Assessment of Current Practice and Challenges of digital banking service

In Commercial Bank of Ethiopia

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In COMMERCIAL BANK OF ETHIOPIA THE CASE OF KIRKOS ADDIS ABABA DISTRICT

By

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr.Tassew Shedega. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for earning any degree.

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ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

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Advisor signature

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Contents

List of Acronyms and Abbreviations

CBE	Commercial Bank of Ethiopia
ATM	Automated Teller Machine
E-Banking	Electronic Banking
E-Commerce	Electronic Commerce
E-Payment	Electronic Payment
POS	Point of Sale
PIN	Personal Identification Number
USSD	UN-structured supplementary service data
XHTML	Extensible Hypertext markup language
WAP	Wireless Application Protocol
SPSS	Statistical Package for Social Science

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Abstract of the study

The aim of this study is to assess digital banking implementation challenges mainly focused on major types of digital banking service offered to customers in selected branches of Commercial Bank of Ethiopia in kirkos Addis Ababa District. Based on the general objective, the study has also formulated eight specific objectives and examined each in depth. In conducting the study, descriptive research design was employed. Both primary and secondary data were collected for the purpose of this study from customers of CBE in kirkos Addis Ababa district. Data was collected from respondents using questionnaire and key informant interviews.From the analysis of the collected data, the findings revealed that fund transfer, cash withdrawal, bill payment, purchasing goods, and service are the major service options available to the customer once they have begun to use digital banking. Besides, it is also confirmed in the study that the bank provides digital banking service to its customers using alternative channels of ATM, internet banking, mobile banking, CBE birr and point of sales. On the viewpoint of the customers: reduced costs, increased comfort and time saving, better cash management, faster way of conducting banking transactions are some of the benefits of using E banking and customers moderately understand the service of electronic banking provided by the bank. Based on sampled customer and key informants lack of suitable legal and regulatory framework, infrastructure issues, security concerns, and service design with respect to local languages option and unable to print receipt of online transactions are among the major challenges of e-banking service provided by CBE in the study area. However, Nurturing digital literacy to facilitate consumer trust and acceptance, investment in advance technology ,increase digital banking service accessibility 24/7 and train all employees who have direct relation with the customers and placing policy and procedures for dealing with digital banking transaction error, theft or fraud and system malfunction & human error are recommendations.

Key words;Digital Banking, ATM, POS, Mobile and Internet banking

CHAPTER ONE

Introduction

This chapter deals about background of the study; statement of the problem; objectives of the study; significance of the study; scope of the study; limitations of the study; operational definition of key terms, and organization of the study.

1.1 Background of the Study

The banking sector is undergoing rapid change from newly emerging developments, which expands economy and advances towards institutional and market completeness. Commercial banking is undergoing rapid change, as the international economy expands and advances towards institutional and market completeness. A major force behind these developments is technology, which is breaching geographical, industrial and regulatory barriers by creating new products,services and market opportunities, and developing more information and systems-oriented business (Liaoa & Cheung, 2002)

According to USB bank, Digital banking refers to the completion of financial transactions over the Internet using a bank's secure websites. Customers can conduct financial transactions using mobile devices and the internet with the aid of digital banking. Digital banking is often known as "online banking" or "web banking."Online banking provides all of the usual banking services that are offered at a local branch.

Digital banking is a part of everyday life. But from the original banchi in Italy to mobile banking, it’s been a long journey. The history of banks began in Italy with the banchi and the exchange business between merchants and money changers. The first ATM was introduced in 1967 and made a decisive contribution towards more flexible banking. But digital banking did not really take off until 1980, when online services were offered for the first time. The invention of the smart phone was the foundation for mobile banking and helped accelerate the digitalization of the banking sector.

In Traditional banking system, customers are visiting the banks for each and every transaction and keeping track of the account history through all paper statements. But now through digital banking system customers can save on the travel time and

conveyance money. Moreover, it has become highly convenient for working class, elderly people, to carry out their bank work from the comfort of their homes.

Through digital banking, you no longer need to wait for the bank working hours to carry out any bank work. Now you can do the required transactions whenever it is convenient to them, 24*7, even on holidays!

Digital banking is integrated system that can provide customers flexible, convenient and inexpensive platform with integrated services of online personal banking product including online checking and saving account , money market accounts ,certificate of deposit , credit cards , home equity loans investment service and other related financial services. Therefore using internet banking, bank customer can conduct the same banking transaction provided by brick and mortar branch at any time and any place through a simple and user-friendly browser (Polatoglu & Ekin, 2001).

1.2 Overview of CBE

The history of Commercial Bank of Ethiopia (CBE) dates back to the establishment of the State Bank of Ethiopia in 1942. CBE was legally established as a share company in 1963. Since then, it has been playing significant roles in the development of the country. Currently CBE has more than 37.9 million account holders in its more than 1842 branches and the number of mobile and internet banking user also reached more than 6.6 million and 37k.active card holders reached more than 8.3 million and 17 million CBE Birr users. Commercial bank of Ethiopia is the first bank in Ethiopia to introduce ATM services in 2001 and mobile banking on December 11, 2017. (https://combanketh.et/en/about/).

CBE's one of the strategic pillar is digital leader scaling mobile money and digital innovation. currently digital banking service or alternative channel users are increasing as a result of technological innovation .In June 2022, CBEs conducted comprehensive assessment on its strategy design and disclosed that one of the reason need to conduct comprehensive assessment is the bank has inefficient digital channels. To provide efficient and effective digital banking service primarily need to assess and understanding main challenges on implementations of digital banking service, level of digital channel functionality ,accessibility and consistency of digital banking services ,customer culture and awareness towards digitization, infrastructural

,security and trust issues, employees awareness (readiness)with regards to promoting and selling e-banking services , adaptation of new technology and regulatory factors. The study was contributed to find out and understanding major challenges and providing possible solution to expand digital banking service and migrate manual transactions into digitization in CBE.

1.3 Statement of the Problem

Digital banking provide 24 hours a day and 7 days in a week to access the banking service without the help of bank personnel such us withdrawal of money, cash deposit, card-less withdrawal of money, fund transfer(account to account transfer),transfer to bank to bank, utility payment, online loan request &balance inquires.

Banks are investing huge capital for maintaining (installing) digital banking technologies in order to cope up with customer preference, build strong competitive advantage, cost efficiency and productivity and less service delivery time.

In Ethiopia, adaptation and practice of digital banking service is very low because of many reasons. Some of the reasons are customer culture and awareness, Older generation and non-literate peoples are less keen to adopt digital technology, Digital banking service design functionality & accessibility issue , security and trust issues, regulatory bodies have Low experience of the legislator and the judicial systems dealing with digital topics, infrastructure dependency on tele com & EEU (only one Electric and tele service provider available, holding a monopoly, internet and EEU infrastructure is state owned; electric power and internet is not available everywhere, leading to slower infrastructure development process. This is set to change with the entry of safari com for internet service), employee resistance and awareness regarding digital banking services .As a result, the bank becomes inefficient and unable to achieve its strategies.

Many studies have been conducting on the problems of digital banking for instance Behailu (2020) conducting research about e-payment challenges and opportunities in CBE concentrated on only employees side, Tewodros (2016) studied about opportunity and challenges of internet-banking in CBE, his study focused on only one

type of digital channel. Selamawit (2018) also conducted a study on prospect and challenges of e- banking service in commercial bank of ethiopia the case of west addis ababa district, her study were not adequately addressing the challenges on implementing digital banking service.

The above researches conducted on the problem of digital banking service shows inadequate information regarding main challenges on implementing digital banking service in CBE, in this sight, the study seeks to adequately assess the major challenges of implementing digital banking service in Commercial Bank of Ethiopia.

1.4 Objectives of the Study

1.4.1 General Objective

The main objective of this study was to find the major challenges on implementing digital banking service in Commercial Bank of Ethiopia the case of kirkos Addis Ababa district.

1.4.2 Specific Objective

1. To assess product and service offered to the customer in selected branch under kirkos Addis Ababa district.
2. To assess customer understanding about digital banking service in selected branch under kirkos Addis Ababa district.
3. To assess benefits which customer gains from utilizing digital banking service in selected branch under kirkos Addis Ababa district.
4. To assess digital banking service design fits with customer expectation in selected branch under kirkos Addis Ababa district.
5. To find ATM ,Internet and Mobile banking and CBE Birr related problem of customers in selected branch under kirkos Addis Ababa district.

1.5 Research Questions

1. What are the digital banking services that are provided to customers at Commercial Bank of Ethiopia?
2. What is the level of customers' understanding about digital banking services provided by Commercial Bank of Ethiopia?
3. What benefits do customers gain from using digital banking services provided by Commercial Bank of Ethiopia?
4. Does CBE's digital banking service design meets customer need?
5. What are ATM,Internet and Mobile banking and CBE birr related problems of the customer in CBE?

1.6 Significance of the Study

This study is significant to identify main issues that affect effective and efficient implementation of digital banking service and providing possible solution and recommendation. Based on the recommendation on identified problem, the bank could expand digital banking service and migrate the bank manual transaction to digitization.

Additionally the study helps the bank to realize one of the strategic pillar; being digital leader scaling mobile money and digital innovation. Lastly, the study can be used as reference material for future researchers on this area of study.

1.7 Scope and Limitation of the Study

1.7.1 Scope of the study

The study was delimited to assess the main challenges that affect implementation of digital banking service on four selected branches customers and employees .delimited on geographical location under kirkos district branches employees of four selected branches: special branch, grade IV and grade II branches (Finfine, Dilgebeya, Gofa mazoria and Bisrate Gebriel) respectively in employees point of view and Externally,

from customers (who are using digital banking service more than one year) point of view.

1.7.2 Limitation of the Study

1. Data collected from employees and customers who are using digital banking service for more than a year from selected branch.

2. In addition, source of secondary data and literature is limited in this area from the country perspective.

1.8 Organization of the Study

This study has five chapters. The first chapter deals with the introduction part, which includes Background of the study, Statement of the problem, Objectives of the study, Research questions, Significance, Scope and Limitations of study. The second chapter is on the theoretical and empirical review of related literature towards digital banking service. The third chapters reveal description of the study, research design and methodology, sampling size and techniques and data collection and analysis. The fourth chapter presents discussion of the results of the study which is conducted through questionnaire and interviews and the final chapter is signifies Summary, Conclusions, and Recommendations.

Operational definition of terms and concepts

Automated teller machine: shall refer to unattended acceptance terminal that has electronic capacity, accepts PIN, dispense/receive money, and may provide balance confirmation, fund transfers between accounts and other services.

Core banking: shall mean a banking system that is centralized, online and real-time exchange which is provided by networked branches of the bank through which customers may access their bank account and perform basic transactions.

Personal identification number (PIN): shall mean a secret numeric password shared between the user and the electronic payment system which is used to access the electronic banking service.

Point of Sale (POS): shall mean an electronic payment channel facilities purchase of goods and services using payment card.

USSD & XHTML, down-loadable and smart applications mobile banking functionality

CHAPTER TWO

Review of related literature

Introduction

The world of banking is changing rapidly, with digital banking service increasingly becoming the norm. With the advent of smart technology, people are now able to view their bank accounts, make transactions, and manage their finances right from their mobile device. This chapter includes theoretical and empirical literature review of the study. Theoretical review contains definition of digital banking, benefits of Digital Banking, Reasons for implementing the digital banking service, types of digital banking service, factors influencing digital banking service implementation and digital banking service in Ethiopia. In addition empirical literature review of different researchers in different regions of the world.

2.1 Theoretical review of literature

The fast advancing global information infrastructure (including information technology and computer networks such as the Internet and telecommunications systems) enable the development of electronic commerce at a global level. The nearly universal connectivity which the Internet offers has made it an invaluable business tool. These developments have created a new type of economy, which many call the digital economy.(Shah & Clarke, 2009)

Most banks choose to deliver their products and services through multiple channels, including the Internet and telephone. Often the main goal of e-banking is to provide most, if not all, of the services offered at a branch. This may include transactions as well as information, advice, administration, and even cross-selling. However, the interactive nature of the Internet not only allows banks to enhance these core services, but also enables banks to communicate more effectively and enrich customer's relationships.

