## **AFRICA UNIVERSITY**

(A United Methodist-Related Institution)

The Impact of Digitilization on Banks in Zimbabwe
(A case study of CABS Bank Zimbabwe)

 $\mathbf{BY}$ 

#### **KUNDAI MBOTO**

A DISSERTATION/THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF COMPUTER INFORMATION SYSTEMS (HONOURS) IN THE COLLEGE OF BUSINESS, PEACE, LEADERSHIP, AND GOVERNANCE

DEPARTMENT OF BUSINESS.

#### **ABSTRACT**

The study's findings are presented here to show how Digitization, also known as Information Communication Technology (ICT), has improved Zimbabwean commercial banking. The four main goals of this study are to identify the ICT technologies that Zimbabwean commercial banks use, to investigate the benefits of using ICT technologies to improve their businesses, and to identify the obstacles these banks face in adopting and utilizing ICT technology. The goal of the study is to suggest ways these banks can use ICT to improve their businesses. Both qualitative and quantitative methods will be used in the mixed methodology. It will be done with stratified random sampling. The use of information and communication technology (ICT) in banks has improved customer service, made accurate record keeping easier, and increased overall service speed, all of which have contributed to a more effective and competitive banking market in Zimbabwe.

## **DECLARATION**

This research project is my original work except where sources have been acknowledged. The work has never been submitted, nor will it ever be, to another University in the awarding of a degree. I have made it independently with the close advice and guidance of my supervisor.

Signature	<u>Bn</u>	<b>Date</b> 4/12/23
	Kundai Mboto	
Supervisor	makanban	<b>Date</b> 4/12/23

Timothy Makambwa

## **COPYRIGHT**

All rights reserved. No part of this research project may be reproduced, stored in any retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, or recording or otherwise from scholarly purpose, without the prior written permission of the author or of Africa University on behalf of the author.

## ABBREVIATIONS AND ACRONYMS

- IB Internet Banking
- ICT Information Communications Technology
- **RBZ** Reserve Bank of Zimbabwe
- **TAM** Technology Acceptance Model
- UTAUT Unified Theory of Acceptance and Use of Technology

#### **KEY DEFINITION OF TERMS**

**UTAUT -** This a technology acceptance model formulated by Venkatesh and others which is used to determine users' behavioural intention to use information technology. It is based on for constructs namely: facilitating conditions (FC), social influence (SI), performance expectancy (PE) and effort expectancy (EE) which are the core determinants for behavioural intention to use a technology

**TAM** - The Technology Acceptance Model, posits that there are two factors that determine whether a computer system will be accepted by its potential users, the first being its perceived usefulness, and the second being its perceived ease of use. The key feature of this model is its emphasis on the perceptions of the potential user

# TABLE OF CONTENTS

1	BSTRACT	i	i
D	ECLARATION	. ii	i
	OPYRIGHT		
	BBREVIATIONS AND ACRONYMS		
	EY DEFINITION OF TERMS		
T.	ABLE OF CONTENTS		
	CHAPTER 1 INTRODUCTION	1	
	1.1 Introduction	1	
	1.2 Background of the Study	1	
	1.3 Statement of the Problem	2	)
	1.4 Research Objectives	3	;
	1.5 Research Questions	3	)
	1.6 Assumptions	3	;
	1.7 Significance of the Study	4	ŀ
	1.8 Delimitation of the study	4	ŀ
	1.9 Limitation of the study	5	í
	CHAPTER 2 REVIEW OF RELATED LITERATURE	6	í
	2.1 Introduction	6	í
	2.1.1 Relevant Theories	6	í
	2.1.2 Comparison of Theories	7	7
	2.2 Definition of Information Communication Technology	7	7
	2.3 Banking Industry	8	;
	2.4 Digital Channels	9	)
	2.5 Cyber Security Concerns	13	;
	2.6 Conceptualizing Mobile banking in Zimbabwe	13	;
	2.7 Various Uses of Information Communications Technology in Banking	16	<b>,</b>
	2.8 Problems Circumvented	18	3
	2.9 Significance of Information and Communications Technology in Banking	18	}
	2.10 Defining Information Communications Technology Security	19	)
	2.10.1 Roles of Information Communications Technology Security in Banking	20	)
	2.10.2 Need for Information Communications Technology Security in Banking	20	)
	2.11 Summarization of the Impact of Information Communication Technologies in Banking	22	)
	2.11.1 To The Customer	22	)
	2.11.2 To The Bank	22	,

2.12 Chapter Summary	23
CHAPTER THREE METHODOLOGY	24
3.1 Introduction	24
3.2 Research Design	24
3.3 Population and Sampling	26
3.4 Data Collection Instruments	28
3.4.1 Questionnaires	28
3.4.2 Questionnaires advantages and disadvantages	29
3.4.2.1 Advantages	29
3.4.2.2 Disadvantages	29
3.4 3 Interviews	30
3.4.3.1 Advantages of interviews	30
3.4.3.2 Disadvantages of interviews	30
3.4.4 Secondary sources	30
3.4.4.1 Advantages of secondary sources	31
3.4.4.2 Disadvantages of secondary sources	31
3.5 Pilot Testing	31
3.6 Data Collection	31
3.7 Data Analysis	32
3.8 Ethical considerations	32
3.9 Chapter Summary	33
CHAPTER FOUR DATA PRESENTATION, ANALYSIS AND INTERPRETATION	34
4.1 Introduction	34
4.2 Response Rate	34
4.3 Description of Respondents	34
4.4 Usage of Information Communication Technologies in Banking	36
4.4.1 Awareness of mobile banking services/platforms	36
4.4.2 Online or mobile banking Registrations	36
4.4.3 Online or mobile banking Registrations	37
4.5 Hurdles affecting usage of ICT Platforms in Banking	38
4.5.1 Ease of Use	38
4.5.2 Cost of data and SMS charges	39
4.5.3 Connectivity Challenges	40
4.5.4 Simplicity of Registering	41
4.5.5 Fraudulent Transactions	42
4.6 Success Factors in Fostering Usage of Information Technologies in Banking	43

4.6.1 Advertising and Marketing	43
4.6.2 Adequate Investment	44
4.6.3 Violation of Information Security	45
4.6.4 Adequate mechanisms and controls in Protecting the Customer	46
4.7 Motivation to migrate from Traditional Banking to Electronic Banking	47
4.7.1 Efficient and better-quality service	47
4.7.2 Lower Cost of Services	48
4.7.3 Reliable and Convenient	49
4.7.4 Benefits Outweighing Pitfalls	50
4.7.5 Agility and Accuracy of Digital Channels	51
4.8 Chapter Summary	52
CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	53
5.1 Introduction	53
5.2 Discussion	53
5.3 Conclusions	54
5.3.1 Conclusions	54
5.3.2 Success Factors	54
5.4 Implications	55
5.5 Recommendations	55
5.5.1 CABS Bank Zimbabwe	55
5.5.2 Regulators and Government	56
5.5.3 Customers	57
5.6 Suggestions for Further Research	57
REFERENCES	58
APPENDICES	61
Appendix 1 AUREC Approval	61
Appendix 2 Approval from CABS Bank Zimbabwe	62
Appendix 3 Questionnaire	63
Figure 4. 1 Awareness of Information Technology services/platforms offered by Bank	36
Figure 4. 2 Registration for online/mobile banking	
Figure 4. 3 Preference for using ICT platforms	
Figure 4. 4 Ease of use	
Figure 4. 5 Cost of data and SMS charges	
Figure 4. 6 Connectivity challenges	41

