

**ASSESSMENT OF ELECTRONIC BANKING SERVICES
ADOPTION TOWARDS CUSTOMER USE IN TANZANIA: A
CASE OF SOME SELECTED COMMERCIAL BANKS**

By

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**A Dissertation Submitted in Partial Fulfilment of the Requirements for Award
of the Degree of Master of Business Administration in Corporate Management
(MBA-CM) of Mzumbe University**

CERTIFICATION

We, the undersigned certifies that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled “**Assessment of Electronic Banking Services Adoption Towards Customer Use in Tanzania: A Case of Some Selected Commercial Banks in Dar es Salaam City**”, in partial fulfilment of the requirements for the degree of Master of Business Administration in Corporate Management of the Mzumbe University.

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ABBREVIATIONS AND ACRONYMS

ATM	Automated Teller Machine
EBS	Electronic Banking Services
GSM	Global System for Mobile Communications
ICT	Information and Communication Technology
MFA	Multi Factor Authentication
MMS	Multimedia Messaging Service
NBS	Nottingham Building Society
P2P	Peer to Peer
PIN	Person Identification Number
PIN	Personal Identification Number
SIM	Subscriber Identification Module
SPSS	Statistical Package for the Social Sciences
SST	Self-Service Technologies
TAN	Transaction Account Number
USSD	Unstructured Supplementary Service Data

ABSTRACT

This study basically assessed the adoption of electronic banking services towards customer use in Tanzania. The research was based on three specific objectives: to determine the effects of internet banking on customer use, to determine the effects of mobile banking services on customer use, and to assess the effects of automated teller machines on customer use.

Explanatory design was used in order to undertake this research. Data was collected by the researcher by contacting employees of two commercial banks using 69 respondents that constituted the sample selected using simple random and purposive sampling techniques. The researcher collected primary data by going to field by contacting respondents that were sampled. The data was collected by the researcher through structured questionnaires complemented by interviews, and was analyzed quantitatively using SPSS to generate relevant statistics measurements. Descriptive statistics were calculated and used to present the characteristics of the participants using frequency and percentages tables. The relationship test among variables was done based on correlation and multiple regression tools. Qualitatively, data was analysed using content analysis through descriptive statements.

Results indicated that the three independent variables quantitatively tested were positively having significant effects statistically on customer use in electronic banking adoption for the dependent variable with $p < 0.05$. Qualitative analysis cemented these findings with similar results.

The findings imply that customer use of adopted electronic banking services is influenced by internet banking services, mobile banking services as well as automated teller machines services. It is recommended that customers' awareness, education, communication and advertisements of electronic banking service are very important in facilitating its use to the customers.

TABLE OF CONTENTS

CERTIFICATION.....	ii
DECLARATION AND COPYRIGHT	iii
ACKNOWLEDGEMENTS	iv
ABBREVIATIONS AND ACRONYMS	v
ABSTRACT.....	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES	x
LIST OF FIGURES.....	xi
CHAPTER ONE: INTRODUCTION	1
1.0 Introduction.....	1
1.1 Background of the Problem	1
1.2 Statement of the Problem.....	4
1.3 Research Purpose	5
1.3.1 General Objectives	5
1.3.2 Specific Objectives.....	5
1.4 Research Questions	5
1.5 Research Hypothesis	6
1.6 The Research Significance.....	6
1.7 Scope of the Study	7
1.8 Limitations and Delimitations of the Study	7
1.9 Organization of the Report.....	7
CHAPTER TWO: LITERATURE REVIEW	9
2.0 Introduction.....	9
2.1 Definition of Operational Terms.....	9
2.2 Reviews on Theories.....	10
2.3 The Rise and Development of E-Banking Services.....	12
2.4 The Usage of Mobile Banking Services.....	20

2.5 Automated Teller Machine (ATM) Services	37
2.6 Empirical Reviews	39
2.7 The Conceptual Framework.....	41
CHAPTER THREE: RESEARCH METHODOLOGY.....	42
3.0 Introduction.....	42
3.1 Research Design.....	42
3.2 Research Strategy.....	42
3.3 Area of the Study	43
3.4 Types of Data	43
3.5 Target Populations	43
3.6 Sample Size.....	43
3.7 Sampling Techniques.....	44
3.8 Data Collection Methods.....	45
3.9 Validity and Reliability.....	46
3.10 Data Analysis	47
CHAPTER FOUR: PRESENTATION OF FINDINGS.....	48
4.0 Introduction.....	48
4.1 Response Rate	48
4.2 Respondents Features.....	48
4.3 Internet Banking Services	51
4.4 Mobile Banking Services	52
4.5 Automated Teller Machine Services (ATMs).....	53
4.6 Quantitative Analysis of Study Variables.....	55
CHAPTER FIVE: DISCUSSION OF THE FINDINGS	59
5.0 Introduction.....	59
5.1 Discussions on the results	59
5.2 Internet Banking and electronic banking usage	59
5.3 Mobile banking Service and electronic banking usage.....	61
5.4 Automated Teller Machines (ATMs) and electronic banking usage	61
CHAPTER SIX: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION	63

6.0 Introduction.....	63
6.1 Summary of findings.....	63
6.2 Conclusion.....	64
6.3 Recommendations.....	65
6.4 Areas for further studies.....	66
REFERENCES.....	67
APPENDICES.....	73
APPENDIX I: QUESTIONNAIRE	73
APPENDEX I1: INTERVIEW SCHEDULE FOR BANK OFFICIALS	78

LIST OF TABLES

Table 3. 1 Cronbach Alpha Test	46
Table 4. 1: Gender of respondents	49
Table 4. 2: Level of Education.....	49
Table 4. 3: Respondents' Age	50
Table 4. 4: Internet Banking.....	51
Table 4. 5: Mobile Banking Services.....	52
Table 4. 6: Automated Teller Machines.....	54
Table 4. 7: Mean and Standard Deviation.....	55
Table 4. 8: Model Summary.....	56
Table 4. 9: Correlation Analysis	57
Table 4. 10: Multiple Regression Analysis.....	57

LIST OF FIGURES

Figure 2.1 Conceptual Framework.....	41
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CHAPTER ONE

INTRODUCTION

1.0 Introduction

This part describes overview of the study on assessment of electronic banking services adoption towards customers' use in Tanzania. The chapter describes these sections chronologically that include: the background, statement of the problem, research objectives, research questions, research significance and the organization of the report.

1.1 Background of the Problem

Electronic banking has become a central phenomenon currently in the technological development as it is facilitated by the use of internet and online facilities in undertaking banking activities (Kelman, 2016)). Its importance has nowadays increased because it has enabled the banks in various parts all over the globe to enhance business transactions and promote service quality, as customers are able to perform transactions beyond borders and expediently using their bank accounts in their home countries (Hogarth, 2004). This service has facilitated improvements in banking services on customers provided, to such extent that there is good understanding on the services by customers to utilize the opportunities.

Electronic banking has spread in various parts of the world, since the operating entities have resorted to the inclusion of the services, for the purpose of ensuring that customers are served in a manner that ensures efficiency and effectiveness in banking services (Locke, 2017). This has fostered the inclusion of electronic banking services' customers in many areas of the world, including the developing countries in areas with insufficient financial entities, operating in the economies and the market at large. The services have been included and made easy to use to enhance customer needs promotion (Bourque, 2017).

The issues which have been thought prior to the inclusion of the services have been queues and traffic jams in the banks' physical premises which have been causing high congestions and distorted service quality, with many customers discouraged to perform transactions using the banks due to such inconveniences (Muhn, 2018). In addition to that, the focus has been on the promotion of Self-Service Technologies (SSTs) on the customers towards bank services consumption for that matter (Ginovsky, 2017). This brought about major developments for the banking services all over the globe pertaining to service quality promotion.

Tanzania specifically consists of the banking sector which is highly growing and escalating higher in the market and the economy. The sector has grown to the extent that there are more than 30 commercial banks operating and other several financial entities in national economy providing various services to the customers which are banking related (Lindi, 2016). On top of that, banks practicing conventional system, electronic services and Islamic banking operate in the economy, whereas the entities in totality are highly regulated and monitored by the Bank of Tanzania (BoT).

Banks operating in Tanzania have a variety of services including lending as the core business of the banks to several clients such as groups, individuals, the government and corporates (Mirondo, 2018). The services also include fixed deposits accounts, saving accounts, current accounts, and many others depending on the wants and needs of the customers, provided that one meets the conditions and requirements to be assisted and gets the services including being landed with the loan(s) for that matter (Elinaza, 2016).

While that is happening, banks on the other hand, in Tanzania have also instituted several measures and services to facilitate service quality enhancement to the customers whereas among these services is electronic banking services (Elinaza, 2018). The service has been incorporated by some banks for the purpose of facilitating easy use, and application of banking services by customers through self-service technologies (SSTs). Despite that, there have been concerns on how to reduce

unnecessary customer congestions in the physical bank premises which have been useful in reducing operating costs by the banks (Sotunde, 2012).

The services consist of several varieties of e-banking services such as internet, automated teller machines and mobile banking services (Elinaza, 2018). The bank of Tanzania Financial Sector Supervision report for 2019, has indicated growing usage of these digital channels and such digital payments emerged as important platform for advancing financial inclusion. This is on account that, digital payments reduce the cost of providing financial services, and increase safety and convenience of using saving and payment products. The channels also drive inclusive economic growth and individual financial empowerment. On that note, electronic banking is inevitable because with advanced technology such facilities are common practices, whereas regardless of the cost and other implications to the banks they are supposed to be included for the purpose of attracting customers (Elinaza, 2016). In this regard, the services are inherently significant in this pace, whereby technology is embraced as a key driver for enhanced modern human activities.

In Tanzania the government has been promoting the use of electronic banking by making efforts of introducing digital communication systems in the country in order to facilitate communication services. Also, the government built a telephone backbone to enhance the speed of internet and other communication facilities. In response to these efforts, banks gradually introduced electronic banking services starting with internet banking followed by ATMs and of recent mobile banking services such as NMB mobile, CRDB mobile, DCB mobile and others.

Regardless of efforts by the commercial banks with Bank of Tanzania support and the government, still the response has been low and poor among customers on digital banking usages and applications (Karega, 2011). This has been attributed to the fact that responses of customers have been deemed limited both by the learned and less learned people, for that matter, which have brought about an increased concern on the initiatives which have been undertaken in this regard. This was possible due to

the verity that, awareness on bank customers for digital banking has been limited which fostered the situation to be that way.

Besides that, the acceptability level of the service has been limited among many customers which have resulted to the situation to lead to limited use on digital banking services (Elinaza, 2018). Furthermore, the situation is facilitated by the fact that, there is limited promotion strategy which is in line with the realities of the services provided in the area. This made it imperative to undertake this research, in as far as various studies were done on banking industry including Vedasto (2018) on inquiry on impact of training and development and the performance of commercial banks in Tanzania.

Despite that, Kiswaga (2018) conducted a research that examined the effects of service quality promotion and practices on customers' satisfaction in Tanzania commercial banks. Nevertheless, less was performed on electronic banking services adoption on customer's use for commercial banks in Tanzania a gap to be filled. In that way, a research was to be performed to assess electronic banking services adoption for customer's use in Tanzania to ascertain the reality.

1.2 Statement of the Problem

E-banking services are rendered through several commercial banks and financial institutions in Tanzania as a means to facilitate financial services usage and consumption among customers in enjoying banking services for that matter (Elinaza, 2018). This has brought about electronic banking services whereas the outcome has been the opposite prior to the expectations of the banks. This is attributed by the fact that there have been limited and poor customer responses on the use of these services regardless of their usefulness and relevance (Lindi, 2016).

Moreover, this has been motivated by concerns that there has been noted limited customer awareness on electronic banking services whereas some confuse it with mobile money services and others have no idea about it (Elinaza, 2016). In spite of

that, there has been limited level of acceptance on the services which has been an issue of great concern pertaining to customer uses of the electronic banking services. However, there have been limited promotion measures and services which congregated with the actual realities of the individuals in Tanzania.

This influenced the desire to have this research done because various researches done on the banking sector practices in Tanzania, like that of Kiswaga (2018), that assessed service quality effects on customer's satisfaction for commercial banks in Tanzania. In addition to that, Vedasto (2018) assessed the influence of the training and development for commercial banks' performance in Tanzania. In that note, it is visible that little or less was done on electronic banking services adoption towards customer's use in Tanzania.

1.3 Research Objectives

1.3.1 General Objectives

The research's general objective was to assess the electronic banking services adoption towards customers' use.

1.3.2 Specific Objectives

- i. To determine whether internet banking affects customers' use of electronic banking services in Tanzania.
- ii. To determine whether mobile banking services affect customers' use of electronic banking Tanzania.
- iii. To assess whether automated teller machines affect customers' use of electronic banking services in Tanzania.

1.4 Research Questions

The following questions guided this research.

1.4.1 General Research Question

What is the effect of electronic banking services adoption towards customers' use in Tanzania?

1.4.2 Specific Research Questions

- i. What are the effects of internet banking on customers' use of electronic banking services?
- ii. What are the effects of mobile banking services on customers' use of electronic banking services?
- iii. What are the effects of automated teller machines on customers' use of electronic banking services?

1.5 Research Hypotheses

There are three predicting variables that were identified: internet banking service, mobile banking service and automated teller machines (ATMs) service as stated below.