When combined with the improving analytical capabilities of data mining, customer's relationships management and other related technologies, the potential for enriching the relationship with customers is huge. In the context of e-banking, many challenges lie ahead in the banking sector. First of all banks need to satisfy customers' needs that are complex and difficult to manage. Second, they need to face up to increased competition from within the sector and from new entrants coming into the market. Third, they must continually invest in new products and services in the light of the changes described above. Central to meeting these challenges is the development of strategies to exploit existing markets and explore new ones using new delivery channels such as the Internet or mobile banking. However these new delivery channels bring their own sets of organizational and external challenges, which need to be managed in order to achieve success.(Mary & Brian,2000)

2.1.1 Definition of Digital Banking

Digital banking is the move to online banking where banking services are delivered over the internet. The advantages for banks and customers are providing more convenient and faster banking services. It provides the ability for users to access financial data through desktop, mobile and ATM services'-banking can be simply

defined to mean a process where banks create a platform for its customers to generally access information and to transact businesses electronically through an electronic device without necessarily being present at the bank (Annin et al., Citation2013).

Electronic banking enhances the development of the financial system in general and the banking industry in particular, and it is considered as a strategic weapon for banks to cop up with today's stiff competition (Al-Smadi, Citation2012).

2.1.2 Digital Banking Solutions

Digital banking solutions merely representing online banking platforms, the tools they offer help to differentiate the financial organization or bank that uses them based on the service level that's being provided. Digital banking solutions ensure that modern financial organizations and banks are able to achieve their business goals using functionality that is ready to use. New functions can also be added over time as the organization grows to provide great business value with no hidden costs.(https://advapay.eu/digital-banking-explained-trends-solutions-functionality-benefits-costs-providers/)

2.1.2.2 The Benefits of Digital Banking

- Products & services can be launched to market faster, compared to a bank's own development process. Traditionally speaking, developing software from scratch in a short period of time is almost impossible, with the process typically taking at least a year.
- External & internal systems can be seamlessly integrated, with ready digital banking solutions often including a range of ready-to-use integration.
- Customizing a ready-made modern system with your branding is far quicker than developing solutions like these from scratch.
- Banks can go live rapidly with minimal risk, compared to developing their own products. When developing their own solutions, the process can be held up at any time. For example, there's the risk of losing specific skills and

competencies when employees leave, as well as going over budget, as total costs are tricky to work out accurately at the outset.

- Products can be created to meet your budget, which is far more efficient than developing digital banking solutions in-house. (https://advapay.eu/digital-banking-explained-trends-solutions-functionality-benefits-costs-providers/)

2.1.3 Reasons for Implementing the Digital Banking

The change in the preference of the customers from offline services to online and mobile banking services has resulted in the adaption of Digital Banking. Initially, many financial organizations and Banks struggled in adapting the online banking experiences, but due to the increasing demand of the customers, the banks could not afford to wait to invest in digital transformation. As the customers were switching the banks for availing the digital banking facility. Digital Banking allows the customers to enjoy a perfect online facility of paperless banking, where it is not required to keep track of the transactions.(https://enterslice.com/learning/reasons-for-implementing-the-digital-banking/)

Banks primary motive for implementing e-banking:-

1. Customers' Demands:-With the emergence of the digital economy the balance of power seems to be shifting to customers. Customers are increasingly demanding more value, 24 hours availability, with goods customized to their exact needs, at less cost, and as quickly as possible. To meet these demands, banks need to develop innovative ways of creating value, and e-banking is seen as one of those innovative ways to meet customers' expectations. (Shah & Clarke ,2009)

2. Selling More to Existing Customers:- The financial services markets in most developed countries have matured considerably and there is very limited scope for creation of new markets. This means that the most common route to growth is to sell more products to existing customers. Early indications are encouraging as both the volume and value of new business generated from the Internet channel are growing for the banks which have implemented e-banking. In addition to this Increase in service quality of the banks can satisfy and develop attitudinal loyalty which ultimately retains valued customers (Kumbhar, 2010).

E-banking often attracts high profit customers with higher than average income and education levels, which helps to increase the size of revenue streams. For a retail bank, e-banking customers are therefore of particular interest, and such customers are likely to have a higher demand for banking products. Most of them are using online channels regularly for a variety of purposes, and for some there is no need for regular personal contacts with the bank's branch network, which is an expensive channel for banks to run (Berger & Gensler, 2007).

3. Enhanced Image; - E-banking helps to enhance the image of the organization as a customer focused innovative organization. This was especially true in early days when only the most innovative organizations were implementing this channel. Despite its common availability today, an attractive banking website with a large portfolio of innovative products still enhances a banks image. This image also helps in becoming effective at e-marketing and attracting young/professional customer base. (Shah & Clarke, 2009).

4. Changes in the Environment;-There have been some significant shifts in the importance of different sectors of the economy. In most western countries, primary (such as mining, agricultural) and secondary (manufacturing) have been steadily declining, whilst the service (e.g. financial services) sector is growing in importance. This has increased the prominence of service sector organizations, resulting in more pressure on them to diversify their offerings and look beyond their immediate markets to create value. They see new technologies such as the Internet and mobile telecommunications as a key enabler in accessing new markets and the creation of value. Social changes are also forcing banks to change the way they interact with their customers. Customers are increasingly mobile (they move or travel more often), and this, coupled with the rise of single person households, means that demand for flexible services is rising at rapid pace.

5. Banking is a Hygiene Factor;- Some banks are offering e-banking because their competitors have done it, and not doing so will mean losing an important customer segment to traditional competitors as well as new entrants to the financial sector. If this is their sole reason for doing so, they often drag behind their competitors and lack

of enthusiasm prevents them from using e-banking to boost other sources of innovation, which are often enabled by the new technologies.

6.Achieving Competitive Advantage;- To gain competitive advantage, banks must continually develop new and innovative services to differentiate themselves from the competition, as having a large branch network or even e-banking is no longer seen as a main source of competitive advantage. Innovative products and state of the art customer service are the key differentiating factors and e-banking could play a central role in achieving both. New types of interactions enabled by the Internet and other communication technologies create innovative relationships between consumers, marketers and suppliers of products and services. These relationships can enable exchange of an unprecedented flow of information in all directions (Talha et al., 2004).

7.To Achieve Efficiency ;-Some banks look at e-banking from a cost savings point of view, as it is widely reported in e-commerce literature (Shah et al., 2007) that cost per transaction is much lower than for other service delivery channels. Banks may fail if they are thinking only of providing low cost transactions, as these costs only become lower once a bank exceeds a critical mass of online customers, owing to the large upfront costs of implementing e-banking. E-banking can also help lower operational costs since, to offer e-banking, banks have to fine tune their business processes, systems and the ways in which employees communicate with one another. This may be seen as an unnecessary and costly exercise initially, but in the long run can prove immensely valuable, and may even enable a bank to survive the economic pressures and down-turns.

8. Increased accuracy;-Traditional banks that rely mainly on paper processing can have an error which requires reworking. Coupled with lack of IT integration between branch and back office personnel, this problem reduces business efficiency. By simplifying the verification process, it's easier to implement IT solutions with business software, leading to more accurate accounting. Financial accuracy is crucial for banks to comply with government regulations.

9. Greater agility;-The use of automation can speed up both external and internal processes, both of which can improve customer satisfaction. Instead of banks hiring and training risk management professionals, it's possible for risk management

software to detect and respond to market changes more quickly than even seasoned professionals.

10. Increased Revenues;-as a result of offering e-channels are often reported, because of possible increases in the number of customers, retention of existing customers, and cross selling opportunities.

11. Easier Expansion-Traditionally;-when a bank wanted to expand geographically it had to open new branches, thereby incurring high startup and maintenance costs. E-channels, such as the Internet, have made this unnecessary in many circumstances. Now banks with a traditional customer base in one part of the country or world can attract customers from other parts, as most of the financial transactions do not require a physical presence near customers living/working place. (Shah & Clarke ,2009)

2.1.4 Types of Digital Banking Services

Digital banking service typically includes automated teller machines (ATMs), mobile banking, internet banking, point of sale (POS) and mobile money (CBE BIRR in CBE Context)

2.1.4.1 ATM

ATM Card is a valid card encoded with magnetic strip and/or data put on chip used for cash access or for goods and services payment. ATM is an electronic banking outlet that allows customers to complete basic transactions without the aid of a branch representative or teller. Anyone with a credit card or debit card can access cash at most ATMs. ATMs are convenient, allowing consumers to perform quick self-service transactions such as deposits, cash withdrawals, bill payments, and transfers between accounts.

2.1.4.2 Mobile Banking

Mobile banking refers to the provision and providing of bank-related financial services with the help of mobile telecommunication devices. The most common payment services available on mobile payment include fund transfers between accounts, bill payments, prepaid mobile air time recharge, payments, balance inquires, account alerts, and customer services. Mobile payment is becoming prominent as it enables anywhere anytime banking Unlike to the other electronic payment channels

(ATMs, POS, Internet), it does not pose a limitation on customer as customers requires only their mobile phones to get access to their accounts while waiting for a bus, while traveling, during at late at night etc.

2.1.4.3 Internet Banking

It is an electronic service provided by the Bank to allow customer to perform transactions, payments etc. over the Internet -through a banks secure website. Banking is now no more limited in going and visiting the bank in person for various purposes like depositing and withdrawing money, requesting for account statement, stop payment, etc. All these tasks and many more can be done using the online services offered by the bank. Internet banking is becoming the predominant banking for both informational as well as transactional medium. Internet banking allows the growth and expansion of e-commerce without geographic limitations through the worldwide web. For corporate customers, it offers a cash management package which is crucial for fund management decisions.(CBE Hand book for customer classification Dec 2016)

2.1.4.4 POS (Point-Of-Sale)

Point of Sale (POS) as an electronic payment channel facilitates purchase of goods and services using payment card. It is a non cash alternative that allows customers to purchase goods and services through instant transfers of funds from their accounts to merchants. The use of point of sale can be extended to paying bills, recharging prepaid mobile, and fund transfers. However, POS can also be used for cash advance services which allows manual cash disbursement by bank tellers while automatically posting transactions. In such cases, POS are used as a substitute to ATM's..(CBE Hand book for customer classification Dec 2016)

A Point-Of-Sale (POS) or point of purchase (POP) is the time and place where a retail transaction is completed. After receiving payment, the merchant may issue a receipt for the transaction, which is usually printed but is increasingly being dispensed with or sent electronically. Any form of payment can be used, such as cash, debit cards, credit cards, mobile payments and even Bit coin.www.RACEInstitute.in

2.1.4.5 Mobile Money

Mobile money is an electronic wallet service. This is available in many countries especially it is very popular in place where people are less likely to have bank accounts and allows users to store, send and receive money using their mobile phone every transaction requires identification in the form of a secret pin. The safe and easy electronic payments make mobile money a popular alternative to bank accounts. Most mobile money service are offered by local mobile telecoms operators who have received a license to operate electronic payment services. Some mobile money service are offered by banks and other companies. It allows users to purchase items in shops or online, pay bills, school fees, and top-up mobile airtime. Cash withdrawals can also be carried out at authorized agents.

2.1.5 Challenges in implementing digital banking service

2.1.5.1 Customers understanding (awareness) about digital banking

Many banking customers are not even aware of availability of mobile banking or associated benefits. As with other technologies, awareness increases with time and needs considerable promotional efforts.

To promote adoption, customers need to be made aware of the advantages mobile banking offers over other channels. Customers should be provided with opportunities to try out mobile banking or see demonstrations, maybe at branches or through electronic media, of how this channel operates. This would raise awareness, and give people a better understanding of mobile banking options. In addition, services being offered should be widely advertised to the target market, such as young people who tend to be early adopters of innovative services. Lack of awareness causing people to hesitate or resist Internet based services, the bank can launch a properly planned communications campaign to give information tailored to help in this situation (Kuisma et al., 2007).

According to Kuisma et al. (2007) banks should identify causes of resistance and address them directly. The feelings of insecurity and learning issues which are common barriers to adoption could be avoided by proper marketing campaigns, communication with customers, customer training and user-friendly website design. To facilitate adoption, banks also need to pay systematic approach to customers

learning processes and adopt their tutorials and other training material according to the learning needs of their customers.

2.1.5.2. Customer trust, risk & Security

Trust is a commitment to maintaining digital banking, trust in digital banking application and its reliability. One of the biggest obstacle in the growth of e-commerce is the lack of trust many people feel when they conduct transactions online. Developing a trustworthy online brand is a strategic as well as a managerial challenge. Trust in e-banking is much more important than in some other areas of e-commerce simply because of the potential for greater damage if a customer is subject to an online fraud. (Shah & Clarke ,2009)

According to Chankar et al (2002) perceptions of online trust have steadily evolved from being a construct involving security and privacy issues on the Internet, to a multidimensional, complex construct that includes reliability/credibility, emotional comfort and quality for multiple stakeholders such as employees, suppliers, distributors and regulators. Financial regulators would like to know whether the website complies with relevant laws, privacy regulations and security regulations, and whether the bank website has reliable and fair mechanisms for addressing failures in the provision of accurate data, product delivery or any other violation of regulations. Other important issues, which will require different organizations such as retailers, regulators, and other intermediaries to work together, include having clear and fair refund policies, clear pricing (e.g. interest rate) policies, and so on.

