform. Every bank is left to use whatever platform that they felt will perform the e-Payment services on behalf of the clients. There is the problem of switches in effecting transfer from one bank to another. Interconnectivity has been a problem. No uniformity of account numbers since different banks use different numbering systems.
- **Lack of adequate Infrastructure:-** the e-Payment system is partially implemented. If it is to be fully implemented, a number of IT infrastructures will have to be put in place. These include but not limited to Laptop, desktop, scanners, good internet connectivity, training and global software. The provision of basic Information Technology infrastructures according to Ovia [8] is a major challenge.
- **Platform Security:-** The major challenges of e-Payment in Nigeria is security. Security in terms of platform, hackers and virus attacks. This will ensure that output from the system are reliable and accurate. The Ministries, Departments and Agencies still carry their schedule(s) to the banks through the banks through Compact Disks (CDs), Flash Drives or e-mail attachments.

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

- Lack of awareness on the benefits of new technologies
- Fear of risk
- Lack of trained personnel in key organizations
- Tendency to be content with the existing structures, and
- People are resistant to new payment mechanisms

### **2.2.3. Challenges of in E-payments in Bangladesh**

According to M. M. Rahman (2008) in Bangladesh despite huge demand from the business community as well as the retail customers particularly the urban customers, electronic banking (e-banking) is still at a budding state due mainly to a number of constraints such as unavailability of a backbone network connecting the whole country; inadequacy of reliable and secure information infrastructure especially telecommunication infrastructure; sluggish ICT penetration in banking sector; insufficient legal and regulatory support for adopting e- banking and so on. The concept of e-banking includes all types of banking activities performed through electronic networks.

According to Alhaji Ibrahim H. (2009), identified in Bangladesh challenge of e-payment service delivery. Some of points are;

- Lack of skill manpower
- Shortage of power supply
- Lack of citizens awareness
- Unwillingness of service providers
- Slow connectivity of internet
- Shortage of equipment

### **2.2.4. E-payment practices in Ethiopia.**

They are 16 private and two state owned banks operating at the end of August 2016 in Ethiopia. Despite a rapid increase in the number of financial institution since financial liberalization the Ethiopian banking system is still underdeveloped compared to the rest of the world. Cash is still the most dominant medium of exchange. The use of checks is mostly limited to government institutions, NGOs and some private business. As compared to the Sub-Sahara Africa, Ethiopia lag behind in the use of e-payment service. ATM's in 2015, 100,000 adults is 6.14 in Sub-Sahara Africa as compared to 1.63: (World Bank)

Currently CBE, Awash International Bank, Dashen Bank, Wegagen Bank, United Bank, Nib Bank, Berhan International Bank, Abyssinia Bank and Zemen banks are giving ATM & POS service. Regarding Mobile banking so far Commercial Bank of Ethiopia, Dashen, Wegagen, Abyssinia, Awash and United banks are giving the service. Moreover, Zemen, United, Wegagen

and Commercial Bank of Ethiopia are giving internet banking service. Dashen ,United, Anbesa banks are giving agent banking service as well (Mohammed yunus, 2014).

CBE is a pioneer to introduce electronic payments in the country when it launched proprietary ATM service 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 (Commercial bank of ethiopia, 2014). The CBE has adopted different e-paymnets service currently. Below each services with its features is discussed.

### **ATM**

CBE is the pioneer in introducing ATM services to the country. As of June 2016, the bank has deployed 889 ATMs all over the country. The host of services by ATM includes; cash withdrawals, bill payments, forex, fund transfer, mobile top up and balance inquiry.

### **POS**

Point of Sale Terminal (POS) is a computerized telecommunications device that provides the customers with access to financial transactions in a public space. The bank has deployed 6,269 POS machine at different location as of June 2016. CBE POS, card holders or customers are getting the following services: cash advance, various payments, fund transfer, mobile top up and bill payment.

### **Mobile Banking**

Mobile banking is and application of mobile computing which provides customer with the support needed to be able to bank anywhere, anytime using a mobile handled device and a mobile services. CBE mobile banking user has getting the following services; balance enquiry, enquiry of mini statement or account history, payment and account transfer.

### **Internet Banking**

Internet banking is customers can affect their bank accounts from internet connection. In CBE the service intended to be provided by internet banking personal and internet banking. The

internet banking users has getting the following services; balance enquiry, payment, account transfer, standing order and enquiry of mini statement.

## **2.2 Summary of Literature**

These literature asses' different country challenges:

- In Malaysia the challenges are infrastructure and systems, business process and operating procedures and consumers' mindset, awareness and confidence.
- In Nigeria the challenges faced:- integrity, Non-repudiation, Confidentially, Reliability, and authorization.
- In Bangladesh the challenges faced:- lack of skill manpower, shortage of power supply, lack of citizens awareness, unwillingness of service providers.

In the above literature studies many challenges in e-payment service on different country. This study focuses in CBE context the challenges on awareness creation, ability, responsiveness and perceived quality. When I select the challenges on awareness, CBE has a huge customer and cannot be addressed well to use the e-payment services and also it is new product. The new technology cannot be adopting the customers easily. The other challenge are ability, the new technology cannot internalized easily to perform transactions. In all this challenge the bank has help as to support any question related to the new technology this also the other challenge that is responsiveness.

## **Chapter Three**

### **Research design and methodology**

#### **3.1. Research design**

A research design provides a framework for the collection and analysis of data. Research design defines the systematic and scientific procedures used to arrive at the results and findings for a study against which claims for knowledge are evaluated (Kotler, 2002). The overall design of the research is mixed research method since it allows the collection of data through questionnaires and interview on the bases of sample. The method of this research is descriptive method using tables, graphs, and percentages are used to illustrate the findings.

#### **3.2. Population, Sampling Method and Sample size**

Branches at Addis Ababa city are categorized in to four districts (North Addis, East Addis, South Addis, and West Addis Districts). Based on the number of customers they serve and the amount of transaction they handle, the branches are classified in to four different grade levels that are from grade 1 up to grade 4. Under this study only grade 4 branches were sampled due to the volume of transaction they process get then a better view on the challenges. Purposive sampling technique was used for management staff of the banks while stratified sampling technique was employed for other respondents. The total sample of population understudy is 232; this number is composed of 204 users of the product and 28 branch managers.

**Table 3.1 Sample size determination of e-payment users**

	<b>POS Machines distributed</b>	<b>ATM Machines distributed</b>	<b>Active Debit/ATM Card distributed</b>	<b>Internet banking users</b>	<b>Mobile Banking users</b>
Total number in Ethiopia CBE branches	1517	1239	425000	8500	287000
Total number in Addis Ababa CBE branches	545	558	82978	5200	68720
Sample size of e-payment users			<b>108</b>	<b>7</b>	<b>89</b>

$$n = \frac{N}{1 + N(e)^2}$$

Where n= is the sample size,

N = is the population size, and

e = is the level of precision or sampling error = (0.7). The precision taken for customer has widened to 70 pct since the sample is taken on the availability of customers and on the convenience of getting their response.

To determine sample from customer total population 156898

$$\begin{aligned}
 n &= \frac{156898}{1 + 156898(0.7)^2} \\
 &= 204
 \end{aligned}$$

From the total population the customer are sample determined 204 and the proportion is taken from their totla customer population.of the three e-payment services.