Figure 4. 7 Simplicity of registering	42
Figure 4. 8 Fraudulent transactions	43
Figure 4. 9 Effective advertising and marketing	44
Figure 4. 10 Adequate investment in security of virtual banking transactions	45
Figure 4. 11 Violation of information security	46
Figure 4. 12 Adequate mechanisms and controls	47
Figure 4. 13 Efficient and better-quality service	48
Figure 4. 14 Lower cost of services	49
Figure 4. 15 Reliable and Convenient	50
Figure 4. 16 Benefits outweighing pitfalls	51
Figure 4. 17 Agility and accuracy of digital channels	52

#### **CHAPTER 1 INTRODUCTION**

#### 1.1 Introduction

The purpose of this study is to investigate how digitalization of Information Communication Technology (ICT) has affected the financial and business performance of commercial banks in Zimbabwe, as well as the overall delivery of banking services to customers. The development of information technology, such as digital banking, has changed the way banks provide services. Individual and business customers can now view transactions, download statements, and conduct business online without having to go into a bank. By deploying electronic banking services like Internet Banking (IB), financial institutions have also reconsidered their service delivery strategies by closing branches in remote and loss-making regions.

Businesses that are enabled by ICT, such as banks in Zimbabwe, invest in projects and equipment that they believe will provide a higher rate of return on investment. Organizations invest in ICT to secure or maintain a competitive advantage. According to Bowen et al. (2007), many organizations' success depends on how well they manage and control ICT to ensure that the anticipated rewards are realized. As a result, investing in technology results in real business advantages like improved reputation, increased trust, product leadership, and decreased costs. The purpose of this study is to determine how digitization has affected the efficiency of Zimbabwean banking institutions.

## 1.2 Background of the Study

The business environment has become extremely challenging due to ongoing margin pressures because of recent technological advancements that have refurbished global economies at an extremely rapid pace. Not only do digital technologies affect competition, but they also influence how businesses handle payments, which ultimately affects customers. However, financial institutions looking to swiftly adapt their long-term business strategies view these disruptions as an enormous opportunity.

The human workforce that is resistant to digital changes could be put at risk by digitization, which could eliminate important job roles. However, observations show a focus on tasks with greater value and the creation of unprecedented opportunities. For instance, the implementation of digitization in retail banking presents relationship managers with a significant opportunity to devote much of their time to advising customers rather than to operational tasks.

For trade purposes, Zimbabwe has traditionally used cash. However, the current liquidity crisis, characterized by a lack of cash, has begun to increase the number of electronic transactions in Zimbabwe. Financial institutions in Zimbabwe are struggling to process electronic payment instructions, both domestic and international, due to an enormous increase in physical Real Time Gross Settlement (RTGS) requests as a result of the shift to digital products (RBZ, 2017).

Before being maintained to allow additional transactions to be processed, the bank systems can only accommodate specific transaction volumes or limits. Consequently, the banking industry's failure rates for both physical instructions and electronic transactions are steadily rising (RBZ, 2017). However, the sector's profitability has improved over time due to an increase in fees and commissions as a result of the rise in electronic transactions (RBZ, 2017). Therefore, despite the fact that the failure rate of transactions has increased significantly across digital platforms as a result of high transaction volumes, banks' profits have continued to rise over the past few years . As a result, the purpose of this study is to determine whether digital banking improves the financial performance of Zimbabwean banks.

#### 1.3 Statement of the Problem

Commercial banks have been greatly impacted by recent technological advancements; however, some Zimbabwean banks are not fully utilizing information and communications technology (ICT) to improve their businesses due to a lack of knowledge regarding the benefits ICT can provide. They should be adopting and utilizing utilizing information and communications technology (ICT) because of the current economic possibilities and benefits, but many of them are still using the traditional tools to remain competitive or

provide services to customers. But they aren't doing that, so more intensive and concentrated efforts are needed to make commercial banks in Zimbabwe aware of the advantages of using utilizing information and communications technology (ICT) . As a result, the goal of this study is to find out how much commercial banks in Zimbabwe can benefit from ICT digitization.

## 1.4 Research Objectives

- 1. To analyze Digitilisation Tools used by commercial banks in Zimbabwe
- 2. To investigate benefits derived from utilizing information and communications technology (ICT) by the banks
- 3. To establish and assess the challenges that banks in Zimbabwe face in using utilizing information and communications technology (ICT) in business transactions
- 4. To recommend how digitilisation can be effectively engaged to improve business performance

## 1.5 Research Questions

- 1. Which digitilisation technologies are used by banks in Zimbabwe.
- 2. What are the benefits of utilizing information and communications technology (ICT) banks?
- 3. What are the challenges faced by banks in using digitilisation tools?
- 4. How can information and communications technology (ICT) be engaged in improving the commercial banks in Zimbabwe?

## 1.6 Assumptions

This study proposes that successful and effective use of information and communications technology (ICT) Tools will Improve the performance of commercial banks in Zimbabwe.

#### 1.7 Significance of the Study

The study will help the Reserve Bank of Zimbabwe focus more on policies that complement the growth and innovation of economies and the long-term economic development through commercial banks using information and communications technology (ICT) digitilisation tools because digitization is taking center stage in this 21st century. Given that digitization is also anticipated to play a significant role in transforming commercial banks in Zimbabwe, it is very pertinent to investigate how these digitilisation tools have enhanced commercial banks' performance. The RBZ will also benefit from this study's assistance in policy formulation. Because it will provide recommendations on how digitilisation can be used to improve their businesses, the study will be of assistance to the banks by providing them with the necessary information and tools to strategically position themselves in the market. Additionally, it is anticipated that this study will add to the existing body of knowledge regarding ICT as a bank enabler. Because the advantages of digitization will be thoroughly examined, which will ultimately contribute to the expansion of the economy, this study will be beneficial to the banks themselves. Because this research will provide them with a platform to further investigate similar or identical areas of study, other researchers will benefit and contribute to academia.

#### 1.8 Delimitation of the study

According to Berntsson-Svensson, R., & Aurum, A. (2006), scope refers to the project's scope, scope of coverage, and scope of impact. It frequently involves a substantial area of research. This study focused on Zimbabwe's commercial banks, specifically those in the Harare CBD.A 2012 SEDCO survey found that Harare CBD accounts for at least fifty percent (50%) of the country's commercial banks, which is a good representation of the industry. The study's theoretical foundations were centered on determining how ICT has improved commercial banks. The intended respondents were the tellers and managers of banks.

## 1.9 Limitation of the study

The researcher had a difficult time persuading some Managers and Tellers to participate in an interview because they were nearly always busy because the study was focused on the Harare CBD, which is the hub of ICT operations for most banks. Because it was their first time participating in research and some of the questions involved information that was too private, those who did respond were also reluctant to answer some of the questions. Because of the frequent activity in the Central Business District, the respondents had little or no time to assist the researcher during the interviews and questionnaires.