Lack of consumer trust is a major hurdle in the growth of e-banking. When the perception of benefits outweigh the risks in the relationship, the person enters into a trusting relationship (Carr, 2007).

Having some sort of physical presence or having an already established brand name often proves to be an invaluable asset in inspiring consumer trust. Consequently, banks with well trusted brand names which also keep high street branches are performing better in e-banking than their rival online only banks. It appears that e-banks are relatively easy to set up in comparison to traditional branches based banks. E-banking will give customers much more choice but the ease of switching means

they will be less likely to remain loyal. Experience has also shown that start-up costs are high, as establishing a trusted brand is costly and takes time (Sergeant, 2000).

Perceived risk is defined as the level of uncertainty that users face in certain buying situations (Cox & Rich, 1964). Perceived risk for digital banking users refers to the worst expectations in finding the best results from the adoption of digital banking services (Yousafzai et al., 2003). So, this perceived risk or uncertainty affects ones confidence in technology adoption decisions. The more perceived risk, the adoption of mobile banking will be increasingly avoided, and vice versa (Al Kailani & Kumar, 2011).

Perceptions of risk, as with many innovations need to be addressed by limiting customers' liability and implementation of latest security technologies. New versions of WAP (Wireless Application Protocol) use encrypted digital signature to enhance security. The functionality and user interface of mobile devices is improving all the time whereas the cost of Internet connectivity in the developed world is decreasing. These developments mean that the prospects of widespread mobile banking adoption now looks brighter than ever.

Security:- digital banking services are basically offered through information technology and internet services. The entire data of the bank is now online security factor checks the level of safety of customers data and money.(https://www.researchgate.net/publication/350134465_Digital_Banking-_Relation_of_Determined_variables_related_to_Service_Quality)

Mobile technology still suffers from questionable security. So it may not be suitable for transfer of highly confidential financial information. Mobile devices are increasingly becoming a target for virus writers, hackers, and short message service (SMS) spammers. According to Tower Groups research, over 200 mobile phone viruses have been identified since phones have been able to support PC-like applications such as email, instant messaging and Web browsing, and the number is doubling every six months (Blau, 2007).

The resulting disruption of service and data theft can cause many problems for consumers, including lost revenues and customer dissatisfaction for mobile operators. However, the greatest loss may be absorbed by banks providing mobile access, as in

almost all cases of fraud banks suffers from the losses. This factor may be making many banks hesitant in providing mobile banking. To be successful in mobile banking the industry must develop an ability to effectively contain the malware problems to a level that is at least on part with that of the existing Internet channels. (Shah & Clarke, 2009)

Security related issues are a major source of concern for everyone both inside and outside the banking industry. E-banking increases security risks, potentially exposing traditionally isolated systems to the open and risky world of Internet. According to McDougall (2007) security problems can mainly be categorized as; hacking with criminal intent (e.g. fraud), hacking by casual hackers(e.g. defacement of web sites or denial of service - causing web sites to slow or crash), and flaws in systems providing opportunities for security breaches (e.g. a user's is able to transact on other users accounts). These threats have potentially serious financial, legal and reputational risks associated with them. .

According to Drake and Clarke (2001) security threats largely fall into the following categories:

- ✓ Login detail disclosure: This is most basic threat to the financial system. Using a number of means, criminals acquire login details, such as a customer number, pin, and use it to access the account and steal money from it. This threat could be mitigated through promotion of good practice amongst consumers to keep their login details safe.

- ✓ Computer spy viruses: These are computer programs which are circulated through email or other means. Once a customer opens a malicious email a program is automatically installed in his/her computer. These programs collect login id or other financial information which is used to conduct a range of criminal activities such as credit card cloning or unauthorized funds transfer.

- ✓ Dummy sites: Here customers are lured to the dummy or look alike website. These website look very similar to a banks website, and when login details are entered, these are recorded and used for criminal activities. Most of these threats can be mitigated by promoting good password practice.

Banks, regulators and professional association provide good practice guidelines to customers. One of the main problem with implementing security solutions is customer resentment against several layers of security which might lead to loss of customers. Another problem is the high cost associated with them; most sophisticated systems can be implemented only for the highest value parts of e-banking systems. Hackers are not the only security threat, employees or contractors can do as much damage as a hacker can. Therefore security provisions are also necessary for internal threats. In the face of multi faced, multi directional security threats, implementing ad hoc security systems may not be the best approach.

2.1.5.3 Digital banking service design

Ease of use:- with regards to digital banking service web site design, operational functionality and accessibility.it is important that digital banking services are available and accessible to the customer when they need to avail the services in order to bring more and more customers to the digital banking platform. High speed public Internet access is offering opportunities to get and stay connected in more locations. Today, hotels that cater to business travelers frequently offer in-room high speed Internet access. As these high speed access networks ramp up, mobile applications are growing in popularity (Phifer, 2004).

Perceived ease of use has been defined by Davis (1989) as the extent to which a person believes that using a particular system will be free of effort. Consumer behavior research found that consumers who feel the benefits and conveniences of the system affect the intention of consumer behavior towards the system (Gao & Bai, 2014).

Ease of use is defined as the extent to which potential users expect the target system to be free of effort (Venkatesh & Jemes, 2012). Perceived ease of use, which is defined as the perception of ease, is ones perception that using technology can be easily understood and applied.

In other words, perceived ease of use is a level of confidence in the ease of using an application in carrying out its activities. Customers use the banking services by themselves without any direct interaction with the bank staff. It is kind of self-service. (Shah & Clarke, 2009)

There is considerable weight attached to the appropriate design of e-banking websites. Poor design of website has been estimated to result in the loss of up to 50 percent of potential repeat visits (Cunliffe, 2000).

Poor design:-may include use of inappropriate colors, contrast, font or navigation functions. Lack of proper functionality, excessive use of graphics or other similar factors can also deter customers from coming back to that website. Web usage barriers can also be attributed to vision, cognition, and physical impairments associated with the normal aging process. Vision changes include a decline in visual acuity resulting in inability to see objects on a screen clearly, decreased capacity to focus at close range, or increased sensitivity to glare from light reflecting or shining into the eye. These physiological changes, and many others, impact the user's ability to see Web objects and read online content (Becker, 2005).

Preferred language:- Financial services related websites are usually very large and consume large resources in language translation process. The problem does not end with the translation of a website, it also need be adapted to the local culture to attract visitors. Banks around the world would do well to learn from Swiss banks, which successfully offer their services in several different languages. These play a major role in global e-Commerce. Although English is accepted as the primary language of the Internet worldwide, in some cases a website has to be designed specifically to suit the market that it is trying to reach. The main problems associated with this are speed and cost. It takes a human translator up to a week to translate a small website into just one language (Turban et al., 2000).

Advancements in information and communication technologies (ICTs):-have been the primary drivers behind the rise of e-banking. According to Consoli (2003), Most of systems were developed before the arrival of e-banking (thus the term legacy systems used for them) so they often lack connectivity, meaning they are difficult to connect to each other or with new systems. E-banking often requires rapid modification in systems to respond to changes in the market, and because of lack of flexibility in these systems they are very difficult of modify swiftly.

The number of mobile devices has been increasing rapidly, there are many times more mobile devices in use than personal computers, and their functionality is also improving all the time. Organizations should start with new Web technologies and e-commerce functionality and combine them with the design, development and implementation of management practices that have been proven successful for other types of large-scale, complex, mission-critical systems. (Shah & Clarke, 2009)

2.1.5.4 Lack of suitable legal and regulatory framework in digital banking context

As the Internet is a global medium, it creates opportunities for trading on an international basis, but every country has its own laws and regulations concerning the provision of financial services.it is also a major source of consumer intelligence (personal information, buying patterns and behavior) which raises a number of privacy, security and data protection issues which regulators must address effectively. To do this new regulations must be put in place more quickly than in the past, leading to constant changes in laws and regulations, and complicating compliance; again a major obstacle to the growth of e-banking. (Shah & Clarke, 2009)

Financial services are regulated by various regulatory bodies around the world. Typically the main objectives of regulatory bodies may include:

a. Maintaining market confidence;

b. Promoting understanding of the financial system;

c. Protecting consumers against frauds and privacy violations; and

d. Reducing financial crime.

Regulators play a vital role in the delivery of financial services regardless of the channel used, and are taking a keen interest in e-banking related developments owing to the new opportunities this channel has brought for the financial sector and the new threats to organizations and customers. For this reason many regulatory bodies have set up consultation committees and are developing new regulations to address e-banking specifically. One problem is that e-banking is evolving very rapidly, and to keep pace with it new regulations are coming into force on almost monthly basis. This

in turn has made the task of regulations management even more challenging. Managers involved in e-banking, whether it is development of e-products or e-marketing or delivery, need to be aware of relevant regulations to ensure compliance. Many banks employ specialist staff to ensure compliance with regulations. (Shah & Clarke ,2009)

Now a days digital banking services frequent problems are fraud, theft, and robbery of payment instruments which results in the unauthorized access of customers account, failure to access and effect the transfer of funds due to technical imperfections, and erroneous electronic fund transfers, problems related to: authorization and authentication of customers instruction, admissibility of e-banking records (e-evidence), absence of countermand for erroneous electronic fund transfers, confidentiality and privacy of critical financial information, and lack of adequate dispute resolution mechanism that protects the consumers of the e-banking results from In adequacy of e-banking regulation in regulating the aforementioned problems. (Shah & Clarke ,2009)

2.1.5.5 Customer service (Help desk)

Customer service is an important factor through which banks retain and gain their new client base. A bad experience with the service provider not mitigated at the right time by the relationship officer can be a damper on the bank's reputation. With technology being the first face in digital banking, non-human bots and customer care help lines are gradually replacing the personalized service that customers still love. These automated services can frustrate customers to the point of quitting. Most online banking apps are creating sets of possible questions for customers, hoping to solve problems. But not all questions address specific problems customers throw. People lack time and are mostly impatient. They prefer being attended to immediately. Customers cannot be made to wait in long queues and quick attendance must be the lookout. The automated system needs greater improvement, supporting the exact customer query. https://www.bankofbaroda.in/banking-mantra/digital/articles/advantages-and-challenges-of-digital-banking

Harden (2002) suggests that e-channels erode a direct relationship with customers as compared with traditional over-the-counter banking: e-banking does not offer face-to-

face contact in what is essentially a one-to-one service relationship. To compensate, e-banks must deliver higher quality services in order to compete with other service delivery channels (Liao & Cheung, 2005).

2.1.5.6 Infrastructure related Problems

At present, the availability of e-banking is substantially greater in developed countries than in developing economies. Many developing countries do not have the necessary telecommunications, banking, commercial, bureaucratic and legal infrastructures to support the widespread introduction of e-banking (Simpson, 2002). Access to the Internet is a major problem in the developing world, and presents an obstacle to the growth of e-banking.

Capacity/Scalability Problems:-Banks should continuously invest in new technologies and focus on big data analytics and establish trustworthy client relationships. (Oliver 2016) It is difficult to predict the usage of e-banking on an hourly or daily basis. These scalability problems can give rise to a slowing down of the website, or even a website crash (temporary unavailability). This can cause many reputation problems and financial damage. Some of the ways of addressing this problem according to Seargeant (2000) are:

- ✓ Undertake market research to predict demand,
- ✓ Adopt systems with adequate capacity and scalability,
- ✓ Undertake proportionate advertising campaigns, and
- ✓ Ensure adequate staff coverage and develop a suitable business continuity plan which not only helps coping with scalability problems but with other causes of systems failure. A number of other technical solutions are also available to address this problem but owing to the high cost associated with them, some banks do not implement them.

Frequent power interruption:-Lack of reliable power supply is a key challenge for smoothly running e-banking service.

2.1.5.7 Information Management

Good information management enables organizations to become more effective in their operations as it provides the information employees need to analyze and conceptualize information, thereby adding to the firm's store of knowledge and making their jobs more meaningful and efficient. This gives employees an opportunity to add value to the organizations products and services (Blount et al. 2005). In online services operations, good information can be a vital difference between success and failure. However managing information has been a problem for organizations across many industries. This problem is not unique to e-banking but information management requirements for e-banking are usually much greater. Therefore if a bank is not good at managing information, their participation in e-banking simply increases the scale of the problem. Effective e-banking requires that management has up-to-date and timely information in an understandable format. Any improvements in this area can lead to significant benefits in operations and the marketing of e-services.