For the purpose of this study, branches from all grade 4 level of the four districts are selected. In all the districts there are 14 Grade four branches, to represent all the districts one branch manager and one customer service managers who have a direct relationship with the e-payment service are selected and the sample size for the 28 managers. As presented in table 3.1 above, a total of 204 e-payment users were selected from ATM active card 108 users, from internet banking 7 users and Mobile banking 89 users is selected. From the total of 28 branch managers were chosen to represent the total management population of CBE in Addis Ababa area. Finally a total of 232 users and managers were selected as representative sample respondents of the study. This total number was distributed in an equal ratio, proportional among the selected grade four branches of the bank.

### **3.3. Types and Source of data**

Both primary and secondary data are used to assess the challenges and prospects of e-payment service in CBE. The primary source included interviews and questionnaires while the secondary source included books, e-books, articles websites, periodic reports and manuals.

### **3.4. Data collection techniques**

Primary data is collected through interview one branch manager and one customer service managers and also who have a direct relationship with the e-payment service manager's are selected and questioner is used for customers. Structured interview is prepared to the branch managers of CBE. The questions in the questionnaires were tested in a pilot test for both validity and reliability. The test was undertaken on 5 managerial and 20 customer respondents' and the questionnaire was found to meet the requirements in all cases. The interview is prepared to gather data from the respondents in a detail manner to support the data collected from the questionnaire and also to give respondents freedom in expressing their idea. The questionnaire is prepared with a five level nominal scale which made the data collection and analysis easier.

### **3.5. Reliability test**

Test for reliability of constructs is indirectly achieved by testing the reliability of the scale measurement used in data collection. Scale reliability test methods available to researches include test-retest, equivalent form, and internal consistency. This reliability test is conducted for



the questionnaires distributed 20 customers. Out the 232 respondents, 20 were selected for the reliability test of Cronbach Alpha

Reliability test

e-payment users Case Processing Summary		
	N	%
Valid	20	100.00
Cases Excluded	0	0
Total	20	100.00

To comprehend the banks customer attitude towards the CBE e-payment service, the questionnaire distributed has 100% response achievement with none exclusion.

#### Reliability Statistics

Cronbach's Alpha	N of Items
.856	73

Reliability is fundamentally concerned with issues of consistency of measures (Bell.E, 2003).

According to (Hair, 2006), if  $\alpha$  is greater than 0.7, it means that it has high reliability and if  $\alpha$  is smaller than 0.3, then it implies that there is low reliability.

### 3.6. Validity, Reliability and Triangulation

How do we know that what the participant is telling us is true? And if it is true for this participant, is it true for anyone else? And if another person were doing the interview, would we get a different meaning? Or if we were to do the interview at a different time of year, would the participant reconstruct his or her experience differently? Or if we had picked different participants to interview, would we get an entirely dissimilar and perhaps contradictory sense of the issue at hand? These are some of the questions underlying the issues of validity, reliability, and generalizability that researchers confront (Seidman, 2006).

## **Validity**

The validity of findings or data is traditionally understood to refer to the 'correctness' or 'precision' of a research reading (Ritchie and Lewis, 2003:273). Although the validity of 'measurement' is seen as a primary concern of quantitative research, and of positivist research more broadly, it is widely recognized that it is an equally significant issue for qualitative research. But the questions posed are different ones and relate more to the validity of representation, understanding and interpretation. In order to meet validity criterion, this research has used different combinations of data gathering tools.

## **Reliability**

Reliability is generally understood to concern the reliability of research findings and whether or not they would be repeated if another study, using the same or similar methods, was undertaken (Ritchie and Lewis, 2003:270). The possibility of another researcher in the future obtaining similar findings could slightly be different as it depends more on the type of issues, time, purpose, changes and processes used. Similar or repeated findings or results arrived at by another researchers will be an argument because problems like the change of respondents' opinion on issues, the time lap between the researchers, new regulations of the local government, the response given by the government or other stakeholders to solve or bridge the problems or gaps found in the study may have influence on the result arrived at by other researchers.

## **Triangulation**

Triangulation may take several forms, but commonly refers to the employment of multiple data sources, data collection methods, or investigators. In general, the purpose of this would be reducing the disadvantages inherent in the use of any single source, method or investigator (Long and Johnson, 2000:34). Triangulation may involve the use of different methods, especially observation, focus groups and individual interviews, which form the major data collection strategies for much qualitative research, (Shenton, 2004:65). So based on the above justification the researcher for this paper has used different types of data collection instruments such as interviews and questionnaire in order to triangulate the research results.

Triangulation is more a direct check on the validity of observations by crosschecking them with other sources of data. If a researcher's conclusion is supported by data from other sources, then we can be more confident of its validity. Triangulation can involve comparing data on the same behavior from different researchers (as in reliability checks in more-structured observation) who possibly adopt different roles in the field, (Sapsford and Jupp, 2006:89).

### **3.7. Data analysis method**

Based on the type of the data collected through questionnaires the following procedures and statistical tools were employed. Data was checked for consistency and completeness and then coded, checked, and entered to computer. Then, it was processed and analyzed by Statistical Package for Social Sciences (SPSS) version 20. To analyze the data, different kinds of statistical methods including descriptive statistics are used. Furthermore, descriptions were made based on the results of the tables and percentage to analyze and interpret the information. The data collected through close ended questions and interviews were analyzed qualitatively by descriptive statements.

### **3.8. Ethical Consideration**

Before the research was conducted, the researcher informed the participants of the study about the objectives of the study, and was consciously consider ethical issues in seeking consent, avoiding deception, maintaining confidentiality, respecting the privacy, and protecting the anonymity of all respondents.

# Chapter Four

## Data Analysis and Interpretation

To find the major out puts of the study and to give important recommendations, the collected data should be analyzed and discussed, accordingly the analysis and important findings from the collected data are discussed below. On the other hand this chapter presents the results and analysis of data collected via questionnaire and interviews. The remaining part of this chapter is organized as follows. Section 4.1 data analysis and interpretation , section 4.2 the challenges of CBE's to providing e-payment services from interview, section 4.3 the last section summarizes research findings.

### 4.1. Data Analysis and Interpretation

#### 4.1.1. Demographic Characteristics of the Respondent

Some personal question such as gender, educational qualifications, account types were presented for customers respondents of the study. This background data are analyzed and presented below.

#### Frequency Table

**Table 4.1. Statistics**

Statistics					
		Sex	Age	Education	Account
N	Valid	169	169	169	169
	Missing	0	0	0	0

The statistics shows that out of 232 respondents 35 respondent are not respond. The sample size taken for this thesis is 169 respondents.

**Table 4.2. Gender distribution of respondents**

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	131	77.5	77.5	77.5
	Female	38	22.5	22.5	100.0
	Total	169	100.0	100.0	

Out of 169 customer's respondents, 131 are male representing 77.5% and the remaining 38 are female representing the remaining 22.5%. The numbers might show that currently the female users of the service are less than the male. The numbers also suggest that the bank should review its marketing strategy in order to incorporate the female users and to narrow the gap that is reflected in the research findings.

All the statistical data concerning the demographic characteristics of respondents are generated by the (SPSS) statistical package for social science students' software.