H₁: Internet banking services affects customer's use of electronic banking services in Tanzania.

H₂: Mobile banking services affects customer's use of electronic banking services in Tanzania

H₃: Automated teller machines (ATMs) affects customer's use of electronic banking services in Tanzania.

1.6 The Research Significance

The study findings are relevant in the way that they seek to provide an insight on the application and usage of electronic banking services for customers in the country. This may assist the banks to design appropriate measures to capture the clear understanding of the markets before introducing new customers' services or products. Moreover, the study sought to reveal objectively the actual concerns that affect electronic banking services usage in the country. Furthermore, the study is useful in enhancing the actual realization of the modern banking accomplishments.

The study findings will be useful to the government, as it may help in designing viable policy instruments, in helping the diffusion of the electronic banking services in the Tanzanian society, in enhancing banking services where formal banking services are unavailable, especially in rural areas. The study is also significant to the researcher, for making him acquire a Master of Business Administration - Corporate Management degree.

1.7 Scope of the Study

The study was conducted in the banking sector specifically on the adoption of electronic banking products towards customers' use in Tanzanian environment. Thus, the study pursues to fill the gap in that particular area and context.

1.8 Limitations and Delimitations of the Study

The research encountered several limitations for pertinent issues including respondents' skills of filling the questionnaires, as it required some time to learn and contemplating essential issues which enabled the undertaking of the questions in a manner which was effective and efficient. The researcher addressed this limitation by spending sometime in explaining how to fill the questionnaires to all respondents.

The other challenge was limited timeframe and schedule for each stage to be undertaken and accomplished, since the schedule set was tight and the researcher had limited time to perform. The pandemic corona virus caused COVID-19 disease that affected the whole world also contributed to hardships during data collection period. The researcher used short and clear questions for easy of filling and made regular but timed visits to the respondents to avoid prolonged contacts and reduces frequent visits to the respondents in order to overcome the challenges.

1.9 Organization of the Report

This report has six chapters, whereby chapter one describes the study overview. This part seeks to explain the background, statement to the problem, research objectives, research significance and limitations. Chapter two presents the literature reviews on line with the topic. This part seeks to discuss the theoretical review, empirical

review, and the conceptual framework. Chapter three discusses the methodology. This part seeks to explain the research design used, the sampling methods used, the nature of the population, the sample, data collection methods and data analysis methods. Chapter four discusses on presentations of data found using tables and graphs. Chapter five discusses the results based on the empirical literature reviewed. Chapter six discusses the summary of findings, conclusion and the recommendations as well as areas for further research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section discusses reviewed literatures that were done by various scholarly authors in line with the study problem, as it is comprised of the conceptual definition of key terms, review of the theories and empirical studies that informed of the study. Besides that, it illustrates the conceptual framework of the study by providing the framework of understanding the concepts in question.

2.1 Definition of Operational Terms

2.1.1 Electronic Banking Services (EBS)

Locke (2017) defined electronic banking services as the banking practices through online facilities by means of internet. These services are done and enabled by the use of modern technology which ensures that the services are effective and efficient for serving customers' needs and wants, in accessing financial services (Locke, 2017). This is an advanced form of banking services which has been assisted by technological advancement and growth in the world.

2.1.2 Customer Use

This is the situation where by a product and or service that has been introduced in the market by the business organization is well utilized and consumed by customers in the market, in a manner that guarantees efficiency and effectiveness (Bourque, 2017). This is associated with the level of consumption and use of businesses' financial service(s) and financial product(s) for that matter.

2.1.3 Mobile Banking Services

This is a service rendered by a bank or other financial institutions permitting customers to undertake monetary exchanges remotely using cellphones or tablets. Similar to web banking, it utilizes programs called applications, and is provided by the financial organization (Smith, 2019).

2.1.4 Internet Banking Services

This is a service rendered by a bank or other financial institutions permitting customers to undertake monetary exchanges remotely using computers connected by the internet or web (Shao, 2007). It utilizes programs called applications, and is provided by the financial organization.

2.1.5 Automated Teller Machine Services

This is a computerized web device that enables the customer of a financial institution to have the right of entry to financial transactions in a public room without the need for a person clerk or a bank teller. This is a service rendered by a bank or other financial institutions permitting customers to undertake monetary exchanges remotely using a computer inside a secured public room, Cacioppo (2000). Similar to web banking, it utilizes programs called applications, and is provided by the financial organization.

2.2 Reviews on Theories

2.2.1 Theory of Technology Acceptance

This can be stated and argued as the use and application of computerized systems and applications on various tasks and activities for that matter (Abassi et al, 2015). The theory argues that the usage and appliance of electronic services for the individuals, entities or any other actors is motivated by two main reasons, which are apparent usefulness and the apparent easy to use. The apparent usefulness meant that, application and use of the arrangement depends on relevance of the system or application for that matter, by the user(s) (Rahimi et al, 2018). The apparent easy to use on the other side, means that, the system uses and applications are assisted by the application that is welcoming and accommodating in usage, for that matter (Huser et al, 2010). The theory's usefulness is that it provides clear justifications for fostering the decision on individuals and entities, to use the system applications. This is the actual fact on the practice that any electronic system and application is deemed effective and highly in use, provided that it possesses degrees of usefulness and it is easily used.

The theory is very useful to the study because it shows a reality pertaining to electronic banking services adoption in Tanzania, that with the limited level of awareness, acceptance and promotion entails that the perceived usefulness in the system usage has been less realized; as well as perceived easy to use, which has prompted the need to undertake a research in order to ensure that the knowledge gap can be filled for that matter.

2.2.2 The Theory of Task Technology Fit

This is a theory in computer applications usage and information and communication technologies' (ICTs) adoption that tries to argue that, in order to make activities that are performed by individuals and entities possible, they have to fit with the available technologies through the use of electronic facilities (Arthur, 2009). This is attributed by urgency of the task to be accomplished. This is actual situation on the ground that technology usage and application is facilitated by the urgency of the task to be performed, whereas the technology usage is effective and efficient for that matter (Franklin, 1999). Apart from that, the theory is also influenced by the previous experience on the technologies used, that as the technology advances the output becomes better and more improved.

This is the reality because as the technology advances, automatically there is improvement with the level of fit that tend to be more advanced and progressive (UNCTAD, 2001). The theory's usefulness to the study is based on the ground pertaining to the technological fit, that electronic banking is considered as a way and platform towards urgency on task performance in facilitating transactions; and responses to the previous experience, that was crude and manual, whereas electronic banking is a new system in the country which seeks to foster improvements in performing banking services.

2.3 The Rise and Development of E-Banking Services

2.3.1 Early Developments of EBS

Installation of E-banking framework empowered users of a bank or other monetary establishments to show the role of money related exchanges via the financial organization's website (Sparks, 2017). Electronic banking framework regularly was associated with pieces of the central financial banking framework that was installed by a bank and was more than branch normal banking, which was customarily a way people got into banks' administrations. In this regard, some banks worked as immediate or virtual banks whereby they depended totally on web-banking.

Web-banking programs gave individuals and corporate financial institutions ability to offer places of interests, view record adjustments, acquire articulations, have glances at late exchanges, moving cash records, and offer installments (Cronin, 1997). The antecedents to the financial transactions were the disconnection of banking administration from electronic media since mid-1980s. The term online became well known late 1980s and it indicated the utilization of terminals, consoles, and televisions or screens in order to access financial transactions, that used telephone lines. This gave rise to home banking that likewise led to the usage of numerical keyboards to send mitigates through telephone lines with instructions to banks.

The first service to be known of home personal computers for buyers' banking started in December, 1980 by the United American Bank, at Knoxville, Tenn. It was a joined American banded together with Radio Shack that delivered a safe customer's modem for TRS-80 personal computers and permitted clients to get to their accounts data safely (Murthy, 2017). After that, huge banks were amazed by such developments in the United States. In 1981 four other significant New York banks followed and gave home-based financial administrations using videotexts' framework (Rishi, 2017).

However, there were records of business disappointments in using videotex, and those financial administrations never got well accepted with the exception of those from France whereby the usage of videotexts were sponsored by telecommunication

suppliers in the UK whereby Prestels' framework were utilized. Designers in the banks of United American advertised personal computers banking framework intended to permit it broadly, however they were overwhelmed by contenders when United States flopped in 1983 because of credit extortion with respect to bank proprietor, the 1978 Tennessee' Democratic candidate for senator, Jake Butcher, advertiser of the Fair in Knoxville World's in 1982 (Gandy, 1995). The Tennessee Bank bought bombed bank, could not endeavor to create or market personal computers to be used in banking.

In the late 1990s, many banks began to witness rise of online banks as a key objective. In 1996 OP Financial Group, went into second phase of online banking on Earth and first in European continent (Tan and Teo, 2000). The fascination of web-based banking was truly evident: lessened costs of exchange, simplified reconciliation of transactions, intelligence showcasing abilities, and other returns arose that helped in easy access and retrieval of client records and net revenues. Web based financial administrations permitted organizations to establish packages for more transactions into easy bundles, clients' drawing and reducing overheads.

Internet banking began in the UK through the release of September 1982 Nottingham Building Society (NBS's) home link transactions. In the first place, on a limited premise before it was extended broadly in 1983 (Gandy, 1995). Homelink was conveyed through an association for British Telecom's Prestel administration and the Bank of Scotland. E-banking framework utilized Prestel interface framework and the personal computer, BBC Micro, or console (Tandata Td1400) was associated with a phone framework with a TV.

Home banking in US in its earliest stages, banks mindfully tested shopper enthusiasm in 1984. In a year later, internet banking drew national interests in the UK. Meanwhile Chemical Bank in New York was all the while finding out the bugs on the administration that offered to some degree restricted highlights (Prendergast, 1992). In 1983 services were paying attention on public and independent ventures. They empowered people to use electronic cheque book registers, saw accounts adjusts, moved assets among savings and investment transactions.

Acquisitions and mergers changed financial businesses in mid and late 1990s by making online services adoption enormously extended to banks' clients base. Banks later saw the Web a tool for enhancing their clients and increasing effectiveness (Peachey, 2015). Many variables made financial institutions grow to a larger extent for their businesses towards the online services. The financial foundations created means to undertake electronic banking transactions in mid 1990s, as many shoppers were not ready to invest money related exchanges through the web. That gave rise to boundless choice of online trade due security problems.

By the end of 2000, about 80% of U.S banks gave their clients electronic banking offer. Clients' uses grew steadily. It took about ten years for the Bank of America to reach 2 million e-banking clients. Huge social changes happened at the end of Y2K millennium bug snags (Werani, 2006). The Bank of America reached primary bank status of 3 million e-banking clients in 2001 with the client's base of about 20%. On correlation, bigger national financial institutions, such as Citigroup guaranteed 2.2 million e-banking transactions; meanwhile J.P. Morgan Chase reached excess of 750,000 web-based financial clients.

2.3.2 Developments in the 21 Century

E-banking customers showed more stable increase and profitable than ordinary customers. The Bank of Americas' clients beat a record of 3.1 million e-billing installments in October 2001 reaching more than \$1 billion (Mari, 2019). In 2009, Gartner Group reported that assessment indicated that in 2009 United States' 47% of grown-ups and 47% and 30% United Kingdom banks were on the e-banking. In mid 2000s saw the rise of branch-less banks as web-based organizations. Online banks acquired less overheads than physical banks (Rishi, 2017). Stores in United States considered direct-banks as FDIC-secured and offered a similar degree of protection assurance as conventional banks.

E-banking framework permitted clients to send cash between accounts, follow-up bills and look on credits, analyze costs and request products. They checked neighborhood café menus or land postings and other services (Abdou et al, 2014). In

order to make bank send and make installments, instructions giving subtleties of the anticipated users were transmitted via NBS that regulated subtleties on home link framework. The beneficiaries were: gas, power and phone organizations with records with different banks. The subtleties of installments were created whereby payments to NBS framework by the transaction holder were made by means of Prestel (Rishi, 2017). A cheque was then sent by NBS to the payee and a counsel giving subtleties of installments were sent to record holders.

Citibank, Chase Bank and Manufacturers Hanover were other three significant banks that began to make use of home financial administrations before long. Compounds Pronto disregarded the attraction of more customers in order to recoup back the original investment and surrendered in 1989 (Werani, 2006). Other banks had a comparable experience that originally showed up in United States web-based banks and was governmentally administered by Electronic Funds Transfer Act of 1978. Web based financial administrations were accelerated in 1984 and in 1988 whereby Minitel terminals conveyed unreservedly to the public legislation that was in operation. 6.5 million Minitels were introduced by 1990 for family units. Internet banking became one of the most popular administrations and web based financial transactions were relocated to online (Gandy, 1995).

In January 1997, the principal internet banking transactions was spearheaded by Sumitomo Bank. Significant banks used web based financial transactions by 2010, A survey directed by Japanese Bankers Association (JBA) in 2012 indicated that 65.2% clients were individual web bank users (Rishi, 2017). WeBank embarked on online bank made by Tencent in January 2015 and began 4-month-long web based financial path activity. Advance Bank procured by St. George Bank began to furnish clients with web-based banking with the rollout of the web banking program in 1995.