2.1.5.8 Clash with Other Services Delivery Channels

Although e-banking promises to be more cost effective and efficient than other channels such as branch or phone banking, it may also cannibalize these other channels. In the short term a cheaper channel replacing an expensive one looks attractive, but in the long run it may cost banks an established and loyal customer base. For this reason many banks treat e-banking as only an extra channel, a factor which could mean that growth of e-banking is much slower than many expected. Many banks have invested huge resources in their branch networks and in many ways view it as one of their core competencies. New technologies can enhance these core competencies but at the same time may destroy them. This could mean that entry barriers for new entrants keep coming down and increasing competition from new and lower cost rivals can erode profits. Banks need to be pro-active regarding new distribution channels, and should allocate resources in order to integrate them in the existing organization. Chandy and Tellis (1998) point out that the willingness to cannibalize is a desirable trait, because it promotes innovation and is necessary for the long-term survival of the firm.

Theories of digital banking

Rogers' theory of digital banking emphasizes the importance of technology in transforming the banking industry. According to Rogers, digital banking is not just about providing online banking services, but it is a fundamental shift in the way banks operate and interact with their customers. He argues that digital banking is a disruptive innovation that has the potential to revolutionize the traditional banking model.

One of the key theories proposed by Rogers is the diffusion of innovation theory. This theory suggests that the adoption of digital banking by customers follows a predictable pattern, starting with innovators and early adopters, followed by the early majority, late majority, and finally the laggards. Rogers argues that banks need to understand this diffusion process and tailor their digital banking strategies accordingly.

Diffusion of Innovations Theory suggests that the adoption of digital banking is influenced by the characteristics of the innovation itself, such as its relative advantage, compatibility, complexity, trialability, and observability. According to this theory, individuals are more likely to adopt digital banking if they perceive it as advantageous, compatible with their needs and values, easy to use, and if they can observe others successfully using it.

Technology Acceptance Model (TAM) proposes that the intention to use digital banking is influenced by two main factors: perceived usefulness and perceived ease of use.

Perceived usefulness (PU) – someone perceives that technology to be useful for what they want to do.

Perceived ease-of-use (PEOU) – If the technology is easy to use, then the barriers conquered. If it's not easy to use and the interface is complicated, no one has a positive attitude towards it.

2.1.6 Digital Banking Challenges in Ethiopia

Digital banking is a rapidly growing industry across the globe, and Ethiopia is no exception. However, there are several challenges that need to be addressed in order for digital banking services to be successful in Ethiopia.

Firstly, there is a lack of infrastructure in the country, particularly in rural areas, which makes it difficult for people to access digital banking services. Additionally, there is a lack of awareness and understanding of digital banking among many Ethiopians, who may be more comfortable with traditional banking methods. Another challenge is the issue of security, as digital banking services are vulnerable to cyber attacks and fraud. Finally, there are also regulatory and legal challenges that need to be addressed, such as the need for new laws and regulations that specifically address digital banking.

However, despite these challenges, the potential benefits of digital banking in Ethiopia are vast, including increased financial inclusion, improved access to credit, and greater convenience for customers.

A Banks and micro finance institution in Ethiopia has begun providing mobile banking services since 2015. Compared to other African nations, Ethiopian financial institutions were very late to introduce the mobile banking services. In bank-led mobile banking, banks and micro finance make use of mobile phones to reach many customers as an extension of their services and products.

The government-owned giant bank, CBE, launched mobile banking service on December 11, 2017, after it has passed the pilot period provided in the Regulation of Mobile and Agent Banking Service Directive. Currently the number of mobile banking subscribers is increasing so the banks should place strong authentication and validation system to reduce the risk and increase customer satisfaction. Equbamariam kidane (2018).

In May 2016, a consortium of 17 local commercial banks formally signed off to implement a shared switch infrastructure for clearing of their card transactions known as EthSwith.S.C. Since that time, all debit cardholders of Ethiopian banks are able to reap the advantages of the inter-operability of the e-banking products by having convenient services while using any ATM or POS of the members of the consortium. This was made possible by the cooperation of the commercial banks in Ethiopia,

having informed of the need to optimize customers outreach and creating convenient banking services. Equbamariam kidane (2018).

2.2 Review of empirical literature

Some of the studies provide insights into the challenges and barriers that hinders the successful implementation of digital banking services in different regions of the world

1) ‘‘Digital banking service: challenges and opportunities for emerging markets banks’’ by Matthew, Susan and Thomas (2017)- this article discusses the challenges and opportunities for digital banking in emerging markets, such as infrastructure limitations, lack of trust ,and low financial literacy.

2) A research conducted by Kodilla-Tedika and Asongu (2018) analyzed the challenges and prospects of digital banking in Africa. The study found that inadequate infrastructure, low ICT skill level, and the high cost to access to digital banking service were the major challenges facing the implementation of digital banking in Africa.

3) ‘‘Issues and challenges of digitilization of banking in rural India’’ (2021)- by Jyoti Ramrakhyani ,This study analyzes the challenges of implementation digital banking services in rural India, including low level of education, inadequate infrastructure, and limited access to technology.

4) ‘‘Challenges of Internet Banking faced by Customers in Kenya: A Survey of Selected Banks in Nairobi County’’ (2021) - A Mixed-Methods Study’’ by Dr. Orucho,Dr. Elisha and Dr. Festus.This paper examine the challenges of internet banking faced by customers in the three selected banks in Nairobi County , including technology, social and infrastructure,security of private information and demographic factor.

5) ‘‘The Prospect, Challenges, and Legal Issues of Digital Banking in Nigeria ’’ (2022) - Descriptive method study "by Paul Atagamen Aidonojie, Oluwaseye Ikubanni and Nosakhare Okuonghae .This study found that the key challenges to

digital banking in Nigeria are the lack of specific legislation regulating digital banking, poor internet infrastructures, and increased cyber fraud, amongst others.

6) ‘‘Electronic Banking in Bangladesh: Aspects, Prospects and Challenges" (2019) - by Shak Brown This paper explores the challenges and prospects of digital banking in Bangladesh, including techniques to prevent fraudulent deceptive and unfair business practice in the market place and provide information to help consumers stop and avoid those and fewer other policy issues.

7) ‘‘Challenges and Opportunities of Digital Inclusion in Ethiopian banking industry: A Mixed-Methods Study’’ by Tewodros Tadesse and Ahmedin Mohammed (2019).This study examines the challenges and opportunities of digital banking in Ethiopia through interviews with bankers, customers, and policymakers. The study found that inadequate infrastructure, limited digital literacy, and regulatory restrictions were the main challenges to the implementation of digital banking service in Ethiopia.

8) “Challenges of Mobile Banking Adoption in Ethiopia: An empirical Investigation” by Asfaw Beyene (2016). This study investigates the challenges of mobile banking adoption in Ethiopia using survey data from 298 respondents. The study found that lack of awareness, low trust in technology, and limited financial literacy were the main barriers to the adoption of mobile banking services in Ethiopia.

9) “Exploring the Readiness of Ethiopian Banks for Digital Transformation: A Qualitative Analysis” by Feysel Gelan (2019). This study examines the readiness of Ethiopian banks for digital transformation by conducting interviews with bank executives and IT managers. The study found that resistance to change, inadequate IT infrastructure, and lack of skilled human resources were the main challenges to digital transformation in Ethiopian banks.

10) “The Challenges and Opportunities of Digital Banking in Ethiopia” by Admassie Belay (2018). This study explores the challenges and opportunities of digital banking in Ethiopia through a review of the relevant literature. The study found that lack of infrastructure. Limited awareness, and regulatory restriction were the main challenges to the adoption of digital banking service in Ethiopia. However, the study also

highlighted the potential for digital banking to promote financial inclusion and enhance the efficiency of the banking sector in Ethiopia.

CHAPTER THREE

Research Methodology

Introduction

This chapter includes description of the study area, research design, population, sampling and sampling technique data analysis methods, reliability and validity and ethical consideration .Generally this research focus on finding the challenges of implementing digital banking service in commercial bank of Ethiopia in order to bring possible solution through implementing descriptive research design.

3.1 Description of the Study Area

According to the bank website (www.combanketh.et) CBE has more than 1842 branches, organized under three regions: central region, southwest region and north east region. For the purpose of this study from central region kirkos district was selected. Under central region -kirkos district: 52 branches and 2,482 employees are found. From these branches purposively, special branch, grade IV and grade II branches (Finfine, Dilgebeya, Gofa mazoria and Bisrate Gebriel) were selected respectively.

There are reasons that the researcher considered in selecting these four branches from Kirkos district. Firstly, special and fourth grade branches implying that they have the highest daily transaction with high value customers but low performance in digital banking service target. (CBE Kirkos district digital banking performance reported on June 30, 2022).

Secondly, grade two branches based on their results from achieving yearly digital banking service plan prior to end of the fiscal year help to asses the challenges of digital banking service implementation. Finally, as these branches are close to the researcher work place this helps to manage financial and time resources efficiently. In addition, it provided advantage in accessing data easily. Finally, the researcher was employed convenient sampling technique to select the study participants.

Table 3.1: Number of active E-banking customers in the selected branches under Kirkos district

No.	Branch name	E-banking customers June 2022	More than one year experience
1.	Finfine (special Branch)	16,533	4,102
2.	Dil Gebeya (Grade 4 branch)	15,129	3,087
3.	Gofa Mazoria (Grade 2 branch)	10,979	2,042
4.	Bisrate Gebriel (Grade 2 Branch)	9,132	1,003
	Total	51,773	10,234

Source:CBE unpublished branch digital banking performance report June 2022

From the above data, the researcher was selected those customers who have actively using ebanking services for more than a year. Hence, customers who have used e-banking services of CBE for more than a year in the area constituted as part of the population of the study.

Besides, the study was selected four digital banking officers (selected due to their conceptual and technical knowledge of the issue under the study) of those four branches purposively in order to conduct key informant interviews. As it is stated in the above paragraphs, the study was considered e-banking customers and digital banking officers under kirkos district branches (Finfine, Dil gebeya, and Gofa

Mazoria and Bisrate Gebriel). Therefore, the sampling frame is 10,234 active customers who have been using e banking for more than a year.

3.2 Research Design

The descriptive research design selected for the study so as to achieve the objective of the study and it is more appropriate to assess/investigate/the challenges of implementing digital banking service. Descriptive Research is also known as statistical research; this describes phenomena as they exist. It is used to identify and obtain information on characteristic of a particular issue like community, group or people. This type of research describes social events, social structure, social situations, etc. The observer examines and describe what did he/she find? Descriptive research answers the questions, what, who, where, how and when. It is used to study the current situation. It is widely used in the physical and natural science. But it is used more common in the social sciences, as in socioeconomic survey and job and activity analysis. Creswell (2003)

3.3 Data Collection Method

The study is conducted by using both secondary and primary sources of data. The sources of primary data are employees and customers of the bank and data is collected through using semi-structured questionnaire to customers who are using digital banking service and face to face, semi-structured and open-ended interview questions to digital banking officers. Likert scale questionnaire is used to measure the perception of customers and employees about digital banking and semi structured interview is conducted with employees of the bank to deeper assess the challenges of implementing digital banking service. The source of the secondary data are private and public documents like internet, magazine and books journals ,research papers ,internal performance reports(unpublished) procedures and different CBE publishing which are written on the subject matter.

3.4 Population, Sampling Technique and Sample Size

3.4.1 Target Population

The target population of the study it consists Digital banking officers and customers who have used e banking service more than a year on four selected branches of Commercial Bank of Ethiopia under kirkos district. Data used in this study was collected from primary and secondary sources. Primary data have been collected through questionnaire (both open and close-ended questions) and interview questions with digital banking officers. The closed ended questions were prepared in Likert scale Secondary source of data collected from internet, magazine and books and journals and CBE published & unpublished materials. After data were collected, it was coded and analyzed using descriptive statistics. Convenience sampling was used to collect responses from employees and customers. The questionnaires were distributed to 385 people. However, only 307 questionnaires were in usable condition and were used for the study's statistical analysis.

3.4.2 Sample Size Determination

The total populations of the research are customers of the selected branches of CBE in Addis Ababa. By using of Solving formula the student researcher, use around 385 sample employees and customers at 95% confidence level. The student researcher was distributing questioner to samples in selected branches.

$n= N/ (1 + Ne^2)$

Where, n=sample size

N=population size

e=the level of precision, sampling error

(Source: Yamne (1967)

Therefore n= 10,234

n=10,234/ (1+10,234(0.05) ^2) =385

Hence the total sample size has been decided 385 customers from selected branch.

3.4.3. Sampling Technique

The total populations of these studies was customers of commercial bank of Ethiopia.(customers using the digital banking services in CBE) sample taken from selected branches under Kirkos Addis Ababa District considering there is no significant difference in digital banking service implementation practice among branches and customers using digital banking services. Therefore; only four branches was selected and incorporated in the study. Then, a convenience-sampling technique was used to select respondents to fill questionnaires. This study focuses only in obtaining data from the bank on the key implementation problems of digital banking service of the bank.