**Table 4.3. Age distribution of respondents**

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	29	17.2	17.2	17.2
	26-30	44	26.0	26.0	43.2
	31-35	67	39.6	39.6	82.8
	36-40	29	17.2	17.2	100.0
	Total	169	100.0	100.0	

As shows in Table 4.3, of those 169 respondents' 67 are found under the age range of 31-35 and it represents for about 39.6%, these number holds the largest portion from among the other range of respondents. The other respondents group is found in the range of 26-30 these range holds for about 44 in number, and these accounts for 26% of the respondents.

**Table 4.4. Educational Qualification of respondents**

Educational Qualification				
	Frequency	Percent	Valid Percent	Cumulative Percent
	Certificate or less	5	3.0	3.0
	Diploma	29	17.2	20.1
Valid	First Degree	126	74.6	94.7
	Masters and above	9	5.3	100.0
	Total	169	100.0	100.0

The Educational qualification of respondents has tabulated, of the 169 respondents 126 in number and 74.6% are first degree holders, 29 in number and 17.2%, are diploma graduates. The remaining 3% and 5.3% accounts for either certificate or less and Masters and above respectively. According to the e-payment service procedure of the bank, Customers who can write and read are termed as eligible to use e-payment services, as it can be seen from the table 4.4 however the number of users of the e-payment service with less educational qualification is very small. This implies that the service is not introduced well, as to whom the service is provided for.

**Table 4.5 Type of Account**

Type of Accounts				
	Frequency	Percent	Valid Percent	Cumulative Percent
	Demand deposit	42	24.9	24.9
Valid	Saving deposit	127	75.1	100.0
	Total	169	100.0	100.0

In the above table 4.5 the researcher shows the type of account the respondents hold. As it can be depicted on the table 127, 75.1% are saving account holders and the rest 42 or 24.9% are demand account holders. Although the number of saving account holders of the bank is significantly larger than the demand account holders, the e-payment service benefit is larger for those demand

account holders; due to the fact that big amount of transactions are made in the current account for business transaction purpose. Internet banking as one product of the e-payment service, is basically provided to current account holders however due to lack of awareness on the benefits of the service and capacity of the bank to provide the service, the number of demand account holders of the e-service users is very small relative to the mobile and card banking users of the bank.

**In this section, the analysis and the collected data under selected topics are presented with all aggregate responses.**

#### **4.1.2. Awareness Creation**

In this section, the analysis of questions which are believed and were prepared to evaluate the customer's awareness level is presented.

**Table 4.6 Response of e-service users regarding the level of awareness on card Banking**

<b>Awareness: On Card Banking, ATM &amp; POS</b>		<b>Strongly disagree</b>	<b>disagree</b>	<b>Neutral</b>	<b>agree</b>	<b>Strongly agree</b>	
1	I am aware that CBE has started providing ATM & POS service.	N	37	14	17	39	62
		%	21.9	8.3	10.1	23.1	36.7
2	I know well the benefits of using debit card both for the payers and receivers.	N	66	17	22	30	34
		%	39.1	10.1	13	17.8	20.1
3	I have used the card banking before CBE introduces locally	N	109	39	10	4	7
		%	64.5	23.1	5.9	2.4	4.1
4	I know how to use the ATM & POS to get cash and to make transaction.	N	19	12	43	51	44
		%	11.2	7.1	25.4	30.2	26
5	I know whom to contact to get the ATM & POS services	N	13	11	35	62	48
		%	7.7	6.5	20.7	36.7	28.4
6	I know the minimum requirement to get debit card.	N	32	18	22	46	51
		%	18.9	10.7	13	27.2	30.2
7	I know whom to contact in case support is required.	N	37	15	39	32	46
		%	21.9	8.9	23.1	18.9	27.2
8	I know using ATM & POS can save my time & money	N	17	1	38	58	55
		%	10.1	0.6	22.5-	34.3	32.5

*(Source: Own Survey, 2016)*

As presented in the above table 4.6 the e-payment service users responded to questions on card banking, ATM and POS. While assessing whether the customers awareness that CBE has started

to provide about the service before, 59.8% of them responded that they have aware CBE has started providing ATM and POS services, with regard to the knowledge of benefits on the service 49.2% of them responded that they do not know well the benefits of using debit card both for the payers and receivers. As stated above Promoting awareness of the service and its products accelerates the implementation of the service delivery. (According Alex Josphine, 2005) electronic payment systems allows financial institutions, business and government offices to offer variety of payment options to their customers. It reduces costs of transactions and can be made from remote, It also save time, promotes speed, security, fund management etc. however with regard to question number 3,of Table 4.6 87.6% of debit card holders were responded as they didn't use e- banking before CBE introduces card banking locally. This implies that the new nature of the service lacks previous experience and has contributed to the stagnant implementation of the service. 56.2% of them responded that they know how to use the ATM & POS to get cash and to make transaction. This implies that the customer has aware how to use ATM & POS. 65.1% of them the responded that they know to whom to contact to get the ATM & POS services. This implies that customers are aware of whom to contact to become ATM & POS service users. 57.4% of them responded that they know the minimum requirement to get debit card. This implies that the customers are aware the minimum requirement to get the debit card. 66.8% of them the responded that they know using ATM & POS can save time & money. This implies that the customers are aware about the technology save the time with less cost. (According Alex Josphine, 2005) electronic payment systems allows financial institutions, business and government offices to offer variety of payment options to their customers. It reduces costs of transactions and can be made from remote, It also save time, promotes speed, security, fund management. In the interview part it is was indicated by the branch management of the bank that they are dealing with awareness creation to the customers of the bank, to the people and office workers resides around the bank branch. In their marketing activities the managers also indicates that the social resistance to adopt new technology is the main challenge that they face with regard to the awareness creation.

The other challenges that the managers face in the awareness creation is that the unorganized awareness creation mission leads to time wastage, duplication of effort to convince management of organizations; to undertake the awareness creation with their employees. All these imply that the bank lacks Standardized customer recruitment and awareness creation strategy.



**Table 4.7. E-payment users' response to questions regarding Mobile Banking**

<b>Awareness: On Mobile Banking</b>			<b>Strongly disagree</b>	<b>disagree</b>	<b>Neutra l</b>	<b>agree</b>	<b>Strongly agree</b>
1	I am well introduced to the features of CBE's mobile banking services.	N		<b>108</b>	<b>29</b>	<b>32</b>	
		%		<b>63.9</b>	<b>17.2</b>	<b>18.9</b>	
2	I am aware that CBE has started providing mobile banking services.	N		<b>23</b>	<b>15</b>	<b>93</b>	<b>38</b>
		%		<b>13.6</b>	<b>8.9</b>	<b>55</b>	<b>22.5</b>
3	I clearly know what services mobile banking deliver.	N	<b>13</b>	<b>87</b>	<b>22</b>	<b>47</b>	
		%	<b>7.7</b>	<b>51.5</b>	<b>13</b>	<b>27.8</b>	
4	I know CBE provide mobile banking compatible to all type of phones.	N	<b>14</b>	<b>18</b>	<b>37</b>	<b>64</b>	<b>36</b>
		%	<b>8.3</b>	<b>10.7</b>	<b>21.9</b>	<b>37.9</b>	<b>21.3</b>
5	I know whom to contact to get mobile banking service	N	<b>27</b>	<b>86</b>	<b>33</b>	<b>23</b>	
		%	<b>16</b>	<b>50.9</b>	<b>19.5</b>	<b>13.6</b>	
6	I know the requirements to get mobile banking service.	N	<b>16</b>	<b>22</b>	<b>29</b>	<b>67</b>	<b>35</b>
		%	<b>9.5</b>	<b>13</b>	<b>17.2</b>	<b>39.6</b>	<b>20.7</b>
7	I know currently CBE deliver mobile banking services free of charge.	N	<b>24</b>	<b>18</b>	<b>32</b>	<b>57</b>	<b>38</b>
		%	<b>14.2</b>	<b>10.7</b>	<b>18.9</b>	<b>33.7</b>	<b>22.5</b>
8	I know using Mobile banking can save my time & money.	N			<b>97</b>	<b>43</b>	<b>29</b>
		%			<b>57.4</b>	<b>25.4</b>	<b>17</b>