ICICI Bank used web saving money with its clients in 1998. Banco Original SA propelled its retail e-banking in 1996. New banks like Conta Simples started to develop in 2019, which intensified distinctly web banking. Banks saw the increasing prominence of e-banking as a change in enhancing financial transaction administration in 1994 (Mari, 2019). The usage of the web was another leaflet,

devoid of contact of the customer. In the early hours' locales included photos of bank's officials or signatures, and furnished customers with drawings of branches and ATM locations, telephone numbers for enquiries and simple postings of items.

Wells Fargo was the first U.S. bank to add account administrations to its site in 1995 whereby different banks rapidly acting accordingly. Presidential became the first U.S. bank to release ledgers in the web in the same year (Sparks, 2017). Online banking increased toward the start of 2004, about 33 million U.S. family units (31%) made usage to some kind of web-based banking. 47% of Americans utilized web-based banking after five years according to the review by Gartner Group.

Meanwhile, in the UK web-based banks developed from 63% to 70% of web customers in the series of 2011 and 2012. The quantity of computerized banking clients in the U.S. reached roughly 61% in 2018. Entrance of web-based banking in European countries expanded too (Mari, 2019). In 2019, it was shown that 93% of the Norwegian people got to internet banking locales, which was the most elevated in European countries, trailed by Denmark and Netherlands. In Asia, excess of 700 million buyers were realized to use computerized banking routinely, as per a 2015 review by McKinsey and Company.

To access financial related transactions, web based financial offices and clients with web access could be enlisted in the foundation for the transactions, and established a surreptitious phrase and diverse accreditations for clients' check (Rishi, 2017). Qualifications for internet bank account were customarily not corresponding to phone or versatile bank account. Financial foundations presented normally designated clients' numbers, despite of whether clients had indicated a goal to get to their web-based financial transactions. Clients' numbers were ordinarily not related to account numbers, so that various client records could be connected to the one client's number.

Monetary foundation could decide the kinds of financial exchanges that a client might have executed through internet banking with generally incorporated acquiring accounts adjusts, a rundown of late exchanges, electronic billing installments,

financing credits and assets moves between a client's or another's records (Rishi, 2017). Many banks set cutoff points on the sums that might be executed, and different limitations. Most banks empowered clients to access duplicates of bank articulations that could be printed at the client's premises. A few banks charged an expense for mailing printed versions of bank explanations. Other banks empowered clients to access exchanges legitimately into the clients' bookkeeping programs.

2.3.2 The Security Challenges of EBS

The security of a customer's money related to data was significant, without which web-based bank transactions could not work. Reputational dangers to banks institutions were significant. Money related institutions created different security measures to diminish the danger of unapproved admittance to clients' records. However, there was no consistency to the different methodologies received (Gandy, 1995). The use of a protected site was all around grasped. In spite of that solitary surreptitious key verification was still being used, it was devoid of anyone else knowledge and viewed as secure enough for web-based banking in certain nations.

Two different security strategies were employed in the web-based banking that included: PIN/TAN framework whereby the PIN were associated with a secret key, this was employed to login, and TANs that employed one-time passwords to verify exchanges that were made by the customers themselves (Tan and Teo, 2000). The latter was conveyed in several manners, especially to send dilapidated TANs to the web based financial customers via the postal letter. Another technique that was implemented for TANs involved the utilization of security tokens. These tokens made it possible to use TANs at any time, to establish a very good system of using two security pins that is two-factor verifications or 2FA.

TAN generators also incorporated the exchange of data into the TAN processed system rising in indicating on a special screen that enabled the customers to check online assaults done by Trojans that attempted to attack controls for the exchanged data through the personal computer. Another method that gave TANs web based financial customers was that sent TANs of bank exchanges to customers' cellphone via short messaging service (SMS) (Veeraghanta, 2017). The SMS for the most part

cited the exchange sum and subtleties; the TAN was just substantial for a brief timeframe.

Other countries like Germany, Austria and the Netherlands their banks embraced SMS TAN help. Also, Photo TAN help was used, whereby banks produced QR code pictures and sent them to cellphones' gadgets of web based financial clients (Werani, 2006). PIN/TAN was done for saving money using internet browsers for Secure Socket Layer (SSL) that made sure about associations, in a way that there was no extra encryption was required. Other approach that used TANs system for internet banking customers was that sent present bank exchange to the customers' (GSM) cell phone through SMS.

Assaults on web-based banking that are used nowadays are built on beguiling the customers' login data through the valid TANs. So new notable assault models, became to be known as phishing and pharming. These were associated with cross-site scripting and key lumberjack/Trojan ponies used still login data (Veeraghanta, 2017). That danger gave rise to assault strategy based on signatures in internet banking for making robust controls to accounts owners and made it possible to reveal on the screens attempted fake access to the customers' accounts.

U.S. Government Deposit Insurance Corporation Technology Incident Report of 2008 ordered that dubious actions that were reported by banks record quarterly that had reached 536 cases of personal computers interferences; with a normal interruption of recorded amount of \$30,000 (Sparks, 2017). It indicated about \$16-million problems that occurred in 2007's second quarter. Personal computers interferences increased by 150 percent between the premier and second quarter of 2007. Actually, 80% of the interferences originated from obscured exchanges that occurred during web banking, as it was reported and stated.

In the UK, misfortunes in web based financial misrepresentation rose by 48% in 2014 as contrasted in 2013. As per investigation done by group of Cambridge University digital security scientists in 2017, internet bank transaction misrepresentations had multiplied since 2011 (Abdou et al, 2014). Other kind of

assaults were purported that a person interfered the program causing an assault whereby central assaults by individuals led to a Trojan pony that accessed remotely the exchanges account number and money amount in the internet browser.

In response to that, modern security forms permitting the customer in cross-checking the exchange data on a protected gadget that was consolidated to fight assaults by malware. This was a socially designed gadget to persuade customers themselves in moving cash to the fraudsters due to bogus means, like the bank requiring a test for moving or organizations erroneously moved cash to the customers without feedback information to check validity of a transaction (Rishi, 2017). Clients were to perform, in this manner that never gave feedback on bank transactions not done by them.

There existed a few countermeasures which attempted to maintain a strategic distance from assaults. Whatever working framework was utilized, it exhorted that the working framework was as yet bolstered, and appropriately fixed (Werani, 2006). Advanced agreements were utilized against phishing and pharming. In signature-based web based financial variations (HBCI/FinTS) the utilization of Seconder card peruses was an estimation to reveal programming side controls of the exchange information. U.S. Government Financial Institutions Examination Council gave direction in adopting on Multi Factor Authentication (MFA) in 2001 and afterwards demanded to be established before finish of year 2006.

European Union Agency for Network and Information Security in 2012 ordered all banks to think of personal computers frameworks of their customers that were tainted by malware as a matter of course, and hence use security forms. The client could make feedback check-ups on the exchanged information against controls, the instance that gave the security of the cellphone hold up SMS TAN whereby the exchange information was to be sent with TAN number or independent smartcard peruses on screen. These could include exchange information into TAN processes while showing the customer the attack immediately.

2.4 The Usage of Mobile Banking Services

2.4.1 The Rise of Mobile Banking Services

This is a service rendered by a bank or other financial institutions permitting customers to undertake monetary exchanges remotely using cellphones or tablets. Similar to web banking, it utilizes programs called applications, and is provided by the financial organization (Smith, 2019). Portable bank transactions are always available on a 24-hour manner. Other financial transactions have restrictions on what data can be accessed via portable bank transactions, and the amount limit to be executed. Versatile bank transactions depend on easy access to web or similar information via cellphones.

Transactions through portable bank structures relied on the application of versatile bank transactions given and incorporated in getting accounts adjustments, and planning of modern monetary transactions, electronic billing arrangements, remote stores checking, P2P arrangements, and assets movements between customers in one side and account records on the other side (Brook, 2017). Other systems enable copies of transactions made and can be printed or downloaded by the customers for references in the future. Utilizing a portable bank application expands usability, speed, adaptability and furthermore improves security since it coordinates with the client worked in cell phone security instruments.

On bank's side, portable bank transactions decreased the costs of taking care of transactions by reducing the requirement for customers to visit bank offices for non-money activities and store exchanges. Mobile banking doesn't deal with transactions that include cash money and customers have to visit an ATM or bank office for cash withdrawals or storage (Tiwari et al, 2007). Many systems have remote storage choices with gadget camera to verify transaction checks to the financial institutions. Portable transactions make them different from versatile installments, which include the use of cellphones to pay for products or the retail location or remotely, similar to the use of a charge or Visa to effect EFTPOS installments.

2.4.2 Recent Developments in Mobile Banking Services

Most recent portable bank activities utilized SMS, a help that is popularly called SMS banking. Using cells with WAP enabled the use of web bank systems in 1999 whereby the first European banks started to offer portable services for their customers (Brook, 2017). Mobile banking prior to 2010 was highly accomplished through the use of SMS or websites. Apple's in collaboration with iPhone made significant achievements when they made it possible to undertake mobile transactions through cellphones that depended on Google's Android framework and this drastically expanded the usage of mobile transactions.

In consideration of these developments, headways in mobile innovations, HTML5, CSS3 and JavaScript saw banks expanding their mobile transactions on e-banking services. New systems are comprised of a web application in JSP, J2EE and elements of J2ME. In the report by Mapa (2012), it was proposed that more than 33% of banks had cellphones locations for making customers access financial services. Many developments occurred on mobile banking awareness on their usefulness and challenges such as recognition, diverting to storage, redirection to a portable financial transaction or accessing a menu of financial choices for customers to make choices after viewing the movements.

Many bank transactions were assigned bookkeeping and business classifications based on exchange medium. The non-exchange transactions of instructive nature were usually directed to exchanges, balance requests that were required before submitting a cash settlement (Sparks, 2017). The bookkeeping and business activities were offered constantly in mix forms with other transactions. Data management activities were done autonomously. Versatile services were used to facilitate business activities on monetary circumstances.

US Federal Reserve Report (March 2012) indicated that 21% cellphone proprietors utilized portable bank services in the year before. On view of an overview led by Forrester, versatile financial were to be appealing fundamentally to the youthful, well-informed client portion (Palmer, 2018). 33% of cellphone clients stated that

they thought about playing out money related exchange through their cellphone. However, the majority of the clients were keen on performing essential exchanges, such as questioning for account equalization and making bill. There are countless distinctive cell phone gadgets that made a major test for banks that offered mobile financial services in their operations. A portion of these gadgets such as Java ME and others supported SIM system Toolkit to be used, a WAP program or mere SMS (Sparks, 2017). Starting interoperability issues are always confined. Nations such as India utilized entryways R-World to empower restrictions on low-end java related telephones, while centered around regions, for example South Africa made it offensive to the USSD as premise of correspondence attainable by any telephone.

Craving for compatibility was to a great extent subjected to the financial institutions themselves, where they introduced systems (Java or local) giving better security and simple to use, and permitted improvement in increasingly complexities abilities like web bank services, whereas SMS could give nuts and bolts yet get hard to work with progressively complex exchanges (Mari, 2019). There was a fantasy that there was a test of interoperability between portable financial applications because they saw absence of regular innovation norms for versatile banking. Practically speaking, it was too soon for administration lifecycle on the compatibility that enabled to enter into a nation, as not many nations were more than one portable financial specialist co-op.

Banking interfaces were very much characterized and cash developments between banks adhered to the ISO-8583 norm. As portable banking developed, cash developments between specialist co-operations received indistinguishable guidelines from the financial world (Vaidya, 2011). Mobile Marketing Association (MMA) Banking Sub-Committee (2009) led by Cell Trust and VeriSign Inc. distributed the mobile services overview on money related foundations that talked about preference weaknesses of mobile channels such as short message services (SMS), mobile web, mobile applications, SMS with mobile web and secured SMS.

Most web-based gadgets, like the versatile communication gadgets, cybercrime rates were heightening every year. Cybercrimes influenced versatile services as they might

go from unapproved usage the proprietor utilized portable services against remote-hacking in any event, sticking or obstruction by means of the web or phone organized information streams (Smith, 2019). This was exhibited by the malware that were considered by SMS Zombie A, that contaminated Chinese Android gadgets implanted on backdrop applications and self-introduced so that to intervene the misuse of shortcomings by China's Mobile SMS Payment framework, taking banks' Visa numbers and data connected by budgetary exchanges.

One exceptional malware found of late was the Trojan Bankbot that attached itself on Google's assurances for Android application commercial center focused on customers of Wells Fargo, Chase, and Citibank on Android gadgets worldwide prior to expulsion by Google in September 2017. Noxious application enacted whenever clients accessed the application, overlaid and took bank's certifications (Brook, 2017). For financial world, money rates change by millisecond. In that sense, security of monetary exchanges executed from some remote area and transmitted money related data over the air, are the most confounded move which should be tended to well established by versatile system designers, remote system specialist co-ops and the banks' IT divisions.

One Time Passwords (OTPs) are the most secret keys that recent apparatus uses by money related and banking specialist co-ops in the battle against digital extortion rather than depending on conventional remembered password, OTPs mentioned for shoppers whenever they need to execute exchanges utilizing web or portable financial interface (Smith, 2019). At the point where the solicitation was gotten the secret phrase was sent to the purchaser's telephone by means of SMS. The secret word was lapsed once it was utilized or once it was planned life-cycle was terminated.