Therefore branches are digital banking service implementation areas. Convenience sampling method is opted because most of the staffs of the bank are busy in serving customers on office hours and it also make easily access participants who has deemed knowledge about digital banking service and collaborate fully in the survey. Based on convenience sampling, 385 customers was selected as participant of the study. The respondents were from various age, gender, social status, culture & educational background.

3.5. Data Analysis Tools

In order to meet the stated research objectives, the collected data was analyzed based on the nature of the objective. A descriptive analysis was used to present and interpret the data collected on various variables of factors affecting the implementation of digital banking service. Percentages and tables are employed to analyze each objective. The data collected via questionnaires was analyzed with descriptive statistics using statistical package for social scientists (SPSS version 23). The data that was collected from the interview and reviews of documents interpreted qualitatively.

3.6 Reliability And Validity

To measure the consistency of the questionnaire particularly the Likert-type scale the reliability analysis is essential in reflecting the overall reliability of constructs that it is measuring. To carry out the reliability analysis, Cronbach‟s Alpha (α) is the most common measure of scale reliability and a value greater than 0.700 is very acceptable

(Field, 2009; Cohen and Sayag, 2010) and according to Cronbach‟s (1951), a reliability value (α) greater than 0.600 is also acceptable.

Table 3.6 Test of reliability for all items Variables

Variables	N of items	Cronbach‟s Alpha
Background information	7	0.76
Customer understanding about E-banking	8	0.721
Benefits of E-Banking	6	0.711
Digital banking service design	5	0.731
ATM related problem	9	0.866
Internet banking related problem	7	0.777
Mobile banking related problem	7	0.759
CBE Birr related problem	7	0.743

Source: Survey Result, May 2023

A Chronbach alpha is an important concept in the evaluation of assessments and questionnaires. The value of Chronbach alpha for this study is above 0.7 for all scale variables so the result is confirmed the reliability and consistency of the questionnaire.

Questionnaires are adapted from SCRIBD.COM and awareness of consumer e transaction through mobile phone (vaishaly sharma).

3.7 Ethical consideration

To ensure compliance to ethical issues the researcher obtained authorization or approval to carry out research from the concerned offices. In addition, due care will be taken at the time of data collection from the respondent to assure and be confident that all information gathered will be treated with confidence. Further, Acknowledgement of all references works by other researchers or writers being used for this study.

CHAPTER FOUR

DATA PRESENTATION ANALYSIS AND INTERPRETATION

Introduction

The research has a primary aim of studying challenges on implementation of E-banking service in CBE the case of under kirkos Addis Ababa district. In line with this, this chapter presents the analysis and interpretation of the data gathered from various sources.

The analysis and interpretation of data was conducted in order to gain a better understanding of challenges of E-Banking service implementation from customer's

perspective and employees. Data was collected through questionnaires and key informant interviews.

With this regards, semi-structured questionnaire was distributed to three hundred eighty five sampled customers of CBE. However, the researcher has received 307 properly filled questionnaires. Accordingly, out of the total number of sampled respondents 307 complete questionnaires were received, translating into nearly 80% response rate. The response rate is considered appropriate since Nulty, (2008) argues that any response rate above 75% is classified as appropriate.

The rate of return of questionnaire was computed as follows:

Rate of return = (R / (S-ND)) X 100

Where; R = number of questionnaires that were returned,

S = total number of questionnaires sent out, and

ND = number of questionnaires unable to be delivered ("returned to sender")

Rate of return= 307 / (385-0) X100

Rate of return =80%

The raw data gathered through questionnaire was analyzed based on descriptive analysis and conducted through SPSS software, version 23. The results, thus presented descriptively. Besides, the researcher has conducted interviews with four Digital Banking officers found under Finfine (respondent 1) , Dil Gebeya (respondent 2) , Gofa Mazoria (respondent 3) and Bisrate Gebriel (respondent 4)branches .The respondents were selected as it was considered in the study that they had detail knowledge, and experience of E-Banking service and its implementation challenges. This has also given the study a better insight about the issue under consideration. The analysis of the key informant interviews was conducted using content analysis of ideas and used to substantiate the findings of the quantitative aspect of the study.

4.1. Background Information of Respondents

Table 4.1 the General Characteristics of Respondents.

Demographic Questions	Responses of Customer	
	Freq.	% age

Gender	Male	151	49.2
	Female	156	50.8
	Total	307	100
Age of respondents	Less than 20	25	8.2
	From 20 to 30	117	38.1
	From 31 to 40	93	30.3
	From 41 to 50	48	15.6
	From 51 to 60	24	7.8
	Total	307	100
Education background	No formal education	10	3.3
	High School	37	12.0
	Certificate	46	15.0
	Diploma	73	23.8
	First Degree	105	34.2
	Masters and above	36	11.7
	Total	307	100
Employment Status	Government employees	81	26.4
	Private employees	88	28.7
	Self employee	74	24.0
	Students	39	12.7
	Retired	18	5.9
	Not employed	7	2.3
	Total	307	100
Experience of respondents in using E-Banking services	Less than 1 year	52	17.0
	From 1 to 3 years	89	29.0
	From 4 to 6 years	95	30.9
	More than 6 years	71	23.1
	Total	307	100
	Advertising	47	15.2
	Bank Employee	123	40.1

Means of information	Social media	61	20.0
	Colleagues and friends	72	23.4
	Other means	4	1.3
	Total	307	100

Source: Survey Result, May 2023

The table shows that 156 (50.8%) respondents were female and 151 (49.2%) respondents were male. This implies that from the total participants, the number of female was greater than the number of male.

The table above shows the age of the respondents in which, 25 (8.2%) respondents were less than 20 years, while 117 (38.9 %) respondents were between the ages of 20 to 30 years. On the other hand 93 (30.3 %) respondents were between the ages of 31 to 40 years and 48 (15.6% respondents) were between the ages of 41 to 50 years. Finally, 24 (7.8%) respondents were between ages 51 to 60. Therefore this implies that most of the e-banking customers while conducting the study were young people.

Based on their educational level majority of the respondent educational level was first-degree, which constituted 105 (34.2%). On the other hand, respondents with high school graduation constituted 37 (12.0%) and those with diploma were indicated to cover 73 (23.8%). Respondents with no formal education were indicated 10 (3.3%) while the ones with masters and above degree were indicated to constitute 36 (11.7%). Finally, those who have certificate are 46 (15.0 %). This implies that, the largest parts of the respondents are first-degree holders.

The above table shows the employment status of the respondents in which, 81 (26.4%) of respondents were found to be government employees, while 88 (28.7%) respondents were found to be employees of the private sector. On the other hand, customers who have personal business constituted 74 (24.0%) and 39 (12.7%) of respondents were students. A small minority of seven (2.3%) of respondents were not employed. Finally, 18 customers (5.9%) of respondents were retired. This implies that the majority of the respondents are government employed.

According to the result, it is found that (52) of the respondents, representing (170%) have been using e-banking for less than one year. On the other hand, 89 (29%) of the respondents that stated that they have been using e-banking from 1 to 3 years. In

addition, the respondents states that 95 (31.9%) of the respondents have agreed that they have been using e-banking services from 4 to 6 years duration. Finally, a majority of the respondents, which constitute 71 (23.1%), have agreed that they have been using e-banking services for more than 6 years. This implies that majorities of the customers that have been using e-banking were those who had used e-banking services for more than 6 years.

4.2 Service of E-Banking used by the Customers

Table 4.2 Service of E-Banking used by the Customers

Types of E-banking service	Frequency	Percent
ATM	57	18.5
Internet banking	3	0.98
Mobile banking	25	8.14
Point of Sale (POS)	21	6.84
CBE birr	42	13.68
ATM & Internet banking	6	1.95
ATM & Mobile banking	24	7.81
ATM & POS	15	4.88
ATM & CBE birr	23	7.49
Internet banking & Mobile banking	2	0.65
Internet banking & POS	3	0.98
Internet banking & CBE birr	4	1.30
Mobile banking & POS	9	2.93
Mobile banking & CBE birr	13	4.23
POS & CBE birr	3	0.98
ATM, Internet banking & Mobile banking	3	0.98
ATM, Internet banking & POS	7	2.28
ATM, Internet banking & CBE birr	4	1.30
ATM, Mobile banking & POS	10	3.26

ATM, Mobile banking & CBE birr	13	4.23
Internet banking, Mobile banking & POS	1	0.32
Internet banking ,Mobile banking & CBE birr	3	0.98
Internet banking, POS & CBE birr	2	0.65
Mobile banking , POS & CBE birr	3	0.98
ATM, Internet banking , Mobile banking & POS	5	1.63
ATM, Internet banking , Mobile banking & CBE birr	3	0.98
Internet banking , Mobile banking POS & CBE birr	2	0.65
ATM, Internet banking , Mobile banking POS & CBE birr	1	0.32
Total	307	100.0

Source: Survey Result, May 2023

Table 4.2 implies that majority of the respondents 57 (18.5%) were users of ATM , 3 respondents which represented (0.98%) used internet Banking , 25 respondents (8.14%) have agreed that they use mobile baking, 21 respondents, which contributed (6.84%) use POS (point of sale) and 42 respondents (13.68%) used CBE birr. In addition, there were 6 respondents (1.95%) who used ATM, and internet banking simultaneously; while 24 respondents (7.81%) used ATM and mobile banking 15 (4.88%) have used ATM and POS; while 2 respondents (0.65%) have used internet banking and mobile banking. Moreover, 3 respondents (0.98%) used internet banking and POS; 4 respondents (1.30%) used internet banking and CBE birr, 9 respondents (2.93%) used mobile banking and POS, 13 respondents (4.23%) used mobile banking and CBE birr, 3 respondents (0.98%) used POS & CBE birr, 3 respondents (0.98%) used ATM, internet and mobile banking, 7 respondents (2.28%) used internet, mobile banking and POS, 4 respondents (1.30%) used ATM, internet banking and CBE birr , 10 respondents (3.26%) used ATM, mobile banking and POS, 13 respondents (4.23%) used ATM, mobile banking and CBE birr, only one respondent (0.32%) used internet mobile banking and POS, 3 respondents (0.98%) used internet banking, mobile banking and CBE birr, 2 respondents (0.65%) used internet banking, POS and CBE birr , 3 respondents (0.98%) used mobile banking, POS and CBE birr , 5 respondents (1.63%) used ATM, internet banking, mobile banking and POS, 3 respondents (0.98%) used ATM, internet banking, mobile banking and CBE birr, 2

respondents (0.65%) used internet banking , mobile banking , POS and CBE birr. Finally, only one respondents (0.32%) used ATM, internet banking, mobile banking, POS and CBE birr;. This implies that most of the customers involved in the survey have used ATM and CBE birr services more than any other e-banking service that CBE provides.

4.3 Customers understanding about digital banking services at CBE

Consumer awareness is a demonstration of ensuring that purchaser or buyer knows the data and information about items, product, administrations, and buyers rights.(https://corpbiz,io/learning/importance-of-consumer-awareness-for-new-age-businesses)

Table 4: 3 Level of Customers Understanding about digital Banking service

No.	Description		Strongly Disagree	Disagree	Neutral	Strongly agree	Agree
1.	I can access e-banking in multiple languages.	Frequency	31	50	57	77	92
		Percent	10.10	16.3	18.57	25.08	30.0
2.	I understand the e-banking service very well.	Frequency	21	51	64	85	86
		Percent	6.84	16.61	20.85	27.7	28.01
3.	I trust the bank e-banking service.	Frequency	68	72	56	42	69
		Percent	22.15	23.45	18.24	13.68	22.5
4.	I am satisfied with the level of data and information security provided by the bank	Frequency	12	25	117	80	73
		Percent	3.90	8.14	38.11	26.06	23.8
5.	The Bank security is regularly updated to protect any theft or fraudulent?	Frequency	18	23	167	47	52
		Percent	5.9	7.5	54.4	15.31	16.92

6.	I can able to see past transactions through e-banking	Frequency	19	36	58	103	91
		Percent	6.2	11.73	18.9	33.55	29.64
7.	I understand the description given by bank staff on the steps of using e-banking service	Frequency	12	46	41	95	113
		Percent	3.90	14.98	13.35	30.94	36.80
8.	If I face a problem, I can ask immediate help from the bank at any time	Frequency	89	73	56	51	38
		Percent	28.99	23.78	18.24	16.61	12.38

Source: Survey Result, May 2023

Based on the result shown on table number 4.3 majority of respondents (25.8% and 30.0%) stated that they could access digital banking services in multiple languages while minor number of them (26.3%) indicated that they did not access e-banking services in multiple languages. The remaining respondents were undecided about the issues. This implies that customers could access e- banking services in multiple languages.