(Source: Own Survey, 2016)

In this section Awareness on CBE mobile banking services is assessed and evaluated. As indicated in the above table 4.7 63.9% of the respondents answered that they are not aware of different feature of mobile banking service of CBE. In addition to this 66.9% of respondents answered that is not aware of whom to contact to become mobile banking users. 59.2% don't clearly know what services mobile banking deliver.

According to (Zahra, Atusa, Hamideh, Hoda, & Marjan, 2012) E-payment users are not limited by time or space, access to e-payment services. For example, people who are stuck in traffic or waiting in the queue will be enable to buy their favorite Internet-based activities or managing their daily transactions through mobile commerce applications .Consumers can know a special comfort that can improve their quality of life. By making services more comfortable, the customer will be more loyal.

In this research 59.2% of the respondents know that CBE provides mobile banking i.e. compatible to all type of phones. 77.5% of the respondents also aware that CBE has started providing mobile banking services. 60.3% of the respondents know that requirements to get mobile banking services. 56.2% of the respondents know that CBE currently deliver mobile banking services free or charge. 57.4% of respondents are neutral mobile banking service can save time and money.

All the above responses lead into conclusion that CBE needs to undertake an in-depth research on how to aware it's existing and prospective customers of the bank.

**Table 4.8. E-payment users' response to questions regarding awareness of Internet Banking**

<b>Awareness: On Internet Banking</b>			<b>Strongly disagree</b>	<b>disagree</b>	<b>neutral</b>	<b>agree</b>	<b>Strongly agree</b>
1	I am well introduced to the features of CBE's internet banking services.	N	47	67	<b>34</b>	<b>21</b>	
		%	27.8	39.6	<b>20.1</b>	<b>12.4</b>	
2	I know what internet banking is and its benefits.	N	48	69	<b>33</b>	<b>19</b>	
		%	<b>28.4</b>	40.8	<b>19.5</b>	<b>11.2</b>	
3	I clearly know what services internet banking deliver.	N	45	67	<b>29</b>		<b>28</b>
		%	<b>26.6</b>	39.6	<b>17.2</b>		<b>16.6</b>
4	I know whom to contact to get internet banking service	N	33	<b>35</b>	<b>34</b>	<b>56</b>	<b>11</b>
		%	19.5	<b>20.7</b>	<b>20.1</b>	<b>33.1</b>	<b>6.5</b>
5	I know the requirements to get internet banking service.	N	28	36	<b>38</b>	<b>59</b>	<b>8</b>
		%	16.6	21.3	<b>22.5</b>	<b>34.9</b>	<b>4.7</b>
6	I know using Internet banking can save my time & money.	N	<b>37</b>	<b>41</b>	<b>30</b>	50	11
		%	<b>21.9</b>	<b>24.3</b>	<b>17.8</b>	29.6	6.5
7	I know I can exercise my account from every corner of the world.	N	<b>66</b>	<b>40</b>	<b>50</b>	13	
		%	<b>39.1</b>	<b>23.7</b>	<b>29.6</b>	7.7	

(Source: Own Survey, 2016)

In this section Awareness on CBE internet banking services is assessed and evaluated. As indicated in the table 4.8 66.2% don't clearly know what services mobile banking deliver.

According to (Zahra, Atusa, Hamideh, Hoda, & Marjan, 2012) E-payment users are not limited by time or space, access to e-payment services. For example, people who are stuck in traffic or waiting in the queue will be enable to buy their favorite Internet-based activities or managing their daily transactions through mobile commerce applications .Consumers can know a special comfort that can improve their quality of life. By making services more comfortable, the customer will be more loyal.

In this research even 69.2% of the respondents also don't know what internet banking is and its benefits are and also 67.4% of the respondents don't well introduced to the features of CBE's internet banking services. So the bank has to do that to create awareness for the benefit of the internet banking. 39.6% of the respondents are known to whom to contact to get the internet

banking services. In addition to this 39.6% of the respondents are known the requirements to get the internet banking services. 62.8% of the respondents don't know that the account can exercise from every corner of the world. This implies that they don't have enough awareness of the internet banking.

All the above responses lead into conclusion that CBE has been successful so far that it has created good level of awareness to its customers about the service and due to the new nature of the product to the bank and the country as well, the bank requires to undertake customer recruitment and introduction campaigns for the services.

### 4.1.3. Ability

Some questions those have the potential to asses' customer's ability to use card banking, mobile banking and internet banking services for handling their account transaction were incorporated in questionnaire presented to customer respondents. Respondents' responses for those questions are presented and analyze in this particular section.

**Table 4.9. Response of e-payment service users regarding the level of ability on card**

#### Banking

<b>Ability: On Card Banking, ATM &amp; POS</b>			<b>Strongly disagree</b>	<b>Disagree</b>	<b>neutral</b>	<b>agree</b>	<b>Strongly agree</b>
1	I believe I would be able to perform transaction through ATM.	N	24	12	10	78	45
		%	14.2	7.1	5.9	46.2	26.2
2	Language is not barrier for me to use ATM and POS internet banking as I can communicate well in English.	N	19	31	17	50	52
		%	11.2	18.3	10.1	29.6	30.8
3	Learning to use ATM & POS is easy for me.	N	24	7	18	62	58
		%	14.2	4.1	10.7	36.7	34.3
4	I have the general ability to be user of ATM & POS service.	N	16	86	9	30	28
		%	9.5	50.9	5.3	17.8	16.6

*Source: Own Survey, 2016)*

Majority of customer respondents once again showed their agreement that they have the ability to use card banking of CBE. This is presented in the above table 4.9. 72.4% of respondents are able to perform transaction through ATM. In addition to this the customer respondents agreed on all the items incorporated under the variable ability except 60.4% of respondents are not

general ability to be user of ATM & POS. This implies that the customers do not have general ability to be used ATM & POS.

**Table 4.10. Response of e-payment service users regarding the level of ability on Mobile Banking**

<b>Ability: On Mobile Banking</b>			Strongly disagree	Disagree	neutral	agree	Strongly agree
1	I believe I would be able to perform transaction through mobile banking.	N	20	19	16	70	44
		%	11.8	11.2	9.5	41.4	26
2	Language is not barrier for me to use mobile banking as I can communicate well in English.	N	17	25	30	51	46
		%	10.1	14.8	17.8	30.2	27.2
3	Learning to use mobile banking is easy for me.	N	19	2	41	58	49
		%	11.2	1.2	24.3	34.3	29
4	I have the general ability to be user of mobile banking service.	N	24	8	30	64	43
		%	14.2	4.7	17.8	37.9	25.4

(Source: Own Survey, 2016)

Based on the table 4.10 67.4% of the respondents able to perform transaction through mobile banking. 30.2% of e-payments users respond that neutral for language is not barrier to use mobile banking. In addition to this the customer respondents agreed on all the items incorporated under the variable ability.