Sparks (2017) argued that due to the worries made express, it was critical that SMS door suppliers could give a tolerable nature of administration for banks and money related establishments concerning SMS administrations. The arrangement of administration level understandings (SLAs) was prerequisite for this sector. It was important to offer to the bank client conveyance assurances on all transactions made,

such as approximations on conveyance speed, throughput, and so forth. SLAs gave administration measurements whereby the information sender arrangement was ensured to perform.

In another way, a test for the chief Officers of the banks was comparative to the versatile financial foundation that dealt with exponential rise of customers. Versatile bank services, make accessible to customer living anywhere on the world (genuine whenever, any part of banking) and thus need to ensure that frameworks were ready for accomplishment in a genuine 24×7 way (Palmer, 2018). As clients would discover portable financial gradually becoming more valuable, their desires from the agreement would increase. Banks in poor condition to meet the exhibition and unwavering quality desires might lose clients' faith. Other frameworks like Mobile Transaction Platform permitted rapid sheltered portables empowering diverse financial administrations. Lately, in India there were an outstanding advance exploitation of portable services, motivating banks getting portable fora and disseminating rules of portable financial responsibilities.

Due to the idea of the network among many banks and their clients, it was impracticable to anticipate that clients would routinely call to e-banks or make connection to the web for typical redesign of resourceful financial applications (Vaidya, 2011). It must be understood that resourceful application should be checked on overhauls of refreshed downloads for essential patches. In spite of that there could be many issues to execute the methodology such as revamp/synchronization of other division segments.

Palmer (2018) argued that researches indicated major concerns about aspect on running resourceful financial assets were to be more broadly utilized, as a financial client's reluctance to adjust. Many shoppers, regardless of whether they were misguided or not, did not have any desire to start utilizing flexible banking, for a few reasons. These could incorporate the expectations to learn and acclimatize modern innovations, notwithstanding innumerable fears on security bargains, basically lack of having any desire to begin usage of modern innovation and other services. This

was a dilapidated by nations where versatile financial use was anticipated by the level of individuals who had non-SMS portable financial interactions in the past.

2.4.3 Mobile Banking Services and Marginal Areas

African countries like Kenya might reach heights if SMS portable bank services were kept in mind for the observed rundown. Kenya had 38% common people supporters of M-Pesa beginning in 2011. Despite the fact that starting at 2016 portable financial applications were in immense development, in Kenyan financial segment who subjugated android play store and apple store to for uploading their applications (Brook, 2017). The Kenya banks such as Equity Bank Kenya Limited and Co-Usable Bank used money applications that ended up being a triumph in portable financial applications. Portable banking was utilized in many localities of the world with virtually zero system services, particularly inaccessible countryside regions. Thus, portable business was mainstream in nations where the greater part of their common people was unbanked. In a large piece of these spots, banks were to be found in vast urban communities and clients needed to travel many kilometers to the closest financial institution.

Financial institutions such as Parsian, Tejarat, Pasargad Bank, Mellat, Saderat, Sepah, Edbi, and Bankmelli in Iran offered e-banking administration. Banco Industrial offered shore up in Guatemala. Residents in Mexico could get services of portable saving money from Omnilife, Bancomer and MPower Venture (Owens and Bantug-Herrera, 2006). In Kenya Safaricom a division of Vodafone Group used the M-Pesa services, essentially was normally embarrassed movement measures for cash, and however progressively took care of helpfulness tabs also. Zain propelled resourceful cash movement in businesses in 2009, known as ZAP in Kenya and in other African countries. In Kenya other different players like Tangerine, MobiKash and Funtrench Limited arrangements for autonomous portable cash move. In Somalia, many telecom organizations gave portable bank services, the most noticeable were Hormuud Telecom and its ZAAD services.

Telenor Pakistan propelled portable financial services as a team via Taameer Bank, named Easy Paisa that started in 2009 (Vaidya, 2011). These banks provide services such as giving ledgers, savings, withdrawals and settlement administrations, and miniaturized scale accounts to its customers about 80% of which were transients or not served area of the country via portable e-banking. By the year 2010, portable financial clients increased for more than 100 percent in Kenya, whereas in China, Brazil and United States had 200 percent, 150 percent, 110 percent respectively.

Dutch Bangla Bank established absolutely the first versatile financial help in Bangladesh on 31 March 2011. New administration was launched particularly on specialist and system assistance rendered by versatile administrators Banglalink and Citycell, and Sybase 365 an auxiliary of Sybase Inc. that gave programming arrangements to their neighboring accomplice Neurosoft Technologies Ltd (Tiwari et al, 2006). There were about 160 million persons in Bangladesh whereby just 13 percent had bank accounts. The arrangements of that Bank enabled to connect the country's unbanked population whereby 45 percent were cellphone customers.

Tiwari et al, (2006) argued that any versatile mobile with membership to portable administrators of Bangladesh get options the service administrations. Versatile financial administrations specialist performed banking services for its sake that is opening portable financial records giving money administrations (receipts and installments) and managed small credits. Cash withdrawals of a resourceful record could be possible from an ATM whose approval was done through cellphone and PIN' rather than 'card and PIN'. Administrations were done using flexible financial framework were individual to individual, individual to business, dealer installment, service charges, compensation payment, and payment of government salaries.

Laxmi Bank Limited launched the absolute portable bank services in Nepal in May 2012 with item Mobile Khata. Portable Khata then set sudden spikes in demand for an outsider stage that considered Hello Paisa that was compatible to all the telecoms in Nepal such as Nepal Telecom, NCell, Smart Tel and UTL, and was compatible to diverse banks countrywide. In a nation with more than 30 million people, more than 5 million bought in versatile banking in Nepal (Tiwari et al, 2007).

Barclays offered a help known as Barclays Pingit, and Hello Money that offered administrations in Africa, thus permitting cash transactions from the UK to worldwide parts with cellphones. Pingit was claimed by a consortium of banks (Tiwari and Buse, 2007). In April 2014, the UK Payments Council launched the Paym portable services enabling versatile installments between clients of a few banks and building social orders using the beneficiary's cellphone. In November 2017, the State Bank in India launched a harmonized financial service called YONO that offered regular financial capacities. In additional installment administrations there were web-based, arranging taxi booking or online training.

In 2019 German direct bank N26 beset Revolut as significant portable bank in European countries with estimation of \$2.7 billion and 1.5 million clients (Vaidya, 2011). The was followed by a remarkable decline of a portion of individuals utilizing versatile banking applications that decreased more in the most recent times in chosen nations worldwide after 2014. This arrangement offered administrations remotely by internet banking and cellphone banking or by autonomous financial specialist organized and gave the services by ATMs regularly under organize coalitions and versatile (Frankenfield, 2019). Direct bank services diminished the noteworthy expenses of keeping up a branch arrangement. The idea of an immediate approach of web financial services in the mid-1990s prompted various direct bank services although many claimed conventional banks.

Many direct banks offered online investment accounts offered better financing services with higher costs than conventional ones, as these banks could be extremely cost effective to work. Since mid-2000s web and phone e-banking became a pillar of retail banking and many banks joined those central administrations on changing or lessening branch system to reflect the points of interest that immediate banks had (Wildau, 2015). In the United States, many online banks were safeguarded by Federal Deposit Insurance Corporation (FDIC) and offered a similar degree of security of the clients' assets as customary banks.

World's first totally utilitarian direct bank was First Direct, which launched phone e-banking in the United Kingdom on 1 October 1989. An auxiliary of Midland Bank

spearheaded the idea of no branches and 24-hour services to community (Blake, 2019). In the mid-1990s was the greatest driver in the configuration of full direct financial models. Internet turned out to be all the more generally available, conventional banks tried to lessen operational expenses by offering web banking administrations.

Concurrently, web just or virtual banks began. These had no conventional financial foundation, such as branches, a cost-sparing element that enabled substantial amount to tender investment accounts with superior loan fees and advances but lower loan costs than most traditional banks (Wildau, 2015). Virtual banks worked for all intents and purposes from a lone PC and server organization without a munificent framework. In any case, there was a fundamental shopper indecisive in directing money related exchanges over the Internet, predominantly with an element that they couldn't manage up close and personal.

The first wholly practical direct bank in the United States was the Security First Network Bank (SFNB). It was launched in October 1995 and was the main direct bank that was safeguarded by Federal Deposit Insurance Corporation (Blake, 2019). Despite the fact that SFNB didn't make a lot of benefits in its underlying years, it indicated the idea of direct banking could work. Other immediate banks determined exclusively online investment accounts, giving higher loan costs than customary banks' clients who were pleased to just approach their record on the web. One of the best adopters of this was ING Direct that was launched in Canada in 1997 and extended to UK, Australia and the United States prior to its sell by proprietor around 2010.

Asia's initially immediate bank was fantastic; a division of the Oversea-Chinese Banking Corporation (OCBC) of Singapore was launched in April 2000. It stopped up in 2011 and its tasks changed into standard financial structure with parent OCBC saying that Internet Banking became a core issue of OCBC Bank which also included branches, ATMs and mobile banking (Blake, 2019). The immediate bank model was adopted by many individuals of competitor banks in UK during the period 2015-2018.

This was generally supported by portable matters which is the kind of electronic media was seen or used on cellphones, as ringtones, illustrations, rebate offers, games, motion pictures, and GPS route. As cellphone uses developed since the mid-1990s, the hugeness of the gadgets in regular day to day uses developed as needs increased (Roberts, 2017). Proprietors of cellphones would be able to access gadgets, plan arrangements, get instant messages (SMS), tune in to music and recordings, reclaim coupons of buys, see office archives and see driving directions on guides. The uses of portable material developed suitably.

Portable material alluded the text or mixed media facilitated on sites, which either were standard Internet pages, or, more than likely explicit versatile pages. Versatile material by means of SMS was as yet the fundamental innovation for correspondence that was used to send portable shoppers' messages, particularly easy material such as ringtones and backdrops (Escandor and Barrameda, 2011). Since SMS was the standard informing innovation used by youngsters, it was as yet the best way of reaching at this objective market. SMS was like universal, contacting a more widespread crowd than some other innovations accessible in versatile space (MMS, Bluetooth, portable email or WAP). More noteworthy than everything else, SMS was incredibly simple to use, which made appropriation increment step by step.

In spite of the fact that SMS was an old innovation that some time or another was supplanted by any appearance in Multimedia Messaging Service (MMS) or WAP, SMS much of the time increases new powers. A model was presentation of uses using portable tickets were sent to shoppers by means of SMS, WAP-push that contained connections whereby a scanner tag was set (Roberts, 2017). This plainly substituted MMS, had a constrained reach and still experienced interoperability issues. It was imperative to continue upgrading the purchaser trust in using SMS for portable substance applications.

This implied that if a shopper had requested another backdrop, this needed to speed up firm's way of doing. In this manner, imperative pick of correct SMS for door supplier so as to guarantee nature of-administration along the entire way of the substance SMS until arriving at the buyer's versatile (Blake, 2019). Present day

telephones accompany Bluetooth and close to handle correspondence. This permits video to be transmitted via telephone over a Bluetooth, with favorable circumstances that there is no information charge.

Portable application improvement also called versatile applications became a critical portable material showcase since the coming of the first iPhone of Apple in 2007. Before arrival of Apple's telephone item, the portable applications market (outside of games) were very inhibited (Feig, 2007). The covering of iPhone function storage just as the iPhone's one of a variety plan and UI, got a huge flood of versatile usage. It also empowered extra competition from diverse players. Google's Android stage for versatile material had furthermore extended the measure of application content available to cellphone supporters.

A few examples of portable applications would be applications to manage itineraries, purchase film tickets, see video content, oversee RSS news sources, read computerized variant of famous papers, recognize music, take a gander at star heavenly bodies, see Wikipedia, and considerably more. Many broadcasting companies had their own applications to advance and present their material (Roberts, 2017). iTyphoon was a case of a versatile application that was used to give data about tropical storms in the Philippines. Versatile games were applications that permitted individuals to play games on portable handsets. The standard classifications of versatile games incorporated Puzzle/Strategy and other strategies provided in inaccurate request of their dishonor.

A few examinations had established that most of portable games were purchased and played by females. 65% of versatile game income was determined by female remote endorsers. They were the greatest drivers of income for the Puzzle/Strategy classification; including 72% of the all-out portion of income, while men made up 28% (Blake, 2019). Ladies ruled income age for all versatile game classifications, except for adventure portable games, that drove 60% of the income for that classification. It was youngsters who multiple times were likely to use those more than twenty times to play mobile phone games.

Portable pictures were used as the backdrop to a cellphone, and were furthermore reachable as screensavers. For some handsets, pictures could be set to show when a specific individual call was made by the client. Locales like adg.ms permitted clients to download free material, other administration administrators like Telus Mobility squared non Telus site downloads (Salonen, 2014). Portable music was in any sound that whose document was to be played on a cellphone. Portable music was characteristically prearranged as an AAC (Advanced Audio Coding) document or MP3 player, and came for few exceptional organizations. Monophonic ringtones were the promptest type of tones played every tone in turn.

This type was enhanced with polyphonic ringtone that played some tone simultaneously so an all the more persuading tune could be made. The next stage was to play clasps of genuine melodies, which were named Real tones (O'Brien, 2012). They were favored by recorded names as that developed into the ringtone that had permitted them to increase a slice of lucrative ringtone advertised. Real tones created sovereignties for record names (the ace chronicle proprietors) just as distributors, in any case, when monophonic or polyphonic ringtone were sold just distributing or perfunctory eminences that brought about an ace explanation that was misused. A few organizations advanced spread tones as ringtones that were to be recorded by broaden groups to look like a highly praised tune. Lately ring back tones were opened up, that was played to the individual making a call the proprietor of the ring reverse tone.