The offices were also the reception and work area, so clients would come in and the tellers or managers would want to take care of business first, which presented a problem when interviews were interrupted. However, the researcher was able to overcome this obstacle by being patient, and he did have to reschedule interviews at times.

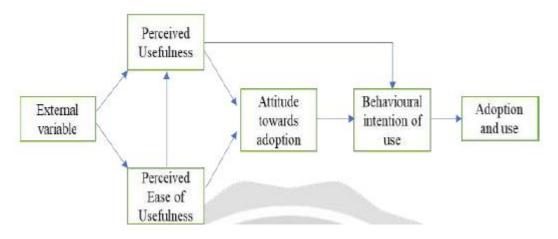
#### CHAPTER 2 REVIEW OF RELATED LITERATURE

#### 2.1 Introduction

The research methodology used to investigate the digitalization of Zimbabwean banks is described in this chapter. The goal of the study is to learn how digitalization has affected Zimbabwe's banking industry, including the challenges and opportunities it brings.

#### 2.1.1 Relevant Theories

Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), Transactions Cost Innovation (TCI) Theory, Innovation diffusion theory (IDT), and Resource based view (RBV) Theory are some of the theories in the digital banking literature. The innovation Acknowledgment Model (Hat) was planned by Davis (1996) to analyze the acknowledgment and utilization of advances. This idea centers on comparing user adoption patterns to technology's internal and external factors. According to Safeena et al., "perceived ease of use" and "perceived usefulness" of a technology are used to describe how a client uses a technology (TAM). 2014). Electronic banking adoption is immediately influenced by perceived usefulness and ease of use, which are the primary TAM factors (Suping & Yizheng, 2010; Safeena and co ,2014). These communications could be delineated as displayed in the Figure underneath:



#### The TAM Model

The Unified Theory of Acceptance and Use of Technology (UTAUT) model was developed by Venkatesh, Morris and Davis in 2003. A more comprehensive set of factors is obtained from Venkatesh et al. (2012) UTAUT as a unified view of user adoption. These factors are

seen as having a direct effect on Internet banking adoption and are likewise used as fundamental

antecedents to until internet banking adoption in the developing world (Yuan, 2020). Although UTAUT is still a relatively new model and has not been as widely used as TAM, it has gradually drawn researchers' attention and has been recently applied to exploring the users' acceptance of online banking (Yuen, 2013; Alalwan et al., 2014; Martins et al., 2014). The Transactions Cost Innovation (TCI) theory pioneered by Niehans (2006) advocated that the dominant factor of financial innovation is the reduction of transaction cost, and in fact, financial innovation is the response of the advance in technology which caused the transaction cost to reduce. The reduction of transaction cost can stimulate financial innovation and improvement of financial service. It states that financial innovation reduces transaction costs (Kombe & Wafula, 2015). TCI theory is also relevant in this context: for instance, the use of digital banking technology can substantially reduce a firm's transaction costs as it enables efficient coordination, management and use of information. Online banking may further lower transaction costs as it provides also off-site access to the firm's internal database and other relevant sources of information. Consequently, reduction of operation costs through digital banking may influence growth in profitability for the bank (Kombe & Wafula, 2015).

#### 2.1.2 Comparison of Theories

The Theory of Planned Behaviour (TPB) and this Theory of Reason and Action (TAM) are simplified in TAM. Both of these theories are criticized for not being able to measure users' attitudes toward behavior, subjective norms, and perceived behavioural goals, and for not taking into account the influence of external factors on the adoption of technologies (Safeena et al., 2014). This study relies heavily on the RBV theory, which holds that businesses with more resources are more likely to innovate in digital banking channels to provide customers with high-quality services, ultimately leading to higher profits.

#### 2.2 Definition of Information Communication Technology

The term "information and communication technologies" (ICTs) has come to mean a lot of different things to different people, each with their own perspective or way of using it.

Because of this, people now understand ICTs from the perspective of the features they are already familiar with. In general, Oliver & Chapman (1990) defined it as "the technology that

supports the activities involving the creation, storage, manipulation, and communication of information together with their related methods, management, and application." This definition applies to both the technology itself and the activities themselves. From the perspective of corporate information systems, Irving & Higgins (1991) defined it as the seamless integration of personal computing, data processing, and telecommunications with manual business processes. which facilitates essential business functions; and enhances productivity, effectiveness, and work-life satisfaction.

Through new technological trends that cut costs and increase the cost advantage, ICTs can reduce banks' operational costs. Using online networks and mobile applications, for instance, banks can speed up routine, low-value-added transactions like bill payments and balance inquiries thanks to the internet, new facilitates, and connectivity. The network effect is the way ICTs make it easier for customers in the same network to transact without going to the bank.

## 2.3 Banking Industry

Moving money from areas of the system where there are surpluses to areas where there are deficits is typically the primary function of banking, which is a form of financial intermediation. The public's trust in the strength, redundancy, and stability of the system's products and services is essential to this activity. A bank typically accepts deposits, offers credit, and allows withdrawals, but it is also associated with other things; Product development, market expansion, advertising, segmentation, branch establishment, and innovation are all areas where appropriate policies are required. Marketing concepts in the banking industry are associated with the design and delivery of customer-needed services in a manner that satisfies the customer because of the fierce competition between the banking industry and non-banking institutions. Customers in today's economy, according to Ezeokafor Ubong (1997), expect banks to be able to meet their needs for products and services because they expect speed, convenience, accurate returns, as well as savings and withdrawals. Bulama (1997) asserts that, in addition to rapidly evolving into a global village as a result of ICT, the world is already in the era of universal banking. Thus, banks must choose the option to give innovation based items like card administrations, versatile banking, on the web and electronic banking, and computerized teller machines (ATMs). As a result, people's banking habits have evolved to the point where going to a bank branch is no longer required to reap the benefits of banking. Banks are becoming more efficient as a result, which boosts customer confidence in the business.) Ogbonna, 1997), and Ovia, 1997) have all discussed ways in which ICT can improve service delivery and emphasized the significance of ICT's role in the banking industry today. ICTs often play a role in keeping banks afloat in this day and age. However, banks that do not implement ICTs run the risk of being left out of the market because the pace of change in the world is so rapid. A mechanically progressed bank will draw in clients who, nowadays, are bound to utilize virtual installment techniques.

## 2.4 Digital Channels

One of the most significant and significant aspects of information and communication technologies in relation to the banking industry is the concept of mobile banking, online banking, and ATMs. Despite the fact that the majority of people today use these features on a daily basis, some individuals are still unaware of their significance, particularly in this technological age when almost everything is becoming digital.

ICTs have an impact on banking performance and pave the way for other organizations to adopt technology in the future. Consequently, these various banking technologies have evolved from business enablers to business drivers. ICTs will generally be vital to all associations. Recently, the banking industry has been significantly impacted by the rapid development of information and communication technologies (ICTs), which have evolved into a tool that both facilitates and dictates the bank's organizational structure, business strategies, and customer service. The mobile and wireless markets have been one of the fastest-growing markets worldwide at an accelerated rate, as history has provided us with a definitive overview. The mobile banking industry may expand as a result of mobile phones becoming an essential communication tool for almost everyone. Mobile value-added services have reached new heights thanks to the rise of electronic commerce (eCommerce), which has enormous advantages for the banking and telecommunications industries.