**Table 4.11. Response of e-payment service users regarding the level of ability on Internet Banking**

<b>Ability: On Internet Banking</b>			Strongly disagree	Disagree	neutral	agree	Strongly agree
1	I believe I would be able to perform transaction through internet.	N	36	99	34		
		%	21.3	58.6	20.1		
2	Language is not barrier for me to use internet banking as I can communicate well in English.	N	26	23	46	52	22
		%	15.4	13.6	27.2	30.8	13
3	Learning to use internet banking is easy for me.	N	18	32	34	59	26
		%	10.7	18.9	20.1	34.9	15.4
4	I have the general ability to be user of internet banking service.	N	9	120	40		
		%	5.3	71	23.7		

(Source: Own Survey, 2016)

79.9% of the e-payment service respondents were disagree that the ability to perform transaction through internet. In addition to this 76.3% of the users responds that they are not general ability to use internet banking service. 50.3% of the users responds that agreed to language is not barrier to use internet banking they can communicate well in English.

This leads in to conclusion about customers ability to use e-payment banking service of CBE that customers are capable of handling transaction through mobile banking regardless of the fact that English is the only language that has to be used to use the services. English will not also continue for long being the only language to use e-payment banking according to team leader of e-payment banking of CBE. When this study was being conducted, the team covers 90% of the task to make Amharic an alternative language to operate e-payment services. The customers of the bank however were not included in the training programs. In addition shows that bank should have change the internet service easy for customers. Further the bank should provide easily to use the internet service to get customers confidence to use and to expand customer base.

#### **4.1.4. Responsiveness**

Questions which have the potential to asses Responsiveness' of card banking were included in the questionnaire. In this section the researcher tries to evaluate the Responsiveness of e-payment service particularly Card Banking, ATM and POS.

**Table 4.12. Response of e-payment service users regarding the level of responsiveness on Card Banking**

<b>Responsiveness: On Card Banking</b>			<b>Strongly disagree</b>	<b>disagree</b>	<b>neutral</b>	<b>agree</b>	<b>Strongly agree</b>
1	I get immediate response for any support I request.	N	<b>36</b>	<b>14</b>	<b>117</b>	<b>2</b>	
		%	<b>21.3</b>	<b>8.3</b>	<b>69.2</b>	<b>1.2</b>	
2	The bank provides me with debit card with in less than two weeks from the date of application	N	47	<b>80</b>	<b>14</b>	<b>28</b>	
		%	27.8	<b>47.3</b>	<b>8.3</b>	<b>16.6</b>	
3	I always get the ATM machine functional	N	43	<b>57</b>	<b>26</b>	<b>18</b>	25
		%	25.4	<b>33.7</b>	<b>15.4</b>	<b>10.7</b>	14.8
4	I get immediate support upon call to the e-payment call center	N	<b>43</b>	<b>104</b>	22		
		%	<b>25.4</b>	<b>61.5</b>	13		
5	I usually get the machine not functional due to various reasons.	N	14	<b>87</b>	<b>50</b>	<b>18</b>	
		%	8.3	<b>51.5</b>	<b>29.6</b>	<b>10.7</b>	
6	I believe I get the service as good as my expectation	N	42	<b>91</b>	<b>36</b>		
		%	24.9	<b>53.8</b>	<b>21.3</b>		

(Source: Own Survey, 2016)

According to (Faruq Muhammad Abubakar, 2013) the resistant to change to e-payment systems by merchandise in Nigeria can be associated with lack of adequate infrastructure to support the use of the system, fear of uncertainty of the performance of the system and the required effort and influence of people who are important to others. The e-payment service in Ethiopia is found at its infant stage, CBE as pioneer bank to introduce the e-payment service has faced various infrastructural, trained manpower, resistance to adopt the service from the public side etc. due to these various factors the responsiveness of the service were highly reviewed and a team was organize to support the service delivery weaknesses.

E-payment service support team is organized in the bank with a dedicated phone number 951 however of those 169 respondents 86.9% disagrees on the immediate service support. Customers request for the Card issuance is also another important aspect for the service trust that requires fast response, with this regard only 16.6% agree and 75.1% disagree that the bank provides them with debit card with in less than two weeks from the date of application. ATM Machine functionality was also another question presented for the respondents to measure the trust worthiness' of the service in that 15.4% of them responds as neutral and 59.1% of the customers

responds that they get the ATM machine out of service due to various reasons. It can also see on the above respondents of the questionnaire the customer believe that as they expectations 21.3% and 78.7% were neutral and disagree respectively. It can also conclude from these the result the service on the e-payment requires further attention and improvement.

**Table 4.13. Response of e-payment service users regarding the level of responsiveness on Mobile Banking**

<b>Responsiveness: On Mobile Banking</b>			<b>Strongly disagree</b>	<b>disagree</b>	<b>neutral</b>	<b>agree</b>	<b>Strongly agree</b>
1	I get immediate response for any support I request.	N	<b>30</b>	<b>17</b>	<b>41</b>	<b>55</b>	<b>26</b>
		%	<b>17.8</b>	<b>10.1</b>	<b>24.3</b>	<b>32.5</b>	<b>15.4</b>
2	The bank provides me with all option on bank service except those services that require physical support.	N	21	<b>28</b>	<b>41</b>	<b>49</b>	<b>30</b>
		%	12.4	<b>16.6</b>	<b>24.3</b>	<b>29.0</b>	<b>17.8</b>
3	I always get all option on mobile banking service functional	N	35	<b>16</b>	<b>55</b>	<b>43</b>	20
		%	20.7	<b>9.5</b>	<b>32.5</b>	<b>25.4</b>	11.8
4	I get immediate support upon call to the e-payment call center	N	<b>43</b>	<b>24</b>	<b>45</b>	46	11
		%	<b>25.4</b>	<b>14.2</b>	<b>26.6</b>	<b>27.2</b>	6.5
5	I usually get the mobile service not functional due to various reasons.	N	40	<b>21</b>	<b>30</b>	<b>69</b>	<b>9</b>
		%	23.7	<b>12.4</b>	<b>17.8</b>	<b>40.8</b>	<b>5.3</b>
6	I believe I get the service as good as my expectation	N	48	<b>44</b>	<b>31</b>	<b>34</b>	<b>12</b>
		%	28.4	<b>26</b>	<b>18.3</b>	<b>20.1</b>	<b>7.1</b>

(Source: Own Survey, 2016)

The level of responsiveness on the mobile banking was analyzed based on the response to the questions presented to the e-payment service users. 46.1% of the respondents were agreed that their mobile banking service is not functional due to various reasons and 17.8% of respondents were neutral on the efficient functionality of the mobile banking. 47.9% of the respondents were agreed that they get immediate response for any support. 46.8% of the respondents were agreed that the banks provide all option on bank services. 39.6% of the respondents were not getting immediate support. 54.4% of respondents were not believed in the service. This respond implies that the banks give attention to customer for any respond to give public trust and the customer to believe our services it helps to expand customer base.