Voice tones were ringtones played by somebody talking or yelling as an alternative of music, and there was few ringtones of features and usual sounds. Real tones are the most renowned type of ringtones. These catch 76.4% of the US ringtones advertisements in 2006 second quarter, these trailed monophonic and polyphonic ringtones at 12%, and ring reverse tones, 11.5% monophonic and polyphonic ringtones were in infamy status while ring back tones were rising (Feig, 2007). This model was basic around the world. An unending development was the sing tone, whereby "the client's voice was recorded live to an eminent music track and subsequently attuned naturally to sound great. This would then be able to be

downloaded as a ringtone or sent to another client's cell phone" exclaimed one executive of Synchro Arts.

Just like flexible music, there was complete track downloads, which was a whole tune programmed to play on a cellphone. They could be bought over the portable system, but information charges could make this restraining (Salonen, 2014). The other technique to get a melody onto a cellphone was by "side stacking" it, which habitually included downloading the melody onto a PC and subsequently touching it to the cellphone by means of Bluetooth, infra-red or link relations. It was imaginable to have full track ringtones.

As of late, sites have sprung that permit clients to transfer sound documents and alter them into ringtones utilizing particular applications, including Myxer, Mobiles Ringtones, Bongo tones, Ringtone section and Zedge. Portable music is turning into a basic piece of the music business in general. The International Federation of Phonographic Industries (IFPI) alleged in 2005 that it anticipated that versatile music must create higher incomes from online music prior to close of the year (Blake, 2019). The primary half of 2005 witnessed computerized music showcases adequately developed to poise the collapse of traditional music advertise without the tender of ringtones, notwithstanding that a lot made up most of portable music deals the world over.

A mobshow or a cellsode were terms that depicted a converse quality program/arrangement which has been created, coordinated, altered encodes for the cellphone. Mobishows and Cellsodes could run short video clasps, wagering advice or the most recent big-name gossips, half-hour performance serials. Models incorporated Ashes and Mr. Paparazzi Show both were made for portable surveys (Feig, 2007). Versatile chatty radio was applied that streamed on-requested sound channels or live radio broadcasts via cellphones. Nowadays, all significant bearers offer some sort of gushing radio aid stressing the modified stations reliant on mainstream programs and live stations which incorporated music and talk.

Portable video likewise came through gushing TV on the versatile system, that must be a 2.5G or 3G assemble. That mirrored a TV channel as the client could not choose to see what they wished, however could watch whatever was on the channel at that point (Salonen, 2014). These were also versatile communicated TV that worked like a traditional TV slot and communicated the substance over an alternate range. This opens up the versatile system to deal with calls and other information use, and due to the "one-to-many" scenery of portable communicate TV whose video quality was considerably better than that streamed over the versatile systems, which was a coordinated framework.

The issue of that communicated advancements did not have features up connect, thus for clients to associate with the TV stream the administration was firmly to be coordinated to the transporters' versatile system. Primary advancements in communicate TV were DVB-H, Digital Multimedia Broadcasting (DMB), and MediaFLO (Feig, 2007). Live videos streamed and shared mobile phone through applications like Qik and InstaLively. The transferred video could be shared to companions through messages or interpersonal interaction locales. Most Live video spilling application machinery over the cell sort out or through Wi-Fi. They furthermore needed as most clients had information plan in their wireless bearers.

Since late 1990s, versatile material became an inevitably important market around the world. South Koreans the world leaders in Mobile Content and 3-G portable systems with the Japanese and followed closely by the Europeans as considerable clients of their cellphones were accomplishing custom versatile material for their gadgets for a considerable length of time (O'Brien, 2012). Truth be told, cellphone use started to surpass the use of PCs in certain nations. In United States and Canada, cellphone uses and the departure with uses of versatile substance were slower to pick up grip due to policy driven issues due to the grounds that open systems did not exist in America.

In modern patterns, cellphone substance is going to assume increasing job in the lives of people in millions over the world as clients would rely upon their cellphones to stay in contact with their friends as well as with world news, sports scores, the

most recent motion pictures and music, and the sky is the limit from there (Kim, 2012). Versatile substance is generally downloaded through WAP locales, but new strategies are on the ascent. In Italy, more individuals are enlisted clients to PassaParola, this application permits clients to peruse major databases for portable substance and legitimately download it to their handsets. This device will be utilized to prescribe substance to other people, or send content as a blessing.

The expanding number of individuals are as well starting to utilize applications like Qik to transfer and offer their recordings from the mobile phone to their web. Cellphone programming like Qik permits client to carve up the recordings to the companions through messages, SMS, and even long-range interpersonal communication locales such Twitter and Facebook (Blake, 2019). In 2016 the Pew Research report indicated that the Modern News Consumer said that 70% of those with ages 18–29 favored getting news from cellphones instead of work areas, while the number was 53% for people aged between 30 to 49 years.

In making nations versatile installment preparations have used some methods for reaching out monetary administrations to the network known as the unbanked or under banked, which was evaluated to be half of the world's grown-up population, as revealed by Financial Access' 2009 Report Half the World is Unbanked (Salonen, 2014). These installment systems were frequently used for micropayments. The usage of portable installments in developing nations have stretched in wide daytime and personal financing by associations, such as the Bill and Melinda Gates Foundation, United States Agency for International Development and Mercy Corps.

2.4.4 Mobile Banking Security

The two-factor verification including the buyer's versatile number and a PIN or One-Time-Password frequently curtailed as OTP, the purchaser's portable record was charged for the buy. It is a genuine elective installment technique that did not require the use of credit/check cards or pre-enlistment at an online installment arrangement like the PayPal, in this way surpassing banks and MasterCard organizations (Hussain, 2015). In the dominating model for SMS installments, the shopper sends

an installment demand by means of a SMS instant message or a USSD to a short code and a top notch whereby charge is gotten to the telephone bill or the online wallet.

The shipper incorporated the educated regarding the installment achievement and would then be able to discharge the paid products. Since a believed physical conveyance address was commonly not given, these merchandises were most oftentimes highly developed with the dealer answering using a Multimedia Messaging Service to communicate the bought music, ringtones, backdrops and so on (Feig, 2007). A Multimedia Messaging Service (MMS) could likewise communicate scanner tags which would then be able to be checked for affirmation of installment by a vendor. This is utilized as an electronic ticket for access to films and occasions or to get together hard merchandise.

Value-based installments by SMS are well known in several parts of the world especially in Asia and Europe and are presently joined by other types of portable installment strategies, such as versatile web installments (WAP), versatile installment customer (Java ME, Android) and Direct Mobile Billing (Ryan, 2012). Even as the volume of Premium SMS exchanges have increased, many cloud-based installments frameworks kept on using SMS for presentment, approval, and confirmation, while the installment itself was prepared through existing installment systems such as credit and check card systems.

The arrangements consolidate the pervasiveness of SMS channels, the security and unwavering quality of existing installment foundation. As SMS needs started to finish encryption, such arrangements utilized a more momentous level of security methodologies known as tokenization and target expulsion whereby installment happens without transmitting any delicate record subtleties, username, secret word, or PIN (Feig, 2007). At this juncture, the purpose of deals in versatile installment arrangements depended on SMS-based confirmation as an installment component, however remote installments like charge installments, seat updates on flights, and enrollment or membership restorations were typical.

In contrast with first-class short code programs that frequently existed in separation, relationship advertising and installment frameworks were regularly coordinated with CRM, ERP, promoting robot formation stages, and reservation frameworks (O'Brien, 2014). A significant number of the issues intrinsic with premium SMS tended to be by arrangement suppliers. Recollecting watchwords was not required since meetings were started by the venture to build up an exchange explicit setting. Answer messages were connected to the best possible meeting and validated either simultaneously through a short expiry period each answer was thought to be to the last message sent or by following meeting as indicated by fluctuating answer addresses as well as answer alternatives.

The buyer utilizes site pages showed or extra applications that was downloaded and introduced on the cellphone to make an installment. It utilizes WAP (Wireless Application Protocol) as fundamental innovations and in this manner acquired all the focal points and detriments of WAP (Hussain, 2015). Except if the portable record was uncomplicatedly charged through a versatile system administrator, the utilization of a credit/plastic or pre-enlistment at online installment arrangement such as PayPal was as yet required similarly as in a work area condition. Portable web installment strategies were currently being ordered by various versatile system administrators.

Close field correspondence (NFC) was utilized mostly in paying for purchases made in physical stores or transportation administrations. A customer utilizing a unique cellphone furnished with smartcard waves with his/her telephone close to the peruse module. Most exchanges don't require confirmation, however some require verification utilizing PIN, before exchange is finished (Hussain, 2015). The installment deducted from a prepaid record or charged to a versatile or ledger frankly. Versatile installment strategy by means of NFC faces noteworthy difficulties for wide and quick reception, because of absence of supporting framework, complex biological system of partners, and norms. Some telephone makers and banks, were energetic. Ericsson and Aconite are instances of organizations that made it workable for banks to make customer portable installment applications that exploited NFC innovations.

2.5 Automated Teller Machine (ATM) Services

Automated Teller Machine is a computerized web device that enables the customer of a financial institution the right of entry to financial transactions in a public room without the need for a person clerk or a bank teller. Many modern ATMs, are able to identify the customer by inserting a plastic card with a magnetic stripe or a plastic smartcard into the teller machine with a chip that contain an exclusive card number and security information, for example the expiration date.

There are two chief types of ATMs. The fundamental units permit the customer to only pull out cash and receive a statement of the account's balance. The more composite equipment can recognize deposits, make possible credit card expenditure and account description in order. To enter the highly developed features of the intricate units, you frequently require to be a member of the bank that operate the machine. Initially, a bank's ATM was only to be used by customers who previously had savings description with the aim of bank (Eugene, et al 2016). However, by the early 1980's, banks started to get benefits of enhancement in ICT and shaped common ATM system with cash by using ATMs of other banks. Commencing the viewpoint of a bank, the banks that connected the system could publicize that their customers might acquire access to their funds.

As it was started the ATM was destined to decrease the superfluous transfer in the banking corridor, enable customers have fast admittance to their cash and create life expedient to a definite level. However, according to Ayo et al. (2010) the circumstances nowadays have altered radically; it has turn out to be the basis of concern to the users and providers (banks), since the purpose was predestined to offer were gravely worn out. During the 21century age, ATM cards have become one of the largest parts accepted non-cash tools in the United States and its fame were rising at a speedy swiftness around the world. Weiner (1999) indicated that the number of ATM dealings doubled over the previous ten years and amounted to an expected 11 billion in 1999. The whole number of ATM terminals had also tripled.

Cacioppo (2000) stated that the use of ATM system of banking enhanced efficiency in the banking business especially in terms of rapidity, data dispensation and storage which was expected to persuade client contentment through instantaneous money withdrawal, balance enquiry, bill imbursement, cash and cheque deposit, saving and credit account on a 24 hours' basis (Patricio & Cunha, 2011). A lot of other financial services could be accessed through the internet. To the majority people, electronic banking service mean 24-hour access to cash through an ATM or paychecks deposited unswervingly into checking or savings accounts (Hillier, 2002).

Lovelock (2000) argued that ATMs provided expediency to bank's customers.as those ATMs were situated at suitable places, such as at the universities, hotels, bus stands, supermarkets, air ports, railway stations, petrol stations, and not essentially at the bank's premises. ATMs also had provided 24 hours' services, denoting that ATMs provided services throughout the day. The customers had established a capability to take out cash up to a definite threshold amount set by the bank during any time of the day (Akrani, 2011).

Customers' acceptance of ATMs in Gulf States had made a huge contribution to the financial services industry with reduction in labor cost and this was observed in Kuwait on the growth of Kuwait Banking Industry. The most important factors which encouraged and persuaded the customers to use of ATMs were the convenience followed by ease of use and availability of use. Convenient locations to shopping areas, avoiding the risks of carrying cash and the reliability of ATMs are also some of the factors which motivate customers to use ATMs (Haddar and Almahmeed, 1992).

Moutinho (1992) discussed that the perceived service performance and usage rate are important factors in the formation of consumers' prolonged satisfaction. They assert that consumers' previous expectations about performance of ATMs shape the degree of prolonged satisfactions. Whereas negative association between degree of usage rate and outcome of consumers' prolonged satisfaction creates needs for development of effective service improvement program and new product developments based on multifunction operations.

2.6 Empirical Reviews

In a similar study like this but different context and focus, Dias et al (2017) conducted a study that assessed the effects of automating bank's back office on facilitating customer engagement in the use and application of the technology found that in South American context with reference to Mexico, Brazil, Ecuador and Argentina using comparative approach as the actual methodology, the automation pattern in the banks in the area had easier way of usage of bank services among customers which was highly appreciated and enjoyed. This fostered customer to use their own accounts and operate transactions within the country in different locations and also beyond borders for that matter. This massively transformed banks in the usage that it had ensured gains both to the customers and banks because to the customers' quality has been improved in accessing banking services. Banks on the other hand benefits with increasing transaction levels that it has been a platform to foster economic gains for that matter. This study is similar to this one, but differs in context and location. In this study the researcher is interested to find out electronic banking services affects customer use. This study is interested to find out why there are limited usage of EBS in Tanzania despite its introduction for some years.