Regarding, Customers level of understanding about digital banking services, 56% of the respondents agreed and strongly agreed that they have good understanding about digital banking while 24% of the respondents discloses that they did not have a very well understanding. This implies that customers have good understanding about e-banking In addition to this based on the interview result conducted with Finfine branch digital banking officer , She added that every staff engaged in selling the bank product and service is responsible to educate customers on how to use the product/service/digital banking service , promote new e-banking service and provided technical as well as professional assistant to customers and the second key informant added that there were elderly customers who don't trust digital banking services and want to be served with traditional banking system and keep record of their transaction on their passbook however the bank needs to work more on customer awareness creation towards digital banking services to improve customer understanding about e-banking. The remaining two key informants had the same comment towards customer understanding about the bank e-banking service.

Besides, 22.5% and 13.68. % of the respondents agreed and strongly agreed that they trust the bank digital banking service but majority of respondents (46 %) they have trust issue with the bank digital banking service.

In addition to the information collected from the customers through questionnaires, the bank digital banking officers were interviewed about trust issues regarding digital banking service. According to their feedback, among the digital banking services offered by the bank, mobile banking service is becoming more vulnerable to theft. Recently, the number of customers whose money is stolen through mobile banking has been increasing. This implies that the bank's digital banking service have trust issues.

As we can see from the above table4.3 38.11% respondents didn't decide about security and privacy of e-banking transaction data while 3.9% and 8.14% disagree and strongly disagree with the idea. The remaining significant numbers of respondents (50.4%) were satisfied with the level of data and information security provided by the bank. This implies that the bank provides security for ebanking transaction data and privacy.

In addition; majority of the respondents (54.4%) were undecided on that the bank security is regularly updated to protect customers account from fraudulent activity. (15.31%) and (16.92%) respondents were strongly agree and agree and the remaining (5.9%) & (7.5%) respondents were strongly disagree and disagree on the issue regarding regular security update , this implies that most of the bank customer were not well aware about regular security update.

Based on the above table 4.3 result (63%) respondents were agreed that they could see their past transactions through e-banking system. while (18%) of them argued on the contrary. This implies that customers could see their past transactions through e-banking.

In addition majority of respondents (67.74%) were understand the instruction given by the bank staff on the steps of using digital banking service and only (18.8%) respondents don't understand the instructions. Based on the information gathered through interview from digital banking service officers ,the bank employees assist customers on utilization of digital banking service moreover, if the customer have any

inquires, they could get assistant from the bank contact center any time. The bank contact center.

However majority (51.77%) respondents were declared that they don't get immediate support from the bank contact center and (29.9%) respondents confirmed that they are getting immediate support from contact center.

Based on the interview result with digital banking officer, all declared that even if the bank contact center organized by professional and skilled staff, there were limitations in responding immediately to all requests of customers made regarding e- banking services because of lack of man power and inadequate training programs provided to the staff but recently the bank placing adequate man power to solve the issue. This implies the bank help desk/contact center didn't respond immediately to customer inquiries.

Generally, the above analysis demonstrates that significant number of respondents stated that they could access digital banking service in multiple languages; understand the e-banking service: able to see past transactions through e-banking services and confirm that the bank provides security and privacy of e-banking transaction data. However, few respondents have trust issues on the bank digital banking service: not well informed about security update to mitigate fraud and not satisfied with the bank customer service support and contact center.

4.4 Benefits of digital Banking Services for Customers at CBE

Table 4.4: Respondents Opinion on Benefits of digital Banking Services

No.	Description		Strongly Disagree	Disagree	Neutral	Strongly agree	Agree
1.	E-Banking reduced costs in accessing and using the banking service.	Frequency	36	41	78	80	72
		Percent	11.73	13.35	25.40	26.06	23.45
2.	E-Banking increased comfort and time saving.	Frequency	11	28	72	88	108
		Percent	3.6	9.12	23.45	28.66	35.18
3.	E-Banking ensures quick and	Frequency	15	45	84	78	85

	continuous access to information about your account.	Percent	4.88	14.66	27.36	25.41	27.69
4.	E-Banking makes faster way of conducting banking transactions.	Frequency	17	33	65	72	120
		Percent	5.54	10.75	21.17	23.45	39.08
5.	E-Banking is convenient in terms of 7 days and 24 hours services	Frequency	56	77	68	44	62
		Percent	18.24	25.08	22.15	14.33	20.19
6.	E-banking ensures me better cash management	Frequency	32	48	93	66	68
		Percent	10.42	15.63	30.29	21.50	22.15

Source: Survey Result, May 2023

In the above table, majority of the respondents 26.06% & 23.45% were agreed on that accessing & using digital banking service reduced cost while 25.08% respondents were not agreed on that and the remaining 25.4% respondents were undecided about the issues. This implies that digital banking service reduced costs in accessing and using service. Besides, around 64% of the respondents 28.66% strongly agreed and 35.18% agreed stated that e-banking service increased comfort and save their time, while 12.7% of them strongly disagree and disagree with this idea. This implies that e-banking service increased comfort and save their time.

As we can see from table 4:4 more than 50% respondents confirmed that digital banking ensures quick and continuous access to information about their account, while 19.54% and 27.36% oppose the idea and remained neutral respectively. This implies that e-banking ensuring quick and continuous access to information about everyone's account.

Regarding with the idea of digital banking makes faster way of conducting banking transaction majority of the respondents (62.53%) were agreed, 16.29% & and 21.17 % respondents disagreed and undecided. This implies digital banking services enable the customers to makes faster transaction.

Based on the result from table 4:4 34.52 % respondents confirmed that the bank Digital banking is convenient in terms of 7 days and 24 hour services but majority of the Respondents (43.32%) not agreed and the remaining 22.15 % respondents have no opinion on the subject matter. This implies the bank digital banking service is not convenient in terms of 7 days and 24 hour service.

Finally, significant number of the respondents(43.65) stated that e-banking ensured better cash management, 26.05% respondents have opposed the idea and the remaining 30.29% respondents were undecided. This implies that that e-banking ensured better cash management,

Additional results found from key informant interviews confirmed that one of the benefit that the customers received from online banking is reduced error and cost of transaction, promotes comfort, and save customers time and ensuring quick and continuous access to information and access to banking service 24/7. However, they believed that due to low penetration rate of mobile phones and internet and poorly developed telecommunication infrastructure, the bank was unable to provide the service for 24/7

Generally, table4:4 result shows that customers acknowledged the benefits of e-banking in terms of reduced cost of transaction, promotes comfort, save customers time , ensuring quick and continuous access to information and ensured better cash management. However, majority of respondents declared that there is a gap in accessing the banking services 7 days and 24 hours.

4.5 Digital banking service design

Table 4:5 Digital banking service design

No.	Description		Strongly Disagree	Disagree	Neutral	Strongly agree	Agree
1.	Preferred language setting	Frequency	12	56	47	57	135
		Percent	3.9	18.24	15.31	18.57	43.97
2.	Product/service design are easy to find and change	Frequency	23	27	98	32	127
		Percent	7.49	8.79	31.92	10.42	41.37

3.	Easily understandable instructions	Frequency	17	40	62	90	98
		Percent	5.54	13.03	20.19	29.31	31.92
4.	User friendly interface	Frequency	27	52	73	66	89
		Percent	8.79	16.93	23.78	21.5	28.99
5.	The bank service design meets customers' needs	Frequency	21	47	81	61	97
		Percent	6.84	15.31	26.38	19.87	31.6

Source: Survey Result, May 2023

As we can see from the above table significant number of respondents are comfortable with the bank product and service design: language setting, easy to find and change, easily understandable instructions, user friendly interface and meets with customer needs or expectation. This implies that there is no major gap observed based on the data collected towards bank service design but according to unstructured interview conducted with digital banking officer's feedback with regards to the bank mobile banking service setting does not have adequate local language options.

4.6 ATM related problems

Table 4:6 ATM related problems

No.	Description		Strongly Disagree	Disagree	Neutral	Strongly agree	Agree
1.	Cards captured in the machine	Frequency	12	60	95	62	78
		Percent	3.9	19.54	30.94	20.19	25.40
2.	ATM Machine out of cash	Frequency	15	25	32	103	132
		Percent	4.88	8.14	10.42	33.55	43
3.	Non printing of statement	Frequency	17	42	57	92	99
		Percent	5.54	13.68	18.57	29.97	32.25
4.	Frequent Power interruption while using ATM machine	Frequency	68	97	63	25	54
		Percent	22.15	31.6	20.52	8.14	17.59
5.	The ATM machine deducts the amount from the account but does not pay the	Frequency	8	23	42	89	145
		Percent	2.6	7.49	13.68	28.99	47.23

	money						
6.	Network failure while using ATM machine	Frequency	6	18	30	97	156
		Percent	1.95	5.86	9.77	31.6	50.81
7.	Inadequate withdrawal limit(transaction limit)	Frequency	32	48	54	42	131
		Percent	10.42	15.63	17.59	13.68	42.67
8.	Not being able to maintain security	Frequency	89	96	63	21	38
		Percent	29	31.27	20.52	6.84	12.38
9.	The bank has most advanced ATM Machine	Frequency	35	73	91	24	84
		Percent	11.4	23.78	29.64	7.80	27.36

Source: Survey Result, May 2023

Most of the customers (45.59 % respondents) stated that their ATM card get captured in the machine. While 23.44 % ATM card users replied that they did not experience such a problem and the rest have a neutral opinion on the problem. This implies that customers are facing a problem related to ATM card get captured in the ATM machine.

Based on table 4:6 results more than 70% of respondents confirmed that there is not enough money in the ATM machine and insignificance number of respondents (13.02% & 10.42 %) disagreed and undecided. This indicates that there is not enough money in the bank's ATM machine.

As shown in the above table 62.22% respondents explained that they did not get a receipt or bank statement from the ATM machine, the remaining 19.22% and 18.57 respondents do not agree and undecided on the problem. This indicates that customers need to get receipts or bank statement from the ATM machine.

Besides majority of the respondent confirmed that they didn't face a problem with frequent power interruption while using ATM machine. This implies that customers do not have electricity issues while using ATM machine.

Based on table 4:6 results more than 70% of respondents confirmed that the ATM deducts the amount from their account but does not pay the money and insignificance

number of respondents (10.09% & 13. %) disagreed and undecided. This indicates that the ATM machine deducts the amount from customers account but does not pay the money.

Based on the results from the above table 82.41% respondents declared that there is Network failure while using ATM machine, 7.81% respondents disagree and 9.77% respondents are neutral. This indicated the bank ATM machine face a problem with network failure.

Concerning the issue with inadequate withdrawal limit 56.35% respondents are confirmed, ATM machine withdrawal limit is inadequate, 26.05% respondents have opposite ideas for the mentioned problem and the remaining respondents are neutral. This implies that the bank ATM machine withdrawal limit is inadequate.

Regarding, the bank security with ATM service more than 60% respondents are confirmed that the bank ATM service maintains security. This indicates the bank service maintains security.

Besides 35.16% respondents are disagreed on the bank has most advanced ATM Machine, while 29.64% respondents are agreed and 35.18% respondents are undecided. This implies the bank does not has most advanced ATM machines.

4.7 Internet banking related problems

Table4:7 Internet Banking related problems

No.	Description		Strongly Disagree	Disagree	Neutral	Strongly agree	Agree
1.	Lack of security in transactions	Frequency	118	141	21	9	18
		Percent	38.44	45.93	6.84	2.93	5.86
2.	Leaving the transaction unfinished	Frequency	74	78	84	22	49
		Percent	24.10	25.41	27.36	7.17	15.96
3.	Following too many steps in processing	Frequency	28	61	77	42	99

	transaction	Percent	9.12	19.87	25.08	13.68	32.25
4.	Network failure while using internet banking	Frequency	71	97	94	19	26
		Percent	23.13	31.6	30.62	6.19	8.47
5.	Inadequate transaction ceiling limit	Frequency	117	151	26	5	8
		Percent	38.11	49.18	8.47	1.63	2.6
6.	The bank has up-to-date web presence	Frequency	101	135	41	6	24
		Percent	32.9	43.97	13.35	1.95	7.82
7.	Unable to print receipt of transaction	Frequency	20	39	62	44	152
		Percent	6.51	12.7	20.19	14.33	49.51

Source: Survey Result, May 2023

As we can see from the above table more than 80% respondents are confirmed the bank internet banking service maintains security. This indicate the bank internet banking security level is good.