**Table 4.14. Response of e-payment service users regarding the level of responsiveness on Internet Banking**

<b>Responsiveness: On Internet Banking</b>			<b>Strongly disagree</b>	<b>disagree</b>	<b>Neutral</b>	<b>agree</b>	<b>Strongly agree</b>
1	Currently all menu options under internet banking are functional.	N	24	102	43		
		%	14.2	60.4	25.4		
2	The bank provides me with all option on bank service except those services that require physical support.	N		24	32	113	
		%		14.2	18.9	66.9	
3	I always get all option on internet banking service functional	N	32	28	39	47	23
		%	18.9	16.6	23.1	27.8	13.6
4	I get immediate support upon call to the e-payment call center	N	91	25	53		
		%	53.8	14.8	31.4		
5	I usually get the internet service not functional due to various reasons.	N	24	100	45		
		%	14.2	59.2	26.6		
6	I believe I get the service as good as my expectation	N	29	41	60	24	15
		%	17.2	24.3	35.5	14.2	8.9

(Source: Own Survey, 2016)

The levels of responsiveness on the internet banking were also analyzed based on the response to the questions presented to the e-payment service users. 73.4% of the respondents were disagreed that their internet service is not functional due to various reasons. 66.9% of the respondents were agreed that the banks provide all option on bank service except that required physically support. 41.4% of the respondents were agreed that internet banking all option is functional. 74.6% of the respondents' were not agree on the question that "Currently all menu options under mobile banking are functional".

All analysis it leads to conclude that CBE has strongly focuses on responsiveness the immediate support call center is not strongly established and there is also infrastructure problem the internet connection cannot get easily, cannot be access every were because of poor connections. All the responses imply that the e-payment service lacks responsiveness to provide the required service to the customers.



### 4.1.5. Perceived Quality

In this section the researcher tries to evaluate the quality of e-payment services of CBE through the question presented to and responded by e-payment users to know the customer perception about CBE e-payment services.

**Table 4.15. Response of e-payment service users regarding the level of Perceived Quality on ATM & POS.**

Perceived Quality: On Card Banking			Strongly disagree	disagree	Neutral	agree	Strongly agree
1	I suppose using ATM & POS enables me to accomplish banking activities more quickly.	N		11	43	82	33
		%		6.5	25.4	48.5	19.5
2	I suppose using ATM & POS allows me to perform all transactions that I could do physically.	N			35	112	22
		%			20.7	66.3	13
3	I believe financial transaction through ATM & POS banking is as confidential as any other bank transaction.	N		18	39	79	33
		%		10.7	23.1	46.7	19.5
4	The bank's ATM & POS services are easily accessible for me.	N		43	21	105	
		%		25.4	12.4	62.1	
5	CBE's ATM & Pos service can be determined as one with good quality.	N		11	43	82	33
		%		6.5	25.4	48.5	19.5

(Source: Own Survey, 2016)

As stated in the table 4.15 e-payment users were requested to answer certain questions to measure the level of perceived quality service on Card Banking, ATM & POS. 79.3% of the respondents were agreeing to perform all transactions that they could do physically. 62.1 % of the e-payment users were agreeing that ATM machine easily accessible. In interview staffs believe that the POS machines are not sufficiently available in shopping centers as required.

**Table 4.16. Response of e-payment service users regarding the level of Perceived Quality on Mobile Banking.**

Perceived Quality: Mobile Banking			Strongly disagree	disagree	Neutral	agree	Strongly agree
1	I suppose using mobile banking enables me to accomplish banking activities more quickly.	N		28	15	115	16
		%		16.6	8.9	65.1	9.5
2	I suppose using mobile banking allows me to perform all transactions that I could do physically.	N		15	35	96	23
		%		8.9	20.7	56.8	13.6
3	I believe financial transaction through mobile banking is as confidential as any other bank transaction.	N			39	100	30
		%			23.1	59.2	17.8
4	The bank's mobile banking services are easily accessible for me.	N			17	118	34
		%			10.1	69.8	20.1
5	CBE's mobile banking service can be determined as one with good quality.	N			87	44	38
		%			51.5	26	22.5

(Source: Own Survey, 2016)

All e-payment users agreed on the financial transaction through mobile banking and accessible of mobile banking service but only 51.5% of them were neutral for the good quality service of mobile banking.

**Table 4.17. Response of e-payment service users regarding the level of Perceived Quality on Internet Banking.**

Perceived Quality: Internet Banking			Strongly disagree	disagree	Neutral	agree	Strongly agree
1	I suppose using internet banking enables me to accomplish banking activities more quickly.	N		112	26	31	
		%		66.3	15.4	18.3	
2	I suppose using internet banking allows me to perform all transactions that I could do physically.	N	23	116	30		
		%	13.6	68.6	17.8		
3	I believe financial transaction through internet banking is as confidential as any other bank transaction.	N			27	126	16
		%			16	74.6	9.5
4	The bank's internet banking services are easily accessible for me.	N	30	98	41		
		%	17.8	58	24.3		
5	CBE's internet banking service can be determined as one with good quality.	N	14	39	116		
		%	8.3	23.1	68.6		

(Source: Own Survey, 2016)

As stated in the table 4.17 e-payment users were requested to answer certain questions to measure the attitude of users on quality internet banking service. 74.6% of e-payment users were agreeing on financial transaction through internet banking is confidential. 68.6% of the users were neutral on CBE's internet banking services determined as a good quality. On the other hand 66.3% of the users disagree with internet banking enables me to accomplish banking activities more quickly. 75.8% of respondents are disagreed with internet banking accessibility.

The result indicated that the External factors affects for example Tele network and electric power have contributed to the service interruption and also the impact of the network and power disruption is high and is creating a challenge of the e-payment quality service.

#### **4.2. The challenges of CBE's to providing E-payment services**

CBE is a pioneer to introduce electronic payments in the country when it launched proprietary ATM service in 2002. And there are a lot of strategies for e-payment service to develop in country. But there are a lot of challenges to provide e-payment services. According to the managements respond during the interview one of the challenge is infrastructure. CBE used dependent system with Ethio telecom so usually it arise network failure this affect the customer dissatisfaction and also card payment system infrastructure the bank should strength its operational and technical capacity by applying sophisticated card payment system, however the poor telecommunication network and electric power interruption has seriously affected the e-payment service delivery. The other one is awareness. According to the management respond during the interview to develop awareness on e-payment service to the bank has strongly plan to promote the e-payment services.

# **Chapter Five**

## **Summary, Conclusions and Recommendations**

This chapter deals with the summary of the findings and conclusions driven from the discussions and analysis of the study. It also ends up with the recommendations on the basis of the findings of the study.

### **5.1. Summary of the findings:**

CBE CHRD In collaboration with the e-payment service department was conducting various training programs to the bank management and branch officers. This was basically aimed to facilitate the implementation of the service. The customers of the bank however were not included in the training programs and it makes the awareness creation activity slow and steady. The operational staffs of the bank also lack previous experience on the service and it has contributed to the low level of awareness on e-payment service. Even the knowledge about the different features and attributes of the service is low. The confidence of customers on the services is not yet developed. According to the managements response during the interview only 32% of the debit cards printed are active, transaction made at least once from the date of issuance. 68% of Card holders of the bank are still using their pass books to withdraw cash from banks and make cash transfer to others while ATM machines are available in their proximity. This shows that the banks awareness' creation and customer recruitment activities done by the promotion department and bank branches is not achieved its goals and results in duplication of effort.