In a similar study like this but in a different context, Villaseca (2019) conducted a study assessing the usefulness of digital banking towards transformation in the banking sector that was performed in European context specifically Western Europe, using survey approach complemented by the comparative approach revealed that digital banking transformed the sector all over the globe on customers and the banks because there were interlink between banks as business entities whereas each got to generate income through multiple usage of the services through digital means. This was a breakthrough as well to the customers because they have been able to use banking services everywhere they went through accessing their personal accounts without being required to walk with cash as it was in the previous years. This enabled easier transactions and purchasing pattern all over the world which was the great transformation because customers were highly enthusiastic in using the services in different jurisdictions.

In his empirical study on adoption of ATM services similar this study but different in focus, McAndrew's (2003) in his article indicated that several utilities of ATM had become very fashionable. Those included money withdrawal at more expedient times and spaces than it was during banking hours in bank branches, lessening of cost service. This article was different from this study because it focused only ATMs and letting other forms of electronic banking so narrower in coverage than this study. This study goes further in looking into factors limiting limited adoption of electronic banking in its entirety. This makes it deferent from the previous study although it is related somehow.

Also, Donell (2003) in his empirical article similar to this study but different in context, indicated that electronic banking service was a service that consumers could access by using system structure or an internet service to a bank's computer center, to carry out banking responsibilities, receive and pay bills, and so forth. This article was limited to internet banking while this study is broader than that as it also covers other electronic banking services such as mobile banking and ATMs. It is wider in scope and different in methodology.

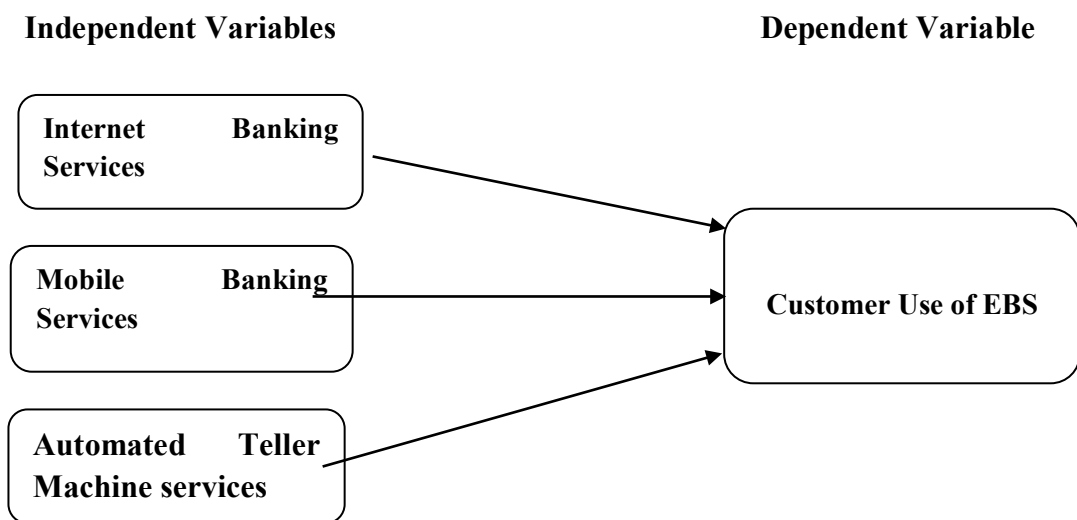
2.7 Research gap

The reviewed empirical studies indicate that different researchers have done some studies on electronic banking services but none specifically looked on how electronic banking services affects customer use in Tanzania. This typical focus and locational focus differentiate this study from the previous studies. This indicates that in Tanzania there is a gap to be filled since the situation has been the contrary on electronic banking services. This is evident with the fact that the services have been little positive response by customers which has been an issue of concern and prompts the call for embarking on the study to fill the gap.

2.8 The Conceptual Framework

This model describes the variables of the study that were assessed to ensure that the knowledge gap identified is filled accordingly. The model describes the variables through figure 2.1 below.

Figure 2.1: The Conceptual Framework



Source: Researcher (2020)

From figure 2.1 above, it can be analysed that customer use of electronic banking depends on how the internet banking services, the mobile internet services and automated teller machine services are accessible to the community. When the services are introduced for the first-time usage is always low. However, as days pass, usage increases drastically to such extent the service provider is overwhelmed by the increase of many customers. So, accessibility of those services provides chance for customer use of such services, as technological diffusion of E-banking.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This section is focused on the description of the methodological framework of the study. It is organized into the following: the research design and strategy, the population under study, the sample size, the sampling methods, the data collection tools, and the data analysis procedures as well as ethical issues. These give the methodological explanations of the study and guide research actions that were implemented in order to accomplish the research objectives.

3.1 Research Design

The research design acts as a plan or blue print of a research showing major parts of the research, it outlines the map that was used to generate answers of the investigated problems (Kothari 2003). The study was based explanatory design, since the study sought to further knowledge generation through causal association approach. The research used this design because it could provide the proper means of describing the EBS adoption towards customer use. This design is concerned with the provision of new insights as to how EBS diffusion in Tanzania is realised and thus give sufficient methodological tools in analysis of this problem based on quantitative tools.

3.2 Research Strategy

The researcher employed quantitative approach of the study as well as the qualitative one. The quantitative approach was used because the focus of the study tried to test hypothesis generated for that matter. However, the researcher complemented this approach with some qualitative interpretations of the variables. This enable the researcher to provide a comprehensive analysis of the research problem as both quantitative and qualitative tools were used in data collection and analysis, thus enriching the research tools in answering the research objectives.

3.3 Area of the Study

This study was performed at Guaranty Trust Bank and CRDB Bank in Dar es Salaam. These banks were chosen among the commercial banks in Tanzania which adopted electronic banking services for serving clients to ensure sufficient generation of primary data. CRDB Bank is one of the banks that has many customers in Tanzania and has been one of the earliest banks to start with many digital products including internet banking, sim banking and its mobile applications. Guaranty Trust Bank is also a bank that came fully digital for most of its banking products as part of its strategy. The selection of Dar es Salaam based banks was based on the truth that Dar es Salaam is the most famous commercial city in Tanzania, and it is a place that consists of most commercial banking activities in the country where customers are enjoying the use of electronic banking services than any other areas at the moment in the country (NBS, 2011).

3.4 Types of Data

The researcher engaged the primary data since the information to fill the study gap was obtained in the field through respondents that were selected from the study area. Secondary information was also used from secondary sources and it aimed at complementing primary data that made discussion on the findings possible.

3.5 Target Populations

The study population was comprised of 382 individual employees from Guaranty Trust Bank and CRDB Bank in Dar es Salaam. These included employees of selected employees in totality in their offices in Dar es Salaam only.

3.6 Sample Size

The study employed 100 respondents that were sampled from 382 employees in the two commercial banks. These employees were selected from different sections and departments. The selection of the employees was adequate in fostering knowledge gathering in the banks. The selection was based on as Webb (2001) who suggested that with a population between 100-1000, 10% may be the appropriate useful and sufficient sample size, as the population is between 1000-2000, 5% is the sample

size. Moreover, with the population above 2000, 1% may be the right sample size. Since the population of the area was 382 at the time of data collection, thus 10% fulfilled the requirements for the appropriate sample.

3.7 Sampling Techniques

The researcher used simple random sampling technique and purposive sampling technique. Simple random sampling technique was used because all respondent employees selected to answer the questionnaires had same characteristics. The purposive sampling technique was used because there were key informants on the adoption of EBS at the banks that were contacted in order to provide key information on the assessment of electronic banking adoption in customer usage.

3.7.1 Simple random sampling

Simple random sampling was done manually by using a list of 382 respondents selected from employees by giving them numbers on pieces of paper that were tossed and picked 100 pieces randomly that constituted the sample for secondary data collection. The researcher used simple random sampling for the banks' employees located in Dar es Salaam because they all possessed homogeneous characteristics as far as the study is concerned, that is employees witnessing the use of electronic banking services.

3.7.2 Purposive sampling

Purposive sampling was used to select two banks and their respective officials from CRDB Bank and Guaranty Trust Bank located in Dar es Salaam. The selection included the six top officials: three CRDB officials and three from the Guaranty Trust Bank depending on their roles they played in their banks as key informants and top officials. The researcher used purposive sampling for these six (6) top officials responsible for electronic banking services in their banks located in Dar es Salaam because he had limited time to visit other areas and exercise of data collection was done during the COVID 19 pandemic outbreak that limited mobility of persons including the researcher. Moreover, the researcher targeted respondents that are mostly located in Dar es Salaam where large electronic banking services take place

in the country as the biggest commercial city in the country where data on usage of electronic banking services could be easily accessible.

3.8 Data Collection Methods

Data was collected using questionnaires, interviews and documentary reviews.

3.8.1 Questionnaires

Since the study investigated causal relationship between the variables, structured questionnaires were employed for collecting data. The questionnaires consisted of questions that can generate quantifiable data using the Likert scale. This was used because it could be easily generating frequency tables and pie charts. In that case, the scale was in five categories ranging from strongly agree to strongly disagree.

3.8.2 Face to face Interviews

Kothari (2004) said that interviews involve utterances of oral verbal stimuli and reply in terms of oral-verbal responses. Semi-structured interview questions were prepared in which interview questions were used to interview three CRDB officials and three Guaranty Trust Bank officials who were selected purposively from top officials. Face to face interviews were used in this study to get deeper information and allow flexibility in questioning. The questions were set around three specific objectives. It involved interviewers and interviewees and in a face to face contact.

The researcher used this method because it enabled him in getting opinions and attitudes of stakeholders that could not be found in the records at CRDB and Guaranty Trust Bank. However, this method sometimes may have been characterized by biasness between interviewer and interviewees depending on individual character that was minimized by observing interviewing skills including promptness and spontaneity, but it was very suitable in collecting qualitative data that complemented secondary data and cemented the findings through deeper clarifications. The researcher carefully conducted his interviews in reducing such biasness.

3.8.3 Documentary Review

The researcher used this method to collect secondary data by using documents and records which relate to the investigated phenomenon, at CRDB officials and Guaranty Trust Bank in Dar es Salaam. The information obtained by reviewing documentary sources were official documents such as files and reports as well as from text books for other relevant information. The researcher used this method because official EBS usage data records was solely available in these office records. For that reason, it was inevitable to use this method as far as this study was concerned.

3.9 Validity and Reliability

Pre-measurement test was performed to check data quality accomplishment and consistence of the study variables. Validity was first checked through pilot study test of the questionnaires to authenticate the questionnaires as the investigation tool for collecting data. Besides that, reliability was checked later to guarantee variables consistency by Cronbach Alpha test. Table 3.1 below supplies the description of the test. The pilot study to test the questionnaires and interview schedules was performed to three respondents from each bank. These were analysed to test their validity and reliability as indicated in figure 3.1 below

Table 3. 1: The Cronbach Alpha Test

Variables Tested	Alpha Results
Internet Banking servives	0.723
Mobile banking Services	0.759
Automated Teller Machine services	0.735
Customer Use	0.708

Source: Researcher (2020)

Table 3.1 above shows the results of the reliability test of the variables in order to assure that information could fill the gap. The results depicted the variables that were completely reliable and consistent, since the given coefficients as alpha values of the variables exceeded 0.7. This was acknowledged by Joppe (2000) that relaiability test

verified and approved on the tested variables provided that the coefficients of alpha values is 0.7 and greater. The contrary results could entail that the variables were not reliable.

3.10 Data Analysis

Data collected from the field were analyzed quantitatively through computations done by SPSS program version 22.0. The data was grouped based on similarities to generate statistics for presentations. Data was descriptively analyzed through percentage and frequency tables, to describe the responses of the respondents. Moreover, correlation analysis was performed to establish association of variables and multiple regression method was done in order to describe the relationship between variables quantitatively. With that, the study was well elaborated by the model which is described in the following manner of collinearity of variables.

$$CU = \beta_0 + \beta_1 IIB + \beta_2 MBS + \beta_3 ATM + e$$

Whereby:

CU = Customer Use

β_0 = Constant factor

$\beta_1 IIB$ = Internet Banking Services

$\beta_2 MBS$ = Mobile Banking Services

$\beta_3 ATM$ = Automated Teller Machine Services

e = Random variable

And this properly interpreted the level of customer use on the adoption of electronic banking services by measuring collinearity of the three variables.

Qualitative analysis was done using content analysis in order to complement findings through quantitative tools. Statements and descriptive arguments were provided in analysing the data with qualitative arguments in relation to the findings and reviewed literatures.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.0 Introduction

Chapter four presents the findings of study. It indicates the results comprising of the fresh information gathered from the field for answering the research objectives that assessed the adoption of electronic banking towards customer use in Tanzania. The chapter consists of the issues on respondents' general characteristics and then topical issues regarding adoption of e-banking towards customer usage. The presentation is based on the three specific objectives.

4.1 Response Rate

Field data specifically aimed at generating facts from 100 respondents as participants of the study from the selected two banks. However, only 69 questionnaires were returned after being filled and engaged in the test which is equivalent to 69% return rate.