Mobile banking, an essential component of eCommerce, has gained a lot of popularity among mobile users since its introduction in 2007. By providing mobile users with a brand-new, simple-to-use communication and fast financial transactional channel that can be accessed at any time and from any location, it establishes pervasive banking.

Checking account information, available balance, credit or debit card information, check status, setting transaction alerts, payment reminders, locating ATMs and bank branches, accessing a mini statement, loan and equity statements, managing insurance policies, placing orders for cheque books, and other services are some of the services offered by mobile banking. With different access choices like SMS, downloadable client, and portable Web (WAP), versatile banking is making the help more open to versatile clients.

Web banking offers internet banking to stay aware of another age of well-informed individuals who need present day banking and other innovation-based administrations. The informed working-class youth with web access are at the cutting edge of this innovation driven upheaval, which is quickly having an impact on the manner in which we bank.

This indicates that Internet Banking, also known as online banking, is offered by the majority of major banks. All you need is a computer that is connected to the internet in order to carry out the majority of your banking needs from the comfort of your office or home. In Zimbabwe, where our economy is tormented by a money deficiency, there has been a critical ascent in the utilization of these administrations over the long haul, with most of residents currently utilizing plastic, web, and portable cash for over 96% of neighborhood exchanges. As per Loudon (2002), virtual financial administrations have arisen as fundamental method for installment, especially in retail showcases, and because of their straightforwardness and usability, they have acquired prominence among customers and organizations around the world (The Messenger, 2017). Virtual banking payment systems have a number of advantages over traditional payment methods. The primary advantages of virtual banking include adaptability, flexibility, mobility, low service costs, and efficiency. The distribution of products and services by individuals, organizations, and organizations all over the world has been fundamentally altered by virtual financial innovation. Additionally, the promotion of electronic commerce (Muhammet, et al.,), which involves the online purchase, delivery, and transaction of goods and services 2013).

The arrangement of financial services through non-customary bank offices utilizing (ICTs) data and correspondence advances is what Carmel and Scott characterize as branchless financial, which is approached through innovative approaches (Carmel and Scott, 2009). The delivery channels for providing banking services at any time and from any location are

PDAs, mobile phones, ATMs powered by wireless technologies like GPRS, GSM, and a fiber link that enables internet connectivity (O'Brien & Marakas, 2009). Numerous studies indicate that online banks are more profitable and offer less expensive financial services than traditional structured banks (physical banks). The two primary drivers of the spread and utilization of virtual banking services are a reduction in branch network size and cost savings for banks. Because many customers believe that traditional banking has a longer turnaround time than modern digitalized banking, these two factors have made way for self-service channels. Polatoglu and Ekin, 2001) suggest that time efficiency, decline in cost and solace have been perceived as the secret clarifications behind the affirmation of virtual banking or online banking by clients.

#### The benefits of Internet banking include:

- 1. Internet banking gives you access to your account at any time, 24 hours a day, seven days a week. This is helpful in emergency situations because you can now avoid long lines and an interminable wait at a bank.
- 2. By simply logging into the bank's website and entering your user name and password, you can check your account information and conduct online transactions from any smartphone, laptop, or other device with access to the internet.
- 3. The majority of services, including mortgages, credit cards, savings accounts, and loans, can be applied for online. Additionally, you can now recharge your mobile phone and make insurance payments online, both of which save time.
- 4. Online shopping, in which you can simply use your online banking information to make purchases, is another area where online banking is gaining ground.
- 5. Online banking also makes it easy to pay your telephone, cable, and electricity bills, making it convenient to manage your finances at any time.
- 6. Online account creation is relatively simpler, less time-consuming, and does not necessitate as much documentation as traditional banking does during the ID & V (Identification and Verification) process. For instance, Steward Bank has developed a facility that allows you to create a free account by dialing a specific USSD code, making it simple and eliminating the need to waste time in long, fussy lines with a lot of requirements for verification.

- 7. Since online transactions are based on a paperless principle, information is processed and displayed on electronic devices like smartphones and computers rather than paper.
- 8. Robustness and adaptability, such as the quick execution and confirmation of transactions, such as Zipit funds transfer, which is currently utilized by the majority of banks as they phase out the traditional real time gross settlement (RTGS).

However, the Internet Banking system is not without its flaws, which include the following:

- The security issues associated with online transactions are a major drawback.
   Even though all information is encrypted, this does not completely guarantee that one's account is secure. Technology also introduces some flaws that need to be fixed, so it could be both beneficial and harmful at the same time.
- 2. If your internet connection fails, the worst-case scenario is that your account cannot be accessed. Additionally, the customer is responsible for paying for their internet connection while using the service.
- 3. Online banking does not completely eliminate the need to visit a bank. For example, if you want to get a loan or a mortgage, you can only apply for them online, but in order to get them, you have to visit the bank and talk to the people in charge of those products.
- 4. Another drawback of internet banking is that it eliminates much of your face-to-face interaction with your personal banker.

#### Solution:

- 1. Continuously ensure that you don't give out your own data to individuals you don't be aware over the web and make sure to change or refresh your secret key once in a while or month to month stretches.
- 2. Check whether encryption software is available on the bank's website and verify the privacy and information sharing policies.

#### 2.5 Cyber Security Concerns

During the COVID-19 lockdown, Zimbabwe saw an increase in the use of mobile money, online banking, and online shopping, which increased the need for cybersecurity. Money-related fraud, card cloning, and identity fraud were cyber incidents that contributed to an increase in cybercrime and computer-related crime in the nation.

In addition, the National Risk Assessment (NRA) Report of 2020 indicates that cyber risks, particularly those involving digital financial channels, were a major contributor to the estimated \$900 million in illicit proceeds that are generated annually from criminal activity in Zimbabwe. In its annual cyber security report for 2021, Liquid Intelligent Technologies (Liquid), a subsidiary of Cassava Technologies, listed malware and ransomware, email attacks, social engineering, and data breaches as the top four concerns regarding cyber security in Zimbabwe for 2021.

As a result of concerted efforts to accelerate the enactment of computer crime through the cybercrime bill/act, which was passed into law in 2017, the quest for use and adoption of virtual and online banking services can improve despite these obstacles, as these measures have reduced the rates of cyber-related crimes. In terms of its dedication to issues related to the fight against cyber criminology, Zimbabwe ranks 18th in Africa on the Global Cybersecurity Index (Pembere, 2017). Pembere says in his article that laws to protect people and businesses from cybercriminals and those whose operations appear to be hindered haven't been developed quickly enough. Due to a lack of trained cyber security experts and a lack of appreciation for and education regarding cyber security issues among law enforcement personnel, the majority of developing nations face vulnerability challenges.

#### 2.6 Conceptualizing Mobile banking in Zimbabwe

Individual clients, medium-sized organizations, huge enterprises, and establishments are served by Zimbabwe's monetary area. Banks have made significant investments in qualified and skilled information and communications technology (ICT) support teams and ICT itself. The banks in Zimbabwe have been able to withstand hyperinflation, a liquidity crisis prior to and following the introduction of the dollar in 2009, and most recently, a cash shortage from 2016 to 2018. The banks established a retail banking and e-banking division that is devoted to providing and developing virtual products in accordance with cutting-edge banking technologies in an effort to alleviate pressure on the unattainable dollar. These technologies

include things like automated teller machines, internet banking, mobile banking, point of sale (POS) machines, master cards, debit cards, and web-based services. Some banks have introduced a variety of options for online shopping as a result of the development of ICT over the past few years. The trouble presently lies in monetary establishments' capacity to adjust to clients' ability to completely acknowledge, appreciate, and utilize plastic cash instead of slippery actual money.

Since the introduction of internet technology, there has been a significant shift in the manner in which businesses and companies all over the world conduct business and provide services. As a result of electronic commerce (eCommerce), which uses the internet to sell and deliver products to end users at lower costs, businesses' marketing strategies have changed. eCommerce has made business activities like electronic data interchange, electronic funds transfer (EFT), electronic marketing (eMarketing), online marketing, online transaction processing, and supply chain management easier. Customers' advantages and disadvantages, as well as the empirical effects on their adoption and acceptance of e-banking, have been the subject of numerous studies. As indicated by Burke (2002), more modest monetary establishments were less inclined to completely take on electronic banking due to their absence of skill, aversion to outside market influences, and generally absence of monetary assets to buy the different innovations vital for the center financial framework to actually work. Gonzalez (2004) claims that low employee performance frequently has slowed the spread of electronic banking. Employees' attitudes, knowledge, qualifications, and experience continue to play a significant role in the success or failure of various electronic banking technologies.

The core components of virtual banking are internet banking, mobile banking, automated teller machines (ATMs), and other digital channels. To decrease the stunning compensation charges that monetary organizations cause to give banking administrations to a consistently progressively requesting and extending client base, virtual financial presents a rewarding choice. The Zimbabwean economy, which has been severely hampered by a lack of hard currency, may soon see a brighter future thanks to virtual financial services, which allow customers to use a variety of exchange methods like web-based offices like RTGS, ZIPIT, swiping on POS machines, and web and mobile financial, thereby decreasing the demand for hard currency.

Despite investments in digital channels and virtual banking platforms, long lines persist. Using pen and paper, many customers spend several hours conducting their banking transactions. This number rises toward the end of the month due to customers' desire to withdraw the hard cash they require for certain day-to-day requirements, such as transportation and other necessities. It's possible that the upcoming tech-savvy modern generation is to blame for the fact that very few customers have fully adopted the use of plastic money. The Reserve Bank of Zimbabwe (RBZ) economic review report from November 2011 states that offline customers, or traditional brick-and-mortar customers, made 12 billion transactions, compared to 1.5 billion online transactions. However, this number is assumed to have increased recently due to the various challenges faced over the past few years. These customers have fully integrated every This basically indicates that e-banking and information and communication technologies are not widely used in Zimbabwe.

Most of us utilize this element consistently, however a few of us are as yet uninformed about its importance to our lives. It gives mobile users brand-new transactional channels that are quick and easy to use and can be accessed at any time, anywhere.

Some of the services offered by mobile banking, which is an integral part of the financial industry, include checking account information, the available balance, credit/debit card information, cheque status, setting alerts, payment reminders, locating ATMs and bank branches, accessing a mini statement, accessing loan and equity statements, insurance policy management, and placing orders for cheque books via mobile phones.

Internet Banking provides online banking in order to keep up with a new generation of techsavvy individuals who demand cutting-edge technology-based services. This is rapidly transforming the way we bank. This technology-driven revolution is being led by educated, young people from the middle class. You can do most of your banking from the comfort of your office or home because most major banks offer Internet Banking, or online banking.

The utilization of retail location gadgets to execute and add to the improvement of a credit only economy in which we will involve plastic cash as Visa, Zimswitch, or Mastercard are instances of ICTs assuming an essential part in installment handling.

#### 2.7 Various Uses of Information Communications Technology in Banking

Individual customers, medium-sized businesses, large corporations, and institutions are served by Zimbabwe's financial sector. Banks have invested a significant amount in information and communications technology (ICT) as well as in ICT support teams that are qualified and skilled. This has enabled the banks to survive Zimbabwe's hyperinflation, liquidity crisis before and after dollarization in 2009, and most recently the cash shortage from 2016 to 2018. In an effort to alleviate pressure on the unattainable dollar, the banks established a retail banking and e-banking division that is devoted to providing and developing virtual products in accordance with cutting-edge banking technologies.

Automated teller machines, internet banking and mobile banking, point of sale (POS) machines, master cards, debit cards, and web-based service are examples of these technologies. The development of ICT over the past few years has had a significant impact on banking operations, with some banks introducing a variety of online shopping options. The difficulty now lies in financial institutions' ability to adapt to customers' willingness to fully accept, appreciate, and use plastic money in place of elusive physical cash.

The way businesses and companies all over the world conduct business and provide services has significantly changed since the advent of internet technology. Businesses' marketing strategies have changed as a result of electronic commerce (eCommerce), which uses the internet to sell and deliver products to end users at lower costs. Electronic funds transfer (EFT), supply chain management, electronic marketing (eMarketing), online marketing, online transaction processing, electronic data interchange, and other business activities have all been made easier by eCommerce. Numerous researchers have examined the advantages and disadvantages of e-banking for customers, as well as the empirical effects on customer adoption and acceptance. According to Burke (2002), smaller financial institutions were less likely to fully adopt electronic banking because of their lack of expertise, sensitivity to external market forces, and overall lack of financial resources to purchase the various technologies necessary for the core banking system to function effectively. According to Gonzalez (2004), low employee performance has frequently slowed the adoption of electronic banking. The attitudes, knowledge, qualifications, and experience of employees continue to play a crucial role in whether or not various electronic banking technologies succeed or fail.

Automated Teller Machines (ATMs), internet banking, mobile banking, and other digital channels are the core components of virtual banking. In order to reduce the staggering wage

bills that financial institutions incur in order to provide banking services to an ever-increasingly demanding and expanding customer base, virtual banking presents a lucrative option. Virtual financial offers a hint of something better over the horizon to the Zimbabwean economy which has been hit by extreme money deficiencies by which the clients can utilize different exchange stages such web-based offices like RTGS, ZIPIT, swiping on POS machines, web and versatile financial subsequently decreasing interest of scant unfamiliar cash or hard money.

Long queues are still a common occurrence despite investments in digital channels and virtual banking platforms. A number of customers spend several hours doing their banking business using the traditional paper and pen method. This number increases at the end of the month as customers want to withdraw the hard cash they need because some day-to-day needs, like transportation and other necessities, require hard cash. Very few customers have fully adopted the use of plastic money, which may be related to the tech-savvy modern generation that is about to emerge. These customers have fully integrated every The Reserve Bank of Zimbabwe (RBZ) economic review report from November 2011 states that offline customers made 12 billion transactions, or traditional brick-and-mortar customers, compared to 1.5 billion online transactions, though this number is assumed to have increased recently due to the various challenges faced over the past few years. This basically indicates that ICTs and e-banking products are not widely used in Zimbabwe.

The majority of us use this feature every day, but some of us are still unaware of its significance to our lives. It provides mobile users with new, fast, and convenient transactional channels that can be accessed from any location at any time.

As mentioned above, you can check account information, balance available, credit/debit card information, cheque status, setting alerts, payment reminders, locating ATMs and bank branches, accessing mini statement, accessing loan and equity statements, insurance policy management, and placing orders for cheque books via mobile phones are some of the services offered by mobile banking, which is an integral part of the financial industry.

In order to keep up with a new generation of tech-savvy individuals who demand cuttingedge technology-based services, Internet Banking offers online banking. The way we bank is rapidly being altered by this. Young people from the middle class who have access to the internet and are educated are leading this technology-driven revolution. The majority of major banks offer Internet Banking, or online banking, so you can do most of your banking from the convenience of your office or home.

The use of point-of-sale devices to transact and contribute to the development of a cashless society in which we will use plastic money in the form of Visa, Zimswitch, or Mastercard are examples of ICTs playing a crucial role in payment processing.

#### 2.8 Problems Circumvented

With the unavoidable job that ICT's have played in the economy, different difficulties and issues have noticeably been decreased because of these different advances embraced as made sense of beneath:

- 1. The role that mobile banking applications have played, as well as the citizens' acceptance of the use of virtual cash and realization of its benefits as a result of the economic difficulties caused by the inability to gather foreign currency, have significantly reduced long lines.
- 2. Transaction errors caused by bank employees; despite our best efforts, no one is immune to making mistakes, some of which are minor and others of a more serious nature. Because of this, the role these technologies have played has reduced errors and reduced their likelihood to almost zero. As a result, this appears to be a benefit for both the bank and the customer who may have lost money as a result of these errors.
- 3. Exorbitant organization, the customary blocks and concrete tends to need to follow different conventions for a specific exchange to be handled or one may be hoping to open a record, and this will have its conventions too. For instance, in order for your account to be considered to be opened, certain bureaucratic policies must be adhered to. However, with these various technologies, these protocols have been eliminated for the benefit of the customer, who is able to open an account quickly and saves time.

#### 2.9 Significance of Information and Communications Technology in Banking

The information and communication technology (ICT) revolution has altered the traditional business model of banking by allowing banks to step outside of their comfort zones and separating the value creation chain so that a variety of businesses can provide customer service, thereby improving customer service. As per Delgado and Nieto (2004), web, virtual, and portable banks, for example, disseminate protection and protections notwithstanding

pretty much every financial item. However, their group does not produce all of the products they sell.

Nonetheless, the essential financial legitimization for the race to utilize the web and other data and correspondence advancements (ICTs) as conveyance channels is the expected decrease in above costs that will come about because of diminishing and in the end disposing of the convergence of clients into different actual branches and the related expenses. Delgado et al. claim that ( According to DeYoung (2005) and 2006, the internet delivery channel has the potential to generate scale economies that are greater than those provided by conventional distribution channels. This suggests that the inevitable new economical virtual spaces will eventually take the place of physical brick-and-mortar stores. According to Haq (2005), banks exist because they are able to achieve economies of scale and reduce information asymmetry between savers and borrowers. As a result of monetary record development, the unit costs of web banking decrease more quickly than those of traditional banks. According to DeYoung et al. 2007) refer to internet banking as an innovation process that primarily replaces services provided by physical branch banks.

#### 2.10 Defining Information Communications Technology Security

As per Anderson (2003), most of ICT security is unclear and uncertain, and the creator further battles that there is lacking agreement with respect to a meaning of ICT security and that few existing definitions center more around what it does than what it is. He then goes on to offer a definition that he believes to be reasonable: "a very educated sense regarding confirmation that data hazard and controls are in balance." Because of this, it is often thought of as the certainty that all sensitive key data has been obtained and cannot be hacked because they have conducted firewall strengthening and other entrance tests. Another definition of information security, according to Hoppe, Pastwa, and Sowa (2009), is the protection of information security from a variety of threats to ensure business continuity, lessen business risk, and maximize return on investments and business opportunities. Computer security, according to Neumann (2003), is "freedom from and resistance to danger." In the context of information and communications technology security, "danger" refers to threats or attacks that are suspicious or malicious. The denial of unapproved or unintentional adjustment, obliteration, exposure, misfortune, or admittance to mechanized or manual records and documents, as well as the misfortune, harm, or abuse of data resources through different

ICT's gear, is illustrated in Peltier's 2001 meaning of ICT's security, which tends to physical and consistent controls.

#### 2.10.1 Roles of Information Communications Technology Security in Banking

This term can mean a lot of different things, as was mentioned earlier. The role that ICT plays in banking may be the deciding factor in whether or not banking systems succeed. Because banking systems are sensitive and vulnerable, this is not a problem because it is necessary for the implementation of an effective system. Customers frequently share personal information because they trust the bank's ability to protect their data.

To ensure the confidentiality and safety of all customer data, the majority of Zimbabwean banks typically employ a variety of security policies.

Banks are among the most mature industries when it comes to cyber security because of their conservative, consistent approach to risk, consistent, remarkable investments in security and privacy safeguards to maintain customer confidence in the institution, and tradition of collaboration with authorities and within the industry. Subsequently, they will keep on exhibiting huge interest in the battle against the transnational, enterprising, and decided digital danger, which is quickly developing.

## 2.10.2 Need for Information Communications Technology Security in Banking

- 1. Increased attack surface and the proliferation of attack vectors.
- 2. Digitalization and shifting customer preferences
- 3. More sophisticated threat actors and increased bank targeting
- 4. Banking progressively working as a boundaryless area

With these comes the requirement for legitimate strategies to make preparations for these dangers thus as a number of banks in Zimbabwe would make a stride further by instructing clients on the most proficient method to stay away from and attempt stay express online by utilizing different strategy measures, for instance

1. Be careful with free Wi-Fi, by which you shouldn't send or get private data when your gadget is associated with public Wi-Fi except if you're utilizing a solid site page and just utilize notable area of interest suppliers.

- 2. Avoid giving out your PIN entry codes, Mobile PIN entry codes, passcodes, Online Banking passwords, or other full passwords to anyone—even to a caller claiming to be from your bank or the police.
- 3. Safe account scam, in which no legitimate bank would ask you to transfer money to a "safe account." Do not respond to anyone who asks you to do this, whether they call, email, or otherwise contact you.
- 4. Don't open any links or attachments from unsolicited emails, and don't respond to them. It's possible that fraudsters could gain access to your data or infect your device with a virus if you do this.

With these dangers some of the time perhaps undeniable, one might come to consider what should be finished to remain erring on the side of caution and improve their insight on the different violations that are out there. At CABS Bank Zimbabwe, they would go one step further in order to be able to assist their customers and shield them from these unavoidable dangers that could occur if no one was made aware of their presence. The following are CABS Bank Zimbabwe's various actions:

Credit Card Protection by - If your card has been lost or stolen, please contact us immediately using the information provided here. You ought to constantly keep your cards in a protected spot - and sign new ones when you get them (on the off chance that you live in a common property, it very well might be more secure to gather new cards from your neighborhood office, as opposed to having them posted). Never let someone take your credit card from you while you are in a store, restaurant, or bar to complete a transaction. Never give your credit card to a stranger who knocks on your door if you are at home. Last but not least, your card's expiration dates should be checked frequently. If a new card hasn't arrived on time, contact us if you bank with us.

Protection at cash registers: When using a cash register, you never know who might be behind you; therefore, safeguard your PIN. You must not be distracted by anyone. Fraudsters could attempt to redirect your consideration by conversing with you by which they may then snatch your card. Don't give your PIN to anyone, even if they claim to be from your bank or the police. Remember it and don't keep it with your cards. Contact your bank if you notice any unusual activity on your statements on a regular basis. Make sure you are using the right device. Don't use it if it looks like it has been tampered with; notify your bank. As a result of

all this education and awareness, CABS Bank Zimbabwe is aware of the consequences of the rise of ICTs and other banking technologies.

# 2.11 Summarization of the Impact of Information Communication Technologies in Banking

## 2.11.1 To The Customer

#### Disadvantages

- Eliminates the role of a personal banker with a client by which they lose the
  connection with the physical bank hence might miss out on various benefits and
  information that can be learned from there thus no personal relationships are made
  with the customer
- 2. Various costs that come about using these systems for example the 2% that was introduced by the government in Zimbabwe which applies to every transaction that takes place
- 3. The complexity that comes with these various systems for the different age groups some who are not exposed to these various ICT's do not even know how to access an ATM
- 4. Fraud is more likely with an online service than the fraudster physically visiting a branch hence the customer may be vulnerable to that
- 5. If the banking site goes down, then customers cannot access their accounts

## Advantages

- 1. You can do almost everything from the comfort of your own home
- 2. You can bank anytime convenient because it operates everyday anytime
- 3. Save time by not queuing up to be served

#### **2.11.2** To The Bank

Advantages:

- 1. Its employees can work from home through telecommuting thus reduction of the costs to the organisation
- 2. Replace some employees with computerised equipment, for example ATM's thus reducing the organisations wage bill
- 3. More advertisement thus more customers as they can open an account easily alone

## Disadvantages:

- There is a need to be always one step ahead of thieves and fraudsters, so the bank
  must make considerable investment in order to come up with new ways to keep
  customer accounts secure and must employ specialist web developers and expensive
  computers to run the site.
- 2. Less customer contact and so it is harder to build personal relationships with customers

## 2.12 Chapter Summary

This chapter focused on the definition of key terms used in the research, the theoretical frameworks used in the study, previous research, an analysis of the advantages and disadvantages of using ICTs in the banking sector, how mobile banking is conceptualized, and current trends. The next chapter focuses on the design and methodology of the research

#### CHAPTER THREE METHODOLOGY

#### 3.1 Introduction

The preceding chapter brought to light a variety of works on the subject of ICTs and the banking industry. This chapter's primary objective is to discuss the research approach that will be utilized in the current study.

Research procedure can be characterized as the methodical course of issue ID, assortment, show and investigation of information and is an intelligent method for looking for new and helpful data on a subject that will coordinate the individual how examination is to be done and yields the work plan of exploration. Study, experiment, observation, analysis, comparison, and reasoning are used to divide this chapter into various categories, which will serve as the framework for data collection, measurement, and analysis.

This chapter is done to find new information about the subject under study, verify and test these important facts, analyze an event, process, or phenomenon to find the cause-and-effect relationship with this industry, and finally to help us solve the problems we face every day that are influenced by ICTs.

## 3.2 Research Design

In order to obtain responses and solutions to research issues, this is the topic under study's plan and structure. In other words, it could be a plan for the entire research that provides the researcher's action plan with context. It offers solutions, approaches for gaining access to data, sampling strategies, and strategies for overcoming obstacles.

Distinct examination alludes to the event and nature at which something happens or the association among different factors (Ortinam, 2003). The researcher's goal is to collect data that will help them answer the question being studied, which necessitates conducting both quantitative and qualitative research.

- 1. Both Exploratory Research and Descriptive Research were used in accomplishing the Objective of the study.
- 2. Exploratory Research was used to gain insight into the Impact of Information Communications Technology in the banking industry whereby this is used in order to help us find and expand on a matter that was not studied thoroughly.
- 3. Descriptive Research was used to gain insight into the Role of Information Communications Technology in the Banking Industry

- 4. Qualitative approach aiming at examining how the participants respond and interpret to their reality (Bryman and Allen 2011). This approach often presents a challenge of having a methodology that is driven by the respondents' opinions and views as a result of the openness of the interview questions (Feilzer 2010).
- 5. Quantitative approach is used where several respondents are available to take part in the study. It involves use of theories and formulas to come up with sample size basing on the given population

Scope of the Study:

The study concentrates on examining of the Role of Information Communications Technology in Banks, particularly:

- The Perception of Employees towards the implementation of Information Communications Technology in banks
- 2. To assess the customers' satisfaction level towards the use of Information Communications Technology related services in banks

According to (Saunders, et al., 2007) the Research design seeks to answer the following 3 key questions: What- examines fundamental assumptions, How- answers the questions regarding to the ways the researcher would use to conduct the research, that is looking at data collection and analysis and Why- justifies the chosen plan and elaborate what choice suits the study.

This research incorporates the pragmatic research design in accordance to (Saunders, et al., 2007) which entails use of both qualitative and quantitative research techniques. Quantitative data would be collected through administering questionnaires whilst qualitative data would be though interviews and analysed using statistical tools as well with Microsoft excel. The questionnaires are distributed randomly to some employees and customers, then carry out interviews with random employees representing the chosen bank.

Research design is a blueprint or plan specially created to answer the research question and control variance (Helen & Dulock, 1993). Burns and Grove (2003) define a research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. (Parahoo, 1997) describes a research design as a plan that describes how, when and where data are to be collected and analysed. (Polit et al, 2001) define research design as the researcher's overall for answering the research question or testing the research hypothesis. For this study a descriptive approach was used to progress the study. (Burns et al, 2006) define descriptive research as a scientific method that involves observing and describing the behaviour of a subject without influencing it in any way. A case study was used for this research to assess the organization. A case study was chosen because it is an in-depth study of particular individuals or a group of individuals rather than a statistical survey (Bryman et al, 2014). Case study research method is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clear; and in which multiple sources of evidence are used (Yin, 1984). Additionally, a case study was chosen because it is useful for testing whether scientific theories and models work in the real world rather than analysing statistical data. This design will allow the research to meet the aim of the study; to assess the role of ICT's in the banking sector.

#### 3.3 Population and Sampling

The review designated people with various sorts of ledgers at a predefined bank in Zimbabwe and both those that poor person embraced and those that have taken on the utilization of cutting-edge financial innovations as well as a few representatives at this working environment that utilization these advances on an everyday premise; will also aid in the research. The populace will contain people that share comparative qualities and for this situation the financial customer base and those utilized in this area. Based on this banking institution, the study seeks to determine the factors, awareness level, security, and features that influence the adoption and use of information and computer technologies in the Zimbabwean banking sector.

Characteristics of selecting the study population:

- 1. Both female and males
- 2. All age groups from the age of 18 years old
- 3. No discrimination, on all respondents regardless of their aptitude
- 4. Includes respondents with disability

The target population was drawn from CABS Zimbabwe as well as customers, 18 years and older that had access to the internet, a cellphone or landline and visited the banking hall often. A purposive quota sampling method was adopted for this research which entails drawing a sample that conforms to the specific criteria. According to Cooper and Schindler (Cooper & Schindler, 2008) quota sampling is necessary to improve representativeness in the different groups. Various issues must be considered in approximating the sample size required for structural equation modeling as noted by Hair et al. (Hair, 2006). In this research the Cochran's formula was used to calculate the sample as it would be adequate for this study that has a great population size since a majority of citizens in the country are bank with a particular bank whereby for CABS Zimbabwe its customer base is almost more than twice than its closest competitor since it began in 1912. Cochran (Cochran, 1977) devised a formula to calculate a representative sample for proportions as:

$$n_o = \frac{z^2(pq)}{e^2}$$

 $n_o$  is sample size

z is the selected value of desired confidence level

p represents the assumed proportion of an attribute present in the population.

$$q = 1 - p$$
.

e is the desired level of precision.

Since my population is large and its variability is not known I will assume the maximum variability of 80% (p=0.8) and confidence interval of 55% with a precision of  $\pm$ 5% the calculation is as indicated below:

$$p = 0.8$$

$$q = (1 - 0.8) = 0.2$$

$$z = 0.9$$

$$e = 0.05$$

$$n_o = \frac{(0.9) \ 2 * 0.8 * 0.2}{0.05^2} = 51.84 \approx 52$$

Hence the sample size adopted in this research based on the result of the Cochran formula is 52.

#### 3.4 Data Collection Instruments

## 3.4.1 Questionnaires

The questionnaire is a tool for gathering data using a carefully structured and designed set of question (Zikmund, 2000). It also refers to specific questions that the respondents individually answer by filling their corresponding response adjacent to the questions asked on the questionnaire.

It gives the respondent written information in the form of questions that require their own opinion and responses to these questions According to (Martins, 1995) there are these characteristics of a good questionnaire that is:

- 1. devoid of leading, should elicit the respondent's opinion
- 2. clarity in the questions asked, they should not be ambiguous
- 3. complex questions should be used

The questionnaires which the researcher used composed of direct questions that made the various respondents regardless of their nationality provide a simple answer and specific for example, like ticking a box where there is male or female.

The questionnaire should be short enough to keep the respondent's interest, as well as use a common language that will be understood by most of the respondents.

In this research, two questionnaires were used to collect the data whereby one was meant for the clients at CABS Zimbabwe whilst the others were meant for the employees at CABS Bank Zimbabwe.

## 3.4.2 Questionnaires advantages and disadvantages

The number of advantages that accompany the questionnaire convinced the researcher to opt for this method as a collection method for data:

# 3.4.2.1 Advantages

- 1. Many respondents can be reached easily whereby they may be distributed to various branches of the banks in Zimbabwe has and then in turn returned easily thus convenience to both the respondent and researcher
- 2. A respondent may take their time to respond effectively without feeling pressurised at the own time
- 3. It gives respondents anonymity whereby they may be clients who have negative things to say about how the bank is being affected by these ICT's.
- 4. Some employees may not be available when the researcher wants to conduct the interview thus a questionnaire will be convenient

## 3.4.2.2 Disadvantages

With questionnaire come the downside of negligence by which the respondent is not aware of the value of their honest response by which they m ay decide just to jot down random answers to save themselves from thinking too much. Some might as well be pressurised with work such that they will not even be able to find to slot in the questionnaire.

- respondents sometimes are not confident that their anonymity is guaranteed thus impeding the elicitation of valuable information in a bid to protect their organisation.
- 2. The some of the questionnaire forms are not returned they may be thrown away when the respondent goes away
- 3. some of the questions may be a bit difficult to interpret to those less technologically savvy or individuals that are not exposed to ICT's
- 4. they come with a difficulty to convey emotion and feeling from the respondent whereby some may say less but non-verbally say more through gestures or facial expressions.

#### 3.4 3 Interviews

An interview is a conversation that the researcher has with the respondents to get information and data. Respondents' responses are recorded using either voice recording or note taking, or both. The researcher used phone calls and face-to-face in allowing situations interviews as one of the primary research tools to obtain data due to limited time as well as for preciseness and clarity by taking notes while listening to the recording for future reference.

In an effort to obtain as much information as possible from both the employees, who included a few management personnel, and the individual bankers,

## 3.4.3.1 Advantages of interviews

- 1. The researcher explored in great depth what the various roles Information

  Computer Technology's in banking play through engaging conversations with
  the management
- 2. The researcher as well get feedback from customers on why these are difficult to use and the various challenges, they face through the advent of these various systems which may not have been elicited through a questionnaire
- 3. The response rate was very fast as the researcher tended to elicit results immediately
- 4. The researcher could judge the responses as well with the reaction and nonverbal communication

## 3.4.3.2 Disadvantages of interviews

- 1. There tended to be a bit of bias responding by which the respondents were giving false answers in order to protect their organisation. However, the researcher could not prove that it was entirely biased.
- 2. Some respondents could respond getting off topic by which they will start talking about irrelevant things

## 3.4.4 Secondary sources

The researcher also partly used the newspapers and online feedback that was previously presented.

## 3.4.4.1 Advantages of secondary sources

- 1. secondary data was authentic
- 2. Convenience and easy to access
- 3. Accuracy whereby its statistics were spot on and were credible
- 4. Affordability, since you can access them anywhere online for free or in local newspapers

## 3.4.4.2 Disadvantages of secondary sources

1. Data that may be available may not directly relate to the information the researcher is after

#### 3.5 Pilot Testing

In addition to conducting interviews with their immediate top management boss, the researcher distributed questionnaires to colleagues who worked in the ICT field. The pilot testing assisted the researcher in rectifying areas where respondents felt clarification and correction were required, and accordingly, adjustments were made.

In addition, testing was carried out with the help of questionnaires distributed to walk-in customers in the banking hall. These customers were asked to correct and point out some technical terms that they did not understand. The researcher employed alternative language that was understandable by the average layperson.

This stage is a critical one to the examination by which it offered the scientist a chance to see what questions function admirably, need remedy, should be taken out and should be added. This was referred to as administering the instrument for data collection using a select group of people from the general population for the full-scale survey (Cooper et al., 2011), which guarantees that if difficulties arise during the pilot test, they will also manifest themselves during the actual procedure.

#### 3.6 Data Collection

The researcher personally distributed the questionnaires to the participating individuals and conducted the interviews as well. The questionnaires were distributed to random individuals that enter the banking hall and some specific ICT employees at this institution. After all the

respondents had filled the questionnaires, they returned them back to the researcher who compiled and analysed the data. The data was collected over a period of close to 3 weeks when the researcher was attached at this institution. The interviews were held in the top management of the ICT's banking institution and the researcher recorded these conversations for analysis later

## 3.7 Data Analysis

The data collected from the was sorted and checked for completeness, then summarized in tables, charts and graphs. The completed questionnaire was edited and checked for completeness and consistency. The data was coded and checked for any errors and omissions. The data obtained from the study was coded and entered into the