Responsiveness of the e-payment service is measured using various mechanisms mentioned in the analysis part. To improve the responsiveness of the service on mobile banking, the bank has made available alternative options on the mobile banking like USSD \*889#, Android and XHTML type of services. The service however has faced various problems, due to the fact that all the services are dependent on the government telecommunication network, the option has also faced a repeatedly service interruption. Although the bank provides alternative power by supplying generator and 3G services to the branches, the ATMs installed outside of bank branches are still suffered from the electric power and telecommunication network fluctuation.

It is also believed that the e-payment service must have high quality services and also the customer must do all doing in physically. According to the analysis in the internet banking service most of the respondent says is not accessible easily this comes from infrastructure. CBE must develop own network system not dependent on Ethio telcom.

E-payment system is a means of fast tracking the implementation of government policies through the elimination of delays in government payment system, the benefits however, cannot be realized due to the basic infrastructural inefficiency, lack of awareness and commitment.

## **5.2. Conclusion**

As a result of social and technological development; payment mechanisms have changed and developed from time to time. The older payment methods, barter and cash payment are replaced by newer, more efficient ones like account, paper base transaction and e-payment services. Since payment is a daily activity, the selection of a suitable payment method in a rapidly changing environment is critical. In order to benefit and get share from the dominant markets, economies require the adoption of modern e-payment technology.

The value of technological advancement is currently understood more than ever. E-banking is one result of today's technological advancement and banks which are providing these kinds of services are found to be more accessible and convenient to their customer. These all indicate the strategic importance of adopting modern day banking technologies such as e-banking to ease the banks operational activities and to satisfy customers in a greater level which leads in to a greater success.

The introduction and adoption of e-payment service is one of today's banks strategies to expand their market share and customer base. The adoption of the new and advanced technology however requires trained manpower, advanced technology and well developed infrastructure. Beyond the strategic benefits that banks acquire from the implementation of the service. Customers of the banks also get services in a reduced cost, easier access to information, increased comfort and timesaving transactions as they can check on multiple accounts at a time. CBE is adopting the latest technologies and introduce new services. The card banking, internet banking and mobile banking services are among the newly introduced services designed to

enable customers transact 24 hrs a day and seven days a week without the need to go to the bank's counter. The bank however has faced some challenges relating with e-payment service. Among the challenges, lack of awareness, less responsiveness system, dependent on other companies for network or less security, standardization, heavy investment costs, telecommunication network infrastructure and electric power interruption challenges are the serious ones. All these factors affected the development of the service as expected.

### **5.3. Recommendations**

CBE has invested huge capital on the human and material resource to make e-payment service available. Here with for the sake of getting maximum contribution from the e-payment service to the service excellence of the bank some changes and arrangements on the identified shortcomings of the service are critical. The following recommendations are forwarded as potential solution to the findings stated on this research.

- ✓ CBE needs to work more on the awareness creation to customer regarding the e-payment service and specifically on introducing the different features and attributes of the services. Some possible mechanisms are:
  - ☞ Redesigning the advertisement in a way that introduce the difficult features and attributes of the bank's e-payment services.
  - ☞ Applying additional advertisement channels to reach the public at large. Using bill boards, participating in trade fairs, using SMS advertisement, sponsoring events all dedicated to the e-payment services.
- ✓ To make e-payment services more convenient and accessible to customers, one of the major issues that have to be dealt with is the existence of poor internet connection quality. Though it is more of an external problem, CBE must act as much as possible as it is affecting its service in a significant manner. Some possible solution are:
  - ☞ Making special arrangement with Ethio telecom to get reserved high speed internet service.

- ☞ Enabling customers to adapt using the alternatives SMS and USSD code channel whenever they couldn't get capable accessories to use the web based mobile banking service.
- ✓ The potential customer of e-payment service who don't have the ability to communicate in English language need to be considered and the services also need to be provide through main local languages. The e-payment team is already developing a program that allows Amharic to be used as an alternative language for the services. The program needs to be implemented as soon as possible.
- ✓ CBE has to keep working to retain the good attitude of customer towards the e-payment services by keeping up meeting and exceeding customer's expectation. This could be achieved through following up and measuring customer's attitude periodically via series of studies.
- ✓ CBE's capacity of providing e-payment service needs to be enhanced. Some activities this could be done are:
  - ⇒ Arranging high level continuous training programs for technical staff members to equip them with the necessary skills to assure the service's proper functionality.
  - ⇒ Facilitating continuous communication between technical and operational staff members of the bank. This enables operational staff members (branch management in particular) to understand the services more, and technical staff members to get feedback on how customers are feeling.
- ✓ The misconception observed on CBE's branch management as customers are resistant to adopt e-payment service needs to be changed. As long as customers are aware of the benefits of the services, they will develop good attitude which makes it easy for them to adopt and continue as users of the services. Awareness of both the staff members and customer's needs to be boosted through arranging training programs and manuals for the staff members and through massive promotional activities' for customers. Renting an air-time on television and radio stations and broadcasting a continuous program about the bank and its operation could do a lot in creating an exhaustive awareness.

- ✓ The bank management should review its staff's knowledge on the basic futures of service and monitoring strategy should also be designed on how the service support is delivering.
- ✓ The raise awareness and confidence of customers on the service, at corporate level the bank has to communicate with educational institution like universities, collages high schools.
- ✓ The banks management commitment on the introduction of the service should be stretched to the extent of convincing top government officials to declare as a national agenda.
- ✓ Dedicated "system interruption controlling organ" has to be established centrally. The e-payment system interruption that arise due to various external factors like telecommunication network and electric power interruption has to administer by central interruption controlling organ. It can also provide solution easily by maintaining contact person with specific organizations. It has to identify clearly what causes the interruption and should communicate to the respective responsible organs of the bank for further communication with the stakeholders, partners.
- ✓ Power interruption on the mailbox of Telecommunication Corporation is the main source network interruption. The bank should communicate the responsible organs to link the box with generator found around the box.
- ✓ Specific standards' has to be set to control the service delivery of the bank, dedicated person on the e-payment service has to be assigned in all branches and it has to be consistent in service provision, ATM machines has to provide 24 hours service without interruption and machine down due to cash shortage should be avoided.