4.2 Respondents Features

The section consists of the description of the respondent's profile seeking to provide the behavior of bank employees in Tanzania. In that case, three variables of respondents' age, gender and education level were used to assure the presentation of the profile of the respondents as follows in tables 4.1, 4.2 and 4.3 respectively.

4.2.1 Gender

The study results generated information on respondents' gender which is well presented in table 4.1 below.

Table 4. 1: Gender of respondents

Gender	Frequency	Percent
Male	41	59.4
Female	28	40.6
Total	69	100.0

Source: Researcher (2020)

The results described in table 4.1 above consists of the information on respondents' gender whereby 59.4% (41) of the respondents were males and 40.6% (28) were females. This indicates that banks' employees consisted of both males and females with majority being men, as it is in the country labor force. The finding is shared with Elinaza (2016) that employees in banking sector in Tanzania including CRDB Bank, Guaranty Trust Bank and others are both men and women with selection based on merit to become part of the team. Male domination in socio-economic activities is quite common in Tanzania and this is also seen in this study. Since male own economic assets they are a position of making use of the electronic banking services. This tendency requires correction in order to have a balanced usage of these services.

4.2.2 Level of Education of respondents

The data collected for the study consist of information on respondents' education level as indicated in table 4.2 below.

Table 4. 2: Level of Education

Education Level	Frequency	Percent
Diploma	3	4.3
First Degree	43	62.4
Master's Degree	23	33.3
Total	69	100.0

Source: Researcher (2020)

The finding in table 4.2 above describes the information on respondents' level of education, whereby 4.3% were diploma holders, 62.4% were first degree holders and 33.3% were master's degree holders. This revealed that commercial bank employees in the country were well skilled individuals, because the activities and tasks in most account are technical which require to be handled by qualified personnel for the particular. However, Karega (2011) correspond with the view suggesting that banks are entities with several tasks and operations which are technical which require professionals but enrolled in the growth pattern from the least stage to the higher levels.

4.2.3 Age of Respondents

The study results gathered information on respondents' age which are also presented in table 4.3 below.

Table 4. 3: Respondents' Age

Age group	Frequency	Percent
20-33	12	17.4
34-45	38	55.1
46-55	16	23.2
55+	3	4.3
Total	69	100.0

Source: Researcher (2020)

The results in table 4.3 above describes respondents' age whereby 17.4% respondents were aged between 20-33 years, 55.1% were between 34-45 years, 23.2% respondents were between 46-55 years and 4.3% were above 55 years. This revealed that bank employees in Tanzania consisted of all age categories and types pertaining employment experience such as the young, the mid group and the matured population approaching retirement, with the majority of 35 to 45 years. The finding is similar to that by Elinanza (2016) who found that banking sector in the country including commercial banks comprised of employees of all age groups, that is from

the young age of graduating youths from school all the way to adults approaching retirement.

4.3 Internet Banking Services on Customer Usage

The study results below were gathered on internet banking towards customer use of EBS that was facilitated by the complementing statements as illustrated in table 4.4 below.

Table 4. 4: Internet Banking on Customers Usage

S/N	STATEMENTS	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't know
1	Number of customers indicate that there is poor response on internet banking usage.	64%	23%	0%	11%	2%
2	Internet banking is the least service on use by customers.	35%	42%	12%	7%	4%
3	Internet banking is the services with less users than all electronic banking services.	24%	48%	19%	3%	6%

Source: Researcher (2020)

The finding on table 4.4 provides description of internet banking towards customer use through electronic banking services in Tanzania. It is indicated that the majority of respondents 64% strongly agreed that number of customers indicated poor response in internet banking services. This was followed by 23% of respondents who agreed with the statement, none disagreed, 11% strongly disagreed and 2 didn't know. It is arguably shown that cumulatively, 87% of the respondents agreed with the assertion that there is poor response of internet banking usage by customers.

The results also show that the majority of respondents 42% said internet services used by customers, followed by 35% who strongly disagreed, 12% disagreed, 7% strongly disagreed and 4% don't know. It can be argued that cumulatively, 77% of

the respondents revealed that internet banking services is the least service used by customers.

The results also show that the majority of respondents 48% agreed that internet service is the least used electronic banking services with less users, followed by 24% who strongly disagreed, 19% disagreed, 3% strongly disagreed and 6% didn't know. Cumulatively, 72% agreed also with the view that internet banking is the service with less users than all electronic banking services. The implication of the results is that the service as the electronic banking product and service still constitute challenge among users in Tanzania.

4.4 Mobile Banking Services on Customer Usage

This section presents the description of the mobile banking services towards customers use and the table 4.5 presents the results highlighted below.

Table 4. 5: Mobile Banking Services on Customer Usage

S/N	STATEMENTS	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't know
1.	Regardless of Mobile banking services frequent use still customers in totality are limited.	33%	46%	14%	2%	5%
2.	Mobile banking service attracts many users but the response is also limited.	31%	53%	11%	1%	4%
3.	Mobile banking usage in its minimal scale is mostly facilitated by mobile money services.	25%	57%	5%	3%	10%

Source: Researcher (2020)

Table 4.5 results on the mobile banking services towards customer use on electronic banking services in Tanzania shows the majority of respondents 46% agreed that customers are still limited in the use of mobile banking, followed by 33% who strongly disagreed, 11% disagreed, 1% strongly disagreed and 5% didn't know. It can be argued that cumulatively, 79% of the respondent's stated that there are still

limited customers regardless of the frequent use of mobile banking services. This suggests that although mobile banking is the widely used electronic banking services, it is still limited due to limited infrastructures and flexibility. There is need for improving this service and making it readily accessible to many customers.

The results also show the majority of respondents 53% agreed that internet service attracts many users but the response is also limited, followed by 31% who strongly disagreed, 5% disagreed, 3% strongly disagreed and 4% didn't know. It can be argued that cumulatively, 84% of the respondents suggest that mobile banking service attracts many users despite the fact the response is still limited. These findings indicate that mobile banking service is most attractive electronic banking services over internet and ATM services. So, the service providers should strongly invest in the diffusion of this service

The results also show the majority of respondents 57% agreed that mobile banking usage in its minimal scale is mostly facilitated by mobile money services, followed by 25% who strongly disagreed, 5% disagreed, 3% strongly disagreed and 10% didn't know. It can be argued that cumulatively, 82% of the respondents agreed that mobile banking usage is mostly facilitated by mobile money services. The implication for these assertions is that even though mobile banking is perceived as frequent used services, it still possesses limited users and largely influenced by mobile money services offered by the telecommunication companies.

4.5 Automated Teller Machines (ATMs) on Customer Usage

This provide the description of the influence of automated teller machine towards customer's use supported by the complementing statements with table 4.6 illustrating the results.

Table 4. 6: Automated Teller Machines Services on Customer Usage

S/N	STATEMENTS	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't know
1.	Usage of ATMs has declined as a result of poor service and network availability.	26%	61%	8%	0%	5%
2.	ATM usage requires knowledge that reduces customer incapability to use ATMs.	37%	41%	12%	2%	8%
3.	ATM services have been largely surpassed by mobile money services in remote areas and outside the city.	27%	44%	17%	9%	3%

Source: Researcher (2020)

Table 4.6 results on usage of ATMs has declined as a result of poor service and network availability indicate that the majority of respondents 61% agreed that Usage of ATMs has declined as a result of poor service and network availability, followed by 26% respondents who strongly disagreed, 8% disagreed, none strongly disagreed, and 5% didn't know. It can be argued that cumulatively, that 87% of the respondents revealed that the usage of the machines has declined due to limited network availability and services;

The results on ATM usage requires knowledge that reduces customer incapability to use ATMs also indicate that the majority of respondents 41% agreed that ATM usage requires knowledge that reduces customer incapability to use ATMs, followed by 37% respondents who strongly disagreed, 12% disagreed, 2% strongly disagreed, and 8% didn't know. It can be argued that cumulatively, 78% of the respondents agreed with the claim that ATMs requires possession of knowledge that undermines customers' capability to use the services among others.

The results also indicated that ATM services have been largely surpassed by mobile money services in remote areas and outside the city as the majority of respondents 44% agreed that ATM services have been largely surpassed by mobile money

services in remote areas and outside the city, followed by 27% respondents who strongly disagreed, 17% disagreed, 9% strongly disagreed, and 3% didn't know. It can be argued that cumulatively, 71% of the respondents agreed with the view that ATM usage has been largely surpassed by the mobile money services in accessing financial services. This implies that automated teller machines (ATMs) usage with mobile money services and insufficient networking system has caused many to rely with other services especially mobile money offered by the telecommunication companies.

4.6 Quantitative Analysis of Study Variables

This section describes the analysis of the study variables that were specifically conducted using the mean, standard deviation and inferential tools. The description of these tools on analyzing study variables is performed as follows.

4.6.1 Mean and Standard Deviation

This is a form of descriptive analysis perceived as central tendency measures done so as to reveal associations between dependent and independent variables in test. Also, the analysis tends to provide the minimum level of dispersion concerning the opinion of the respondents. Table 4.7 below describes this finding.

Table 4. 7: Mean and Standard Deviation

Study Variables	Mean	Standard Deviation	N
Customer Use	4.119	.2057	69
Internet Banking Services	4.675	.2574	69
Mobile Banking Services	4.532	.2385	69
Automated Teller Machine Services	4.419	.2201	69

Source: Researcher (2020)

The finding in table 4.7 above describes the mean and standard deviation distribution that internet banking as the independent variable has strong influence to the customer use in the adoption of electronic banking as the dependent variable than in mobile banking services and automated teller machines. This is the case because the variable has large mean value than others of 4.675. This revealed that customer use on the

adoption of electronic banking services in banks is mainly affected most by internet banking.

4.6.2 Inferential Analysis

Inferential tools were used specifically for the purpose of describing the relationship between customer use adoption and types of e-banking. In that case, correlation and multiple regression line were used to facilitate the analysis whereby model summary test was done to show the relation between independent variables and the dependent variable altogether. It is noted that the finding is indicated in table 4.8 below.

Table 4. 8: Model Summary

Model	R	R square	Adjusted R Square	Standard Error of Estimate	Change statistics			Durbin-Watson
1	.711	.685	.680	53.645	.617	57.047	.000	1.513

Source: Researcher (2020)

The Dependent Variable: The Customer Use

The Independent Variables: Internet Banking services, Mobile banking Services and Automated Teller Machine services

In Table 4.8 above, it is described that the results of model summary analysis is well shown and described using the value of R^2 revealing the influence of independent variables to dependent variable. It is depicted that customer use of electronic banking services was influenced by internet banking services, mobile banking services and automated teller machine services by 68.5%. Since that is the case, it was indicated by the results that independent variables were related as it was assumed that it positively influenced customer use adoption.

a) Correlation Analysis

Correlation was performed to describe variables with strong influence. The test results are indicated in table 4.9 below.

Table 4. 9: Correlation Analysis

	Customer Use	Internet Banking Services	Mobile banking Services	Automated Teller Machines
Customer Use	1.000			
Internet Banking Services	.516	1.000		
Mobile Banking Services	.309	.005	1.000	
Automated Teller Machine Services	.297	.025	.002	1.000

Source: Researcher (2020)

The finding in table 4.9 above indicates outcomes on the correlation analysis where internet banking independent variable was correlated best to the dependent variable than other variables tested. This was due to the fact that this variable consisted of larger correlation value than mobile banking services and automated teller machine services which revealed that customer use of electronic banking services was largely affected by internet banking services. In that case, the correlation was positive and the coefficient was also small which entailed that there was no multicollinearity. This was a problem which was dealt with through multiple regression analysis.

b) Multiple Regression Analysis

Multiple regression was done specifically to describe the influence of each independent variable to the dependent variable as indicated in table 4.10 below.

Table 4. 10: Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. error	Beta		
(constant)	-8.741	4.749		-1.193	.056
Internet Banking Services	2.843	.238	.574	12.824	.000
Mobile Banking Services	2.486	.209	.538	12.561	.000
Automated Teller Machine Services	2.295	.164	.015	12.106	.000

Source: Researcher (2020)

The finding in table 4.10 above shows multiple regression outcomes that analyzed the relationship between independent variables and the dependent variable. It was certain that all three independent variables: internet banking services, mobile banking services and automated teller machine services were positive with significant effect to customer use which is the dependent variable with $p < 0.05$. This implies that customer use on the adoption of electronic banking services is affected by internet banking, mobile banking services and automated teller machines. This entailed that multicollinearity error has been resolved.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.0 Introduction

The chapter provides the discussion of the research findings as presented in chapter four in relation to the stated objectives in chapter one. It provides detailed discussion on the findings presented in chapter four as addressed in the research questions raised in chapter one in order to fulfil the study objectives and assist to lead to the creation of valuable conclusions and recommendations in chapter six. The purpose of this study was to assess the adoption of electronic banking services towards customer use among selected commercial banks in Tanzania.

5.1 Discussions on the results

The general purpose of the study was to assess electronic banking services adoption towards customer use in Tanzania. The research findings are presented in chapter four, electronic banking services adoption was measured by asking questions to respondents who were required to provide answers in a Likert scale. The respondents were required to indicate among various electronic banking services that they knew it as being offered by CRDB bank and Guaranty Trust Bank. These e-banking services included: Internet banking; mobile banking and Automated Teller Machine. The research findings indicated that the results of the standard deviation of 0.2574, 0.2385 and 0.2201 to Internet banking; Mobile Banking and Automated Teller Machine respectively suggested that respondents' opinion did not differ much and thus indicated that respondents were aware of electronic banking services that were offered by CRDB bank and Guaranty Trust Bank in Tanzania.