Besides 49.51% respondents are declared the bank internet banking service operated successfully while 23.13% respondents are face a problem with the internet banking system Leaving the operation unfinished and the remaining 27.36% respondents are undecided. This indicates the bank internet banking service operated successfully

Regarding, following too many steps to processing transaction 45.93% respondents are confirmed that they are following too many step in processing transaction, while 28.99% & 25.08% respondents are disagree and neutral opinion with the subject matter. This implies the bank internet banking has following too many step in processing transaction

Based on the results found on the above table 14.66% respondents are stated that there is network failure while using internet banking service but significant number of respondents are confirmed that they do not face network problem while they are using

internet banking service. This implies the bank internet banking service has good network connection.

Generally more than 70% respondents are confirmed the bank internet banking service transaction ceiling limit is adequate and also they confirmed the bank has up to date web presence. This indicated the bank has adequate transaction limit and up to date web presence.

Lastly 6384% respondents are stated that they are unable to get receipt while 19.21% and 20.19% disagreed and undecided about mentioned problem. This implies that majority of respondents are unable to get receipt of online transaction.

4.8 Mobile Banking related problems

Table4:8 Mobile Banking related problems

No.	Description		Strongly Disagree	Disagree	Neutral	Strongly agree	Agree
1.	Lack of security in transactions	Frequency	10	38	67	72	120
		Percent	3.28	12.38	21.82	23.45	38.09
2.	Leaving the transaction unfinished	Frequency	12	17	42	99	137
		Percent	3.91	5.54	13.68	32.25	44.63
3.	Following too many steps in processing transaction	Frequency	43	64	51	51	98
		Percent	14	20.85	16.61	16.61	31.92
4.	Network failure while using mobile banking service	Frequency	44	58	13	78	114
		Percent	14.33	18.89	4.23	25.41	37.13
5.	Inadequate	Frequency	40	72	50	64	81

	transaction ceiling limit	Percent	13.03	23.45	16.29	20.85	26.38
6.	The bank has most advanced technology	Frequency	19	45	111	55	77
		Percent	6.19	14.66	36.16	17.91	25.08
7.	Unable to print receipt of transaction	Frequency	12	24	67	96	108
		Percent	3.9	7.82	21.82	31.27	35.18

Source: Survey Result, May 2023

As we can see from the above table more than 61.54% respondents are confirmed the bank mobile banking service has lack of security in transaction. While 15.66% respondents are confirmed the bank mobile banking service maintains security and the remaining 21.82% respondents did not decide. This indicate the bank mobile banking has lack of security in transaction.

Besides 76.88% respondents are declared the bank mobile banking service leaving the transaction unfinished while insignificant number of respondents are confirmed that the mobile banking service transaction completed successfully .This indicates the bank mobile banking service has a problem related with incomplete transaction.

Regarding, following too many steps in processing transaction, 48.53% respondents are confirmed that they are following too many step in processing transaction, while 34.85% & 16.61% respondents are disagree and neutral opinion with the subject matter. This implies the bank mobile banking has too many step to processing the transaction.

Based on the results found on the above table 62.54% respondents are stated that there is network failure while using mobile banking service while 33.22% respondents are confirmed that they do not face network problem while they are using mobile banking service. This implies the bank mobile banking service has network issue.

As we can see from the above table 47.23% respondents are confirmed the bank mobile banking transaction ceiling limit is inadequate while 36.48% respondents are declared that transaction ceiling limit is adequate and the remaining 16.29%

respondents are undecided regarding the issue. This indicates that the bank mobile banking transaction limit is inadequate.

Besides 42.99% respondents confirmed that the bank has most advanced technology and 20.85% & 36.16% respondents are disagreed and not decided about the subject matter. This implies that the bank has most advanced technology with regards to mobile banking service.

Lastly 66.45% respondents are stated that they are unable to get receipt while 11.72% and 21.82% disagreed and undecided about mentioned problem. This implies that majority of respondents are unable to get receipt of online transaction.

4.9 CBE Birr related problems

Table4:9 CBE Birr related problems

No.	Description		Strongly Disagree	Disagree	Neutral	Strongly agree	Agree
1.	Lack of security in transactions	Frequency	61	99	103	8	36
		Percent	19.87	32.25	33.55	2.6	11.73
2.	Leaving the transaction unfinished	Frequency	79	82	89	17	40
		Percent	25.73	26.71	29	5.54	13.03
3.	Not providing full information	Frequency	88	94	92	12	21
		Percent	28.66	30.62	29.97	3.91	6.81
4.	Following too many steps to processing transaction	Frequency	31	56	72	61	87
		Percent	10.1	18.24	23.45	19.87	28.34
5.	Inadequate	Frequency	13	34	57	91	112

	transaction ceiling limit	Percent	4.23	11.1	18.57	29.64	36.48
6.	The bank has most advanced technology	Frequency	49	80	106	14	58
		Percent	15.96	26.06	34.53	4.56	18.89
7.	Unable to print receipt of transaction	Frequency	12	24	47	95	129
		Percent	3.91	7.81	15.31	30.94	42.02

Source: Survey Result, May 2023

As we can see from the above table more than 52.12% respondents are confirmed the bank CBE birr service maintains security in transaction. While 14.33% respondents are confirmed the bank CBE birr has lack of security and the remaining 33.55% respondents did not decide. This indicate the bank CBE birr service has security in transaction.

Besides significant number of respondents (52.44%) are confirmed that the CBE birr transaction completed successfully .This indicates the bank CBE birr service does not have a problem related with incomplete transaction.

Concerning with the issue CBE birr service unable to provide full information, more than 50% respondents confirmed that they are not facing such kind of problem. This indicate the bank CBE birr service provides full information.

Regarding, following too many steps in processing transaction, 48.21% respondents are confirmed that they are following too many step in processing transaction, while 28.34% & 23.45% respondents are disagree and neutral opinion with the subject matter. This implies the bank CBE birr service has too many step to processing the transaction.

As we can see from the above table majority of the respondents (66.12) are confirmed the bank CBE birr transaction ceiling limit is inadequate .This indicates that the bank CBE birr transaction limit is inadequate.

Besides 42.02% respondents confirmed that the bank does not have most advanced technology and 23.45% & 34.53% respondents are disagreed and not decided about

the subject matter. This implies that the bank does not have most advanced technology with regards to CBE birr service.

Lastly more than 70% of the respondents are stated that they are unable to get receipt. This implies that the bank CBE birr system unable to print receipt of online transaction.

in addition to this ,based on conducted interview result with digital banking officers declared that there is problem associated with above mentioned problem. Recently, Embezzlement of money from customer account using mobile banking has been increasing although the bank regularly inform customers to be careful, it is a major problem for the implementation of digital banking, therefor to overcome this problem. Banks, financial institution and regulatory bodies should work together and bring solution to the problem. Otherwise customers will resist to use digital banking service because of the fear and risk associated with it.

4.10 Mean and Standard Deviation Tables

4.10 Mean and Standard Deviation

Dimensions	**N**
Customer understanding about E-banking	8
Benefits of E-Banking	6
Digital banking service design	5
ATM related problem	9
Internet banking related problem	7
Mobile banking related problem	7
CBE Birr related problem	7

Count N:7

Sum, Ex:49

Mean,x=7

S=1.2909944487358 & Margin of Error=0.48795003647427

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter focuses on the conclusion of the study. It provides summary on major findings, conclusion, recommendation and implications for future research on related subject.

5.1 Summary of the major findings

Digital banking services is more convenient, efficient, and cost effective. The transformation from conventional banking to digital banking has been primarily driven by ever revolving customer needs, fierce competition, and a quest to enhance operational efficiency and cost saving for financial institutions. Although digital banking has exhibited significant potential for revolutionizing the customer service experience, it is crucial to consider the numerous challenges that have emerged alongside its implementation. This study found out major implementation challenges

1. The bank offers variety of digital banking services to customers for instance receive/deposit, interbank transaction, international fund transfer, mobile money transaction, money balance inquires, withdraw cash, purchase goods

and services and bill payments. But due to various reasons customers use limited digital banking services of the bank.

2. Customers has understanding of digital banking service provided by the bank however, they have trust issues
3. Customers has a problem with regards to help desk or contact center, unable to get immediate response
4. Customer has a problem with regards to access the bank digital banking service anytime anywhere because of internal and external factors like ATM card captured in the ATM machine, ATM machine out of cash, ATM machine deduct the amount from the account but does not pay the money, unable to print receipts, and inadequate cash withdrawal limit. Power interruption and network failure is external factors which limit accessibility and convenience of the bank ATM, mobile, and internet banking service.
5. Customer has a problem with regards to the banks digital banking service design like local language options, too many steps to process transaction and unable to print out receipt.
6. CBE birr and mobile banking transaction limit are inadequate.
7. Inadequate digital banking regulation as a result of low experience.Lack of coordination & interaction between banks, regulators and other financial institutions to detect fraud activities & refund policies in E-banking context.
8. Lack of policy and procedure on handling customer inquiries related to fraudulent activity, system malfunction & human error and Absence of clear law that defines term and conditions of e banking.

5.2 Conclusions

The rapid evolution of digital banking services has provided numerous opportunities and benefits for both financial institution and customers. However, the implementation of digital banking services is not without its challenges, including trust and security and threats, technological infrastructure gaps, regulatory problems, accessibility barriers. Based on the research finding the study concludes that major challenges that CBE faces while implementation of digital banking ;-

- Lack of trust as a result of inadequate information.

- Lack of adequate and skilled personnel to support customers in bank contact center office.
- Inconsistent accessibility of the bank digital banking service.
- The bank digital banking service have too many steps to process transaction and unable to print out receipt of digital transactions.
- Inadequate digital banking transaction ceiling limit .
- Mobile banking does not have local language option setting.
- Inadequate digital banking services regulation
- Lack of adequate coordination & interaction between banks, regulators and other financial institutions.
- Lack of policy and procedure on handling customer inquiries related to fraudulent activity, system malfunction & human error.
- Absence of clear law that defines term and conditions of e banking.

5.3 Recommendations

Based on the findings of the study, the following recommendations are forwarded in order to improve and create suitable digital banking service implementation in CBE in general and in selected branches of CBE in particular.

1. Regarding customer support service: place skilled man power in help desks and call centers of bank, give regular training to employees to encourage their performance and make close follow up on customer feedback services (help desks and call centers of bank), ensure the approaches of the employees are attractive to retain digital banking customers.

2. Besides trust and security issues, the bank should strengthening security and ensuring data privacy. There may be a need for additional investment in security system to ensure customer protection.

- ✓ A strategic approach to security, building best practice security initiatives into systems and networks as they are developed;
- ✓ A proactive approach to security, involving active testing of security systems, controls (e.g. penetration testing), planning response to new threats and

vulnerabilities and regular reviews of internal as well as external threats. Advice from financial regulators can be sought on how to do it;

- ✓ Sufficient staff with security expertise and responsibilities;
- ✓ Regular use of system based security and monitoring tools. This may include use of digital signatures (A security option that uses two keys, one public and one private, which are used to encrypt messages before transmission and to decrypt them on receipt), or Public Key Infrastructure (policies, processes, and technologies used to verify, enroll and certify users of a security application. A PKI uses public key cryptography and key certification practices to secure communications.) Etc.
- ✓ Continuity plans to deal with aftermaths of any security breaches.

3. Nurturing digital literacy and raising awareness about the benefit of digital banking services will further facilitate consumer trust and acceptance this entails implementing targeted advertising campaigns; brochures to educate new users about digital banking and provides incentives to digital banking users.

4. Concerning the issue of lack of rules and regulation in digital banking context, Collaborative efforts between financial institutions and governments promoting financial inclusion and equitable access to digital banking services. Arranging policy and procedures for dealing with digital banking transaction error, theft or fraud and system malfunction & human error, placing clear law that defines term and conditions of digital banking.

5. Regarding product accessibility, investment in technological infrastructure helps to increase digital banking service quality in addition it enhanced digital banking service accessibility, features and product /service functionality.

CBE should comprehensively address those hurdles and create a secure, inclusive, and sustainable digital banking system in order to ensure long-term benefits for all involved parties.

5.4 Suggestions for Further Studies

This study asses the major challenges on implementing digital banking service in CBE. Future research should focus on exploring innovative solutions for addressing these challenges.

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References

Al-Smadi,(2012) “Factors Affecting Adoption of Electronic Banking:An Analysis of The Perspectives of Bank’s Customers,International Journal of Business And Social Science:Vol. 3 No 17; September 2012

Gao & Bai, (2014) “A Unified Perspective on The Factors Influencing Consumer Acceptance of Internet of Things Technology, Asia Pacific Journal of Marketing; 8 April 2014, ISNN: 1355-5855

Yousafzai Et Al., (2003) “A Proposed Model of E-Trust For Electronic Banking, Cardiff Business School , Cardiff University ; Aberconway Building, Colum Drive, Cardiff CF10 3EU, UK

Al Kailani & Kumar, (2011) “Investigating Uncertainty Avoidance And Perceived Risk For Impacting Internet Buying: A Study In Three National Cultures; Marshall Goldsmith School of Management, Alliant International University ; vol. 6, No.5;May 2011; ISNN 1833-3850

Talha et Al., (2004) “ Problems And Prospects of Internet Banking; Journal Of Internet Banking And Commerce 9(1); January 2004

Venkatesh & James, (2012) “ Consumer Acceptance And Use of Information Technology; Extending The Unified Theory of Acceptance And Use of Technology; Management Information System Research Center,University of Minnesota; vol, 36, No.1, March 2012

Kuisma et Al., (2007) “ Mapping The Reason For Resistance to Internet Banking : A Means-End Approach, International Journal Of Information Management;Nordea Bank Finland 27 (2007) 75-85

Carr, (2007) “Trust-an Analysis of Some Aspects; dept. of philosophy,River University,

Sergeant, (2000) “ Great fundraising & Brands: Help or Hindrance, ACA Philanthropy & Fundraising

Phifer, (2004) “ The Value of Information in The Hold-Up Problem,Accounting and Control, Vienna University, 17 May 2004, Brunner StraBe 72, A-1210 Vienna.

Cunliffe, (2000) “ Developing Usable Web Sites -A review and Model,University of South Wales, October 2000, Internet Research 10(4):295-308

Becker, 2005 “ Methods of Design,

Liao & Cheung, (2005) “ Service Quality in Internet E-banking: A user-based core framework, 2005 IEEE international conference on E-Technology, E-Commerce and E-Service, 29 March 2005, ISBN:0-7695-2274-2

Simpson,(2002) “ Innovation and Technology Management ,INCOSE international symposium/Volume 12, issue 1

Blount Et Al. 2005

Turban et Al., (2000) “ Corporate Social Performance as a competitive Advantage in Attracting a Quality Workforce; International Association for Business and Society, September1,2000, Business Society 2000 39: 254 DOl: 10.1177/000765030003900302,

Consoli (2003), “ The Evolution of Retail Banking Service In United Kingdom ; A Retrospective Analysis, Center for Research on Innovation & Competition, CRIC Working paper No 13, September 2003, ISBN: 1 84052 011 6

Annin Et Al.,(2017) “Influence Of Demographic Factors On Users’ Adoption Of Electronic Banking In Ethiopia”,Journal of Internet Banking And Commerce ISSN: 1204-5357

Kumbhar, (2010) “Factors Affecting The Customer Satisfaction in E-Banking: Some Evidences Form Indian Banks,Knowledge Management Research & Practice 3:1-14 ; January 2011

Berger & Gensler (2007) “Online Banking Customers : Insight From Germany. Journal of Internet Banking And Commerce, April 2007. vol. 12, no. 1

Creswell, 2009, Research Design:Qualitative, Quantitative , Mixed Methods Approaches,University Of Nebraska-Lincoln(3rd Edition Ed.). Los Angeles,London,New Delji Page 95-101

Mohmood Shah & Steve clarke ,2009 E-Banking Management

Https://Blog.Kms-Solution.Asia/The-Best-Payment-Authentication-Methods-For-Banks

Https://En.m.Wikipedia.Org/Wiki/Digital_Banking

Http://Www.Nia.Nih.Gov

Https://Www.Investopedia.Com/Terms/a/Atm.Asp

Www.Raceinstitute.In

Https://Www.Icommercecentral.Com/Open-Access/Electronicbanking-In-Ethiopia-Practices-Opportunities-And-Challenges-18.Php?Aid=38390#:~:Text=The%20modern%20e-Banking%20methods,To%20the%20Ethiopian%20banking%20sector

Https://Encyclopedia.Pub/Entry/26330#:~:Text=The%20estimation%20result%20of%20Sem,%2C%20social%20influence%2C%20effort%20expectancy.

Https://Www.Ubs.Com/Ch/En/Wealth-Management/Womens Wealth/Academy/2022/History-Of-Digitalbanking.Html#:~:Text=From%20the%201980s%20onwards%2C%20innovations,The%20history%20of%20digital%20banking.

Https://Www.Hdfcbank.Com/Personal/Resources/Learningcentre/Digitalbanking/Importance-Of-Digital-Banking

Https://Corpbiz,Io/Learning/Importance-Of-Consumer-Awareness-For-New-Age-Businesses

Https://Www.Researchgate.Net/Publication/350134465_Digital_Banking-_Relation_Of_Determined_Variables_Related_To_Service_Quality

Https://Diro.Io/Digital-Banking-And-Aml-Regulatory-Compliance/

Https://Comesabusinesscouncil.Org/Wp-Content/Uploads/2020/04/7.-Electronic-Banking-Regulations.Pdf

Https://Www.Bankofbaroda.In/Banking-Mantra/Digital/Articles/Advantages-And-Challenges-Of-Digital-Banking

Https://Enterslice.Com/Learning/Reasons-For-Implementing-The-Digital-Banking/

Mohmood Shah & Steve Clarke, 2009 E-Banking Management

CBE Hand Book For Customer Classification Dec 2016 ,Pp.24-32

Brian Dixon And Brian Nixon.(2000).E-Banking Managing Your Money And Transactions Online ,Pp 19-35.

Executive Summary of The CBE's Comprehensive Assessment And Strategy Design Work Published In June 2022.

Kwame Gyeabour Asante And Nana Kojo Ayimadu Baafi, (2022). Influence Of Trust In The Adoption Of Digital Banking Platforms.

S. Bulomine Regi (2017). Problem Faced By Customers Using Technological Banking Services. International Journal Of Research - Granthaalayah, Pp.1-2

Oliver Wyman (2016) .Retail Banking In Africa.France,Pp 13&14

Influence Of Trust In The Adoption Of Digital Banking Platforms a Case Study Of a Public Ghanaian Bank Seek To Examine The Influence Of Trust On The Adoption Of Digital Banking Services Conducted On May 2023;

Appendix I: Questionnaire for customers of Commercial Bank of Ethiopia, Addis Ababa

St. Mary's University

School of Graduate Studies

Department of management

Questionnaire prepared for Customers of Commercial Bank of Ethiopia, Addis Ababa

Dear Respondents

Thank you for responding to this questionnaire. I am a university student conducting this survey as part of my research for partial fulfillment of Masters Degree in Business Administration at St, marry University.

The purpose of this survey is to examine your opinion about the main factors of implementing digital Banking Service in Commercial Bank of Ethiopia. With the results of this survey, I expect to gain a better understanding of major challenges of implementing digital Banking service have an impact on excelling customers service and satisfaction and for banks reduction of operational costs and attainment of strategic objectives .

The success of this survey depends on your participation and open responses. I would like to greatly appreciate your assistance in answering the questionnaire. Please be assured that your responses will be kept strictly confidential and only be used for academic purpose.

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

Yegzersira Besufekad Mobile No. 0913938475

Thank you

This Questionnaire distributed for customers who are practicing digital banking service provided by the bank.

PART ONE

Section A: - Personal Background Information

- Please, circle your alternatives

1. Branch Name_____

Sex	Age	Education Background	Employment Status
A. Female B. Male	A. <20 B. 20-30 C. 31-40 D. 41-50 E. 51-60	A. No formal education B. High school C. Certificate D. Diploma E. Bachelor's Degree F. Masters and above	A. Government Employee B. Private Employee C. Personal Business D. Student E. Retired F. Not Employed

Section B: General Question

How long have you been using E-Banking service?	Which E-Banking service do you use?	How do you start E-Banking?	What factor promotes you to use digital banking service?
A. less than 1 Year B. 1-3 Years C. 4-6 Years D. > 6 Years	A. ATM/Debit card B. Internet Banking C. Mobile banking D. Point of sell (POS) E. CBE Birr	A. Advertisement B. Bank Employee C. Social Media D. Colleague/Friends E. If other specify_____	A. Reduced time of transaction B. Cost effectiveness C. Ease of use D. Technology savvy E. Convenience F. Others(please specify)_____

PART TWO

Section A: Rating Questions Please mark with (√) for your extent of agreement with the following statements. Strongly Agree= 5, Agree= 4, Neutral= 3, Disagree=2 and Strongly Disagree=1

No.	**Level of customer understanding about E-banking service**	**1**	**2**	**3**	**4**	**5**
1.	I can access e-banking in multiple languages.					
2.	I understand the e-banking service very well.					
3.	I trust the bank e-banking service					
4.	I am satisfied with the level of data and information security provided by the bank					
5.	The Bank security is always updated to protect any theft or fraudulent?					
6.	I can able to see past transactions through e-banking					
7.	I understand the description given by bank staff on the steps of using e-banking service					
8	If I face a problem, I can ask immediate help from the bank at any time					
No.	**Benefits of E-Banking services for customers**	**1**	**2**	**3**	**4**	**5**
1.	E-Banking reduced costs in accessing and using the banking service.					
2.	E-Banking increased comfort and time saving.					
3.	E-Banking ensures quick and continuous access to information about your account.					
4.	E-Banking makes faster way of conducting banking transactions.					
5.	E-Banking is convenient in terms of 7 days and 24 hours services.					
6.	E-banking ensures me better cash management					
No.	**Digital banking service design**	**1**	**2**	**3**	**4**	**5**
1.	Preferred language setting					
2.	Product/service design are easy to find and change					

3.	Easily understandable instructions					
4.	User friendly interface					
5.	The bank service design meets customers' needs					
No.	**ATM related problems**	**1**	**2**	**3**	**4**	**5**
1.	Cards captured in the machine					
2.	ATM Machine out of cash					
3.	Non printing of statement/receipts					
4.	Frequent Power interruption while using ATM machine					
5.	The ATM machine deducts the amount from the account but does not pay the money					
6.	Network failure while using ATM machine					
7.	Inadequate withdrawal limit(transaction limit)					
8.	Not being able to maintain security					
9.	The bank has most advanced ATM Machine					
No.	**Internet Banking related problem**	**1**	**2**	**3**	**4**	**5**
1.	Lack of security in transactions					
2.	Leaving the transaction unfinished					
3.	Following too many steps to processing transaction					
4.	Network failure while using internet banking					
5.	Inadequate transaction ceiling limit					
6.	The bank has up-to-date web presence					
7.	Unable to print receipt of transaction					
No.	**Mobile banking related problem**	**1**	**2**	**3**	**4**	**5**
1.	Lack of security in transactions					
2.	Leaving the transaction unfinished					
3.	Following too many steps to processing transaction					
4.	Network failure while using mobile banking service					
5.	Inadequate transaction ceiling limit					

6.	The bank has most advanced technology					
7.	Unable to print receipt of transaction					
No.	**CBE Birr related problem**	**1**	**2**	**3**	**4**	**5**
1.	Lack of security in transactions					
2.	Leaving the transaction unfinished					
3.	Not providing full information					
4.	Following too many steps to processing transaction					
5.	Inadequate transaction ceiling limit					
6.	The bank has most advanced technology					
7	Unable to print receipt of transaction					

Section B: Briefing Questions

1. What are the challenges you face using e-banking services?

_____

_____

_____

2. What is your overall feedback on the e-banking services provided by Commercial Bank of Ethiopia?

_____

_____

_____

_____

3. If there is any additional suggestion you would like to give concerning the challenges of e-banking service provided by Commercial Bank of Ethiopia, please specify here

_____

_____

Adapted questionnaire from SCRIBD.COM and awareness of consumer e transaction through mobile phone (vaishaly sharma)

Appendix II:Interview Questions for Digital Banking Officers

Interview Guidelines for Key Informants (Digital Banking Officers)

Name of the interviewer_____

Position of the interviewee_____

Place of Interview_____

Branch Name_____

Date of Interview_____

1) What are major challenges on implementation of E-payment (Digital services)?

2) Do you think Commercial Bank of Ethiopia E-Banking service is providing as expected and provide e-banking services for 24/7?

3) Do employees of the bank have adequate knowledge and skill in providing e-banking services? Does the bank give training to all employees to encourage their performance?

4) Does the bank have policy and procedures for dealing with digital banking transaction error, theft or fraud and service rules applicable to customer accounts? Are customers and bank employees aware of them?

5) Do you think the bank's digital service clash with other service delivery channels?

6) Is the bank's digital banking service design suits the market that it is trying to address?

7) Do you think that there is adequate coordination and cooperation between banks, regulators and other financial institutions to detect fraud activities & refund policies in E-banking context?

Adapted questionnaire from SCRIBD.COM and awareness of consumer e transaction through mobile phone (vaishaly sharma).