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# **ANNEXES**



**Part II: In this part of questionnaire the attitude and ideas of bank users on Card banking will be covered. Please mark [√] what you feel most appropriate, using the scale from 1 to 5 (Where, 1= Strong Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5= Strong Agree).**

<b>Awareness: On Card Banking, ATM &amp; POS</b>		SD (1)	D (2)	N (3)	A (4)	SA (5)
1	I am aware that CBE has started providing ATM & POS service.	1	2	3	4	5
2	I know well the benefits of using debit card both for the payers and receivers.	1	2	3	4	5
3	I have used the card banking before CBE introduces locally	1	2	3	4	5
4	I know how to use the ATM & POS to get cash and to make transaction.	1	2	3	4	5
5	I know whom to contact to get the ATM & POS services	1	2	3	4	5
6	I know the minimum requirement to get debit card.	1	2	3	4	5
7	I know whom to contact in case support is required.	1	2	3	4	5
8	I know using ATM & POS can save my time & money	1	2	3	4	5
<b>Ability: On Card Banking, ATM &amp; POS</b>						
1	I believe I would be able to perform transaction through ATM.	1	2	3	4	5
2	Language is not barrier for me to use ATM & POS as I can communicate well in English.	1	2	3	4	5
3	Learning to use ATM & POS is easy for me.	1	2	3	4	5
4	I have the general ability to be user of ATM & POS service.	1	2	3	4	5
<b>Responsiveness: On Card Banking, ATM &amp; POS</b>						
1	I get immediate response for any support I request.	1	2	3	4	5
2	The bank provides me with debit card within less than two weeks from the date of application.	1	2	3	4	5
3	I always get the ATM machine functional.	1	2	3	4	5
4	I get immediate support upon call to the e-payment call center.	1	2	3	4	5
5	I usually get the machine not functional due to various reasons.	1	2	3	4	5
6	I believe I get the service as good as my expectation.	1	2	3	4	5
<b>Perceived Quality: On Card Banking, ATM &amp; POS</b>						
1	I suppose using ATM & POS enables me to accomplish banking activities more quickly.	1	2	3	4	5
2	I suppose using ATM & POS allows me to perform all transactions that I could do physically.	1	2	3	4	5
3	I believe financial transaction through ATM & Pos is as	1	2	3	4	5

	confidential as any other bank transaction.					
4	The bank's ATM & POS services are easily accessible for me.	1	2	3	4	5
5	CBE's ATM & POS service can be determined as one with good quality.	1	2	3	4	5

**Part III: In this part of questionnaire the attitude and ideas of bank users on Mobile banking will be covered.**

<b>Awareness: On Mobile Banking</b>		SD (1)	D (2)	N (3)	A (4)	SA (5)
1	I am well introduced to the features of CBE's mobile banking services.	1	2	3	4	5
2	I am aware that CBE has started providing mobile banking services.	1	2	3	4	5
3	I clearly know what services mobile banking deliver.	1	2	3	4	5
4	I know CBE provide mobile banking compatible to all type of phones.	1	2	3	4	5
5	I know whom to contact to get mobile banking service	1	2	3	4	5
6	I know the requirements to get mobile banking service.	1	2	3	4	5
7	I know currently CBE deliver mobile banking services free of charge.	1	2	3	4	5
8	I know using Mobile banking can save my time & money.	1	2	3	4	5
<b>Ability: On Mobile Banking</b>						
1	I believe I would be able to perform transactions through mobile banking.	1	2	3	4	5
2	Language is not barrier for me to use mobile banking as I can communicate well in English.	1	2	3	4	5
3	Learning to use mobile banking is easy for me.	1	2	3	4	5
4	I have the general ability to be user of mobile banking services.	1	2	3	4	5
<b>Responsiveness: On Mobile Banking</b>						
1	Currently all menu options under mobile banking are functional.	1	2	3	4	5
2	The bank provides me with all options on bank services except those services that require physical support.	1	2	3	4	5
3	I always get all options on mobile banking service	1	2	3	4	5

	functional.					
4	I get immediate support upon call to the e-payment call center	1	2	3	4	5
5	I usually get the mobile service not functional due to various reasons.	1	2	3	4	5
6	I believe I get the service as good as my expectation	1	2	3	4	5
<b>Perceive Quality: On Mobile Banking</b>						
1	I suppose using mobile banking enables me to accomplish banking activities more quickly.	1	2	3	4	5
2	I suppose using mobile banking allows me to perform all transactions that I could do physically.	1	2	3	4	5
3	I believe financial transaction through mobile banking is as confidential as any other bank transaction.	1	2	3	4	5
4	The banks mobile banking services is easily accessible for me.	1	2	3	4	5
5	CBE's mobile banking service can be determined as one with good quality.	1	2	3	4	5

**Part IV: In this part of questionnaire the attitude and ideas of bank users on Internet banking will be covered.**

<b>Awareness: On Internet Banking</b>		SD (1)	D (2)	N (3)	A (4)	SA (5)
1	I am well introduced to the features of CBE's internet banking services.	1	2	3	4	5
2	I know what internet banking is and its benefits.	1	2	3	4	5
3	I clearly know what services internet banking deliver.	1	2	3	4	5
4	I know whom to contact to get internet banking service	1	2	3	4	5
5	I know the requirements to get internet banking service.	1	2	3	4	5
6	I know using Internet banking can save my time & money.	1	2	3	4	5
7	I know I can exercise my account from every corner of the world.	1	2	3	4	5
<b>Ability: On Internet Banking</b>						
1	I believe I would be able to perform transactions through internet banking.	1	2	3	4	5
2	Language is not barrier for me to use internet banking as I can communicate well in English.	1	2	3	4	5
3	Learning to use internet banking is easy for me.	1	2	3	4	5
4	I have the general ability to be user of internet banking	1	2	3	4	5



	services.					
<b>Responsiveness: On Internet Banking</b>						
1	Currently all menu options under internet banking are functional.	1	2	3	4	5
2	The bank provides me with all options on bank services except those services that require physical support.	1	2	3	4	5
3	I always get all options on internet banking service functional.	1	2	3	4	5
4	I get immediate support upon call to the e-payment call center	1	2	3	4	5
5	I usually get the internet service not functional due to various reasons.	1	2	3	4	5
6	I believe I get the service as good as my expectation	1	2	3	4	5
<b>Perceive Quality: On Internet Banking</b>						
1	I suppose using internet banking enables me to accomplish banking activities more quickly.	1	2	3	4	5
2	I suppose using internet banking allows me to perform all transactions that I could do physically.	1	2	3	4	5
3	The banks internet banking services is easily accessible for me.	1	2	3	4	5
4	CBE's internet banking service can be determined as one with good quality.	1	2	3	4	5

## **Annex B:**

### **Interview**

#### **St. Mary's University, department of MBA in General**

This Interview is prepared to be answered by the Technical, managerial, other operational staffs of the bank.

The researcher is working on the research as partial fulfillment of the requirements for the degree of master in MBA in general. Therefore, your genuine, frank and timely responses are quite vital to determine the success of this study. So, I kindly request you to answer the interview honestly and responsibly.

The paper under research is working on identifying the Challenges and prospects of e-payment service in the case of CBE in Addis Ababa area. In doing so it is expected to provide valuable suggestions from both sides of the operational and the managerial staff of the bank.

1. What weakness or inefficiencies does the e-payment service have in general?
2. Does the bank have procedures in place for when there is an interruption in service of e- banking (internet banking) for the customer?
3. What do you suggest the bank to do? To develop awareness on e- payment service to customers, a/c holders and other walking customers of the bank?
4. What possible actions, alternative solutions do you suggest to improve the performance of the e-payment service in CBE Addis Ababa area?
5. Do you believe E-banking is safer than paper based banking?
6. What do you think the e-payment service challenges in the case of CBE Addis Ababa area?
7. What advantages, a benefit does the e –payment service provide to the bank and customers in general?
8. To what extent do you believe the e-payment service is secured from theft by third party?
9. Finally, would you like to add: any comment, idea or suggestion about the e-payment service practices.

Thank you!