5.2 Internet Banking Services on customers usage

The first variable according to frame of reference discussed in this research, is internet banking towards customer use of electronic banking services, which refers to the ease of customer's access to financial services through internet banking service. Through regression analysis in Table 4.10 above that showed $p < 0.05$, it was vividly

indicated that internet banking has been positive with significant effect statistically on customer use of electronic banking services. This is to say that, usage of electronic banking services is affected by the availability of internet banking (Number of customers indicate that there is poor response on internet banking usage, internet banking is the least service on use by customers, and internet banking is the services with less users than all electronic banking services). Elinaza (2018) shares the same view, in the manner that electronic banking regardless of its use and relevance in enjoying and using bank services, still some services such as internet banking were expensive and required further insight pertaining to awareness level. This was due to the fact that, it requires the beneficiaries either to have smartphone or tablets with strong and reliable internet to enable the service to be available and enjoyed. This is a setback to many users in Tanzania because not all can afford the smartphones and tablets also level of understanding on all such requirements itself is a challenge to many users as customers.

Sotunde (2012) also suggested that internet banking services, in most cases were essential to the users, as customers directly or indirectly are limited by their knowledge and skills on the use. This is due to the fact that, the usage requires individuals to possess certain knowledge on the understanding of things including information technology issues, to a large extent. This entails that individuals are required have a certain level of literacy, to be useful in the adoption and use of the e-banking services, and not otherwise and vice versa. This is a challenge among many users as customers in Tanzania, because such knowledge is limited to some or several users which affect its adoption, for that matter.

Ainin et al. (2005), shares the view that customers who used internet banking were more focused to the easier ways of conducting e-banking transactions. This is due to the fact that; they can gain access to the system to perform the transactions whenever they see the need to meet certain financial obligations. There is challenge among many customers in Tanzania, since Internet banking relates to having internet bundle, which not all customers have such capability to spend on bundle, in order to meet the financial services.

5.3 Mobile banking Services on customers usage

Mobile banking services was the second objective, in the independent variable test that generated positive relationship with significant effect statistically to the dependent variable in Table 4.10 above. This entails that customer use of electronic banking services was affected by mobile banking service availability (Regardless of mobile banking services frequent use still customers in totality are limited, mobile banking service attracts many users but the response is also limited, and mobile banking usage in its minimal scale is mostly facilitated by mobile money services). This is supported also by Mirondo (2018) who stated that mobile banking services were technical in their usage and applications to such extent that they required the users to possess certain skills like the internet use through the smartphones, tablets and other gadgets including normal cellphones that supported the use and its application.

Since, among many customers both in rural which is worse and urban areas, most people expected to be customers, and some as customers have limited knowledge on the use of the services such that, it is difficult for acceptance among customers to possess high rate. In addition to that Karega (2011), also suggests that banking sector is highly scattered to such extent that the services are limitedly accessed, in the gathering of financial services which affect acceptability of most of the electronic banking services particularly among customers residing outside towns and cities. Though mobile banking is common and easy to use for those with knowledge, but the reality is that many are still far from it among users and or beneficiaries. This also agrees with the study by Rumanyika (2015), which showed that lack of understanding of how mobile banking and mobile-related transactions operated were obstacles to the use of electronic banking services in Tanzania.

5.4 Automated Teller Machine Services on Customers usage

ATM services constituted the third research objective as part of the independent variable as analysed in table 4.10 above, It was indicated that there are positive correlation and possessing significant effect on the dependent variable and

independent variable (Usage of ATMs has declined as a result of poor service and network availability, ATM usage requires knowledge that reduces customer incapability to use ATMs, and ATM services have been largely surpassed by mobile money services in remote areas and outside the city) which implied that customer use of electronic banking services adopted was affected by automated teller machines availability. This was also acknowledged by Elinaza (2016), that automated teller machine usage by customers was very common among bank users, since it was very easy and accommodating many learned and non-learned customers provided that, one was able to read and write respectively. Despite that services having been affected by limited network coverage causing poor service availability, which have been a disturbance to many in local and remote areas, it was still quite easily adopted.

This has caused many customers to rely on and become dependent to the mobile money services than banking services. However, illiterate people also find it difficult to operate the ATM because it requires capacity of reading on how to go about doing the transactions in the ATM; this is in line with the study carried out by Khan (2010) when he stated in his findings that technical complexities and lack of knowledge were the major disadvantages of the ATM usage amongst customers.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

6.0 Introduction

This section highlights the summary of findings, presents the description of the conclusion based on findings of the study. The chapter also describes recommendations for the observed areas of concern to facilitate positive improvement on the electronic banking usage by customers. It finally provides recommendations for areas for further research.

6.1 Summary of findings

The study basically assessed electronic banking services adoption on customer use in Tanzania. The study was conducted under the guidance of three specific objectives which are internet banking service, mobile banking service and automated teller machines service effects on customer use as the independent variable and dependent variables respectively. Explanatory design was used to undertake the study with the information collected from employees of two commercial banks using the sample of 69 gathered respondents. The study employed primary data which was basically gathered from the field through the respondents selected for the study. The data was collected using structured questionnaires which were analyzed by SPSS computer package to generate relevant statistics measurements, and to present the primary data to fill the research gap.

Descriptive statistics was computed and used to present the profile of the respondents using frequency tables and percentages. The relationship test between variables was done using correlation and multiple regression analysis. Results of the study indicated that three independent variables tested to the independent variable: internet banking service, mobile banking service and automated teller machines service have positive effects with significant effect statistically on customer use in the adoption of electronic banking services as the dependent variable with $p < 0.05$. This has implication on findings that customer use of electronic banking services is influenced by the availability of the internet banking service, mobile banking service and

automated teller machines service in the community. It is certain that customer use or the adoption of electronic banking services is basically influenced by the three components as revealed by findings.

6.2 Conclusion

Usage of electronic banking services in Tanzania is indeed facilitated by the availability of internet banking service, mobile banking service and automated teller machines service due to the fact that the tested independent variables generated positive correlation with significant results on the customer use of the services. Besides that, on the skills of customers to use the services facilities (machines such the computers and laptops) still some customers possessed limited skills in great scale on the use and applications which customers initially perceived as complex, although once they were well instructed they might positively respond and adopt the services easily.

Furthermore, on the perception of customers, some still have negative views due to several occurrences of insecurity such as cyber-attacks and weak security systems that caused some frauds to be undertaken. The customers are afraid of loss of funds if they allow their access to funds through the digital means despite its convenience and availability through these electronic banking products

Another reason on the customers readiness to use the electronic banking service due to being conservative and reluctant to changes such that they were less favoured with digital applications and facilities. Thus, measures were to be taken to match and compromise the situation. Mobile banking service, however, stands a chance of becoming the leading electronic banking services due to the availability of handsets and its portability compared to other two services of internet banking and ATMs.

Despite that, the responses of customers towards electronic banking services usage was still at infancy levels, that is limited usage and low because of several setbacks pertaining to knowledge of the customers on the services particularly use of computers, since many customers confused electronic banking services with other

services which are non-banking services but related directly such as mobile money services (TigoPesa, Mpesa and others)

6.3 Recommendations

Since the usage of electronic banking services by customers is still affected by the availability of internet banking, mobile banking and ATMs, customers must thoroughly assess the banks that foster the usage of these services and influence them on the e-banking services. The study recommends that the banks must set the services to be user-friendly more than they are now because they possess severe complications and difficult of usage for those with limited or non-formal education to use the services. This has been affecting the use of the services since most people found in the society possess limited formal education which automatically affects e-banking services usage due to failures to access internet, mobile phones and ATMs.

Commercial banks also need to communicate and educate more in order to change the customers behavior or perception especially to those who are still reluctant and do not want to move away from traditional banking services. More digital awareness communication is needed on how the electronic banking services are secured, protected and its convenient use on accessing financial services.

It is also recommended that banks must be clear and open in advertising electronic banking services and educate customers how to use them because it has been largely known and believed to be digital banking or mobile money services which are not the case in actual facts. With that, the confusions have been causing the services to be less focused by some customers which in the end affects its usage and adoption. It is important for the bank to rectify the situation to be on their favour.

Customers need to be educated on how to use electronic banking facilities such as computers for internet banking and ATMs usage. This may increase its usage as most customers have poor backgrounds in using computers, which is why mobile banking is becoming the most popular electronic banking service as many customers know how to operate it in contrast to internet and ATMs banking. The identified barriers to customer adoption of the services may be reduced by such trainings.

6.4 Areas for further studies

This study found out that electronic banking adoption is limited by availability of the facilities in Tanzania. It is then recommended that more studies are to be done on what limits the availability of service facilities for the adoption of electronic banking services, other areas that need further studies include the adoption of electronic banking usage in rural areas in Tanzania. In so doing more knowledge may be acquired in increasing the usage of electronic banking in the country.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

Dear Respondent;

This is a questionnaire on the study entitled *“Assessment of Electronic Banking Services adoption towards Customer Use in Tanzania, A Case of Some Selected Commercial Banks”*. I kindly request for your participation in filling this questionnaire since it is only for academic purpose so as to accomplish my postgraduate studies at Mzumbe University. The information you will provide shall never be personified in any way and I assure you that your identity will never be exposed. I kindly expect your full cooperation. Thank you for assisting.

A: General Issues

Part I: General Information (Choose the correct answer)

1. Gender? ()
 - a. Male
 - b. Female

2. Age? ()
 - a. 20-34
 - b. 35-44
 - c. 45-54
 - d. 55+

3. Education Level ()
 - a. Bachelor Degree
 - b. Masters and Above
 - c. Diploma
 - d. Certificate
 - e. Secondary Education
 - f. Primary Education
 - g. No formal education
 - h. Other (specify)

The First Objective: Effects of Internet Banking Service on Electronic Banking services usage

The statements below are complements of internet banking on customer use in electronic banking services rated in Likert scale for feedback. Please provide your answer by ticking (√) in the appropriate box on the scale expressed in numbers within boxes

Strongly Agree Agree Disagree Strongly Disagree Don't Know
1 2 3 4 5

S/N	STATEMENTS	1	2	3	4	5
1.	Number of customers indicate that there is poor response on internet banking usage					
2.	Internet banking is the least service on use by customers.					
3.	Internet banking is the services with less users than all electronic banking services.					

The Second Objective: Effects of mobile banking services on Electronic banking services usage

The statements below are complements of mobile banking services on customer use in electronic banking services rated in Likert scale for feedback. Please provide your answer by ticking (√) in the appropriate box on the scale expressed in numbers within boxes

Strongly Agree Agree Disagree Strongly Disagree Don't Know
1 2 3 4 5

S/N	STATEMENTS	1	2	3	4	5
1.	Regardless of mobile banking services frequent use still customers in totality are limited.					
2.	Mobile banking service attracts many users but the response is also limited.					
3.	Mobile banking usage in its minimal scale is mostly facilitated by mobile money services (Mpesa, TigoPesa).					

Third Objective: Effects of Automated Teller Machines on Electronic Banking Services Usage

The statements below are complements of Automated Teller Machine on customer use of electronic banking services rated in Likert scale for feedback. Please provide your answer by ticking (√) in the appropriate box on the scale expressed in numbers within boxes

Strongly Agree Agree Disagree Strongly Disagree Don't Know

1 2 3 4 5

S/N	STATEMENTS	1	2	3	4	5
1.	Usage of ATMs has declined as a result of poor service (unavailability) and network availability.					
2.	ATM usage requires knowledge that reduces customer capabilities to use ATMs.					
3.	ATM services have been largely surpassed by mobile money services in remote areas and outside the city.					

B. Test of Variables affecting Customer Usage of Electronic Banking Services

The statements below are complements of customer use in electronic banking services rated in Likert scale for feedback. Please provide your answer by ticking (√) in the appropriate box on the scale expressed in numbers within boxes

Strongly Agree Agree Disagree Strongly Disagree Don't Know
1 2 3 4 5

S/N	STATEMENTS	1	2	3	4	5
1.	Customer use of electronic banking services is affected by internet banking.					
2.	Customer use of electronic banking services is affected by Mobile banking services					
3.	Customer use of electronic banking services is affected by automated teller machines.					

THANK YOU FOR YOUR TIME

APPENDIX II

INTERVIEW SCHEDULE FOR BANK OFFICIALS

Preliminary information

Key informant number Date..... /..... /2020

The First Objective: Effects of Internet Banking Service on Electronic Banking services usage

1. What affects internet banking service usage in your bank?
2. How Internet banking affects EBS?
3. How can increase the usage of internet banking?

The Second Objective: Effects of mobile banking services on Electronic banking services usage

1. What affects mobile banking service usage in your bank?
2. How mobile banking affects EBS?
3. How can increase the usage of mobile banking?

Third Objective: Effects of Automated Teller Machines on Electronic Banking Services Usage

1. What affects ATMs banking service usage in your bank?
2. How ATMs banking service affects EBS?
3. How can increase the usage of ATMs banking?

THANK YOU FOR YOUR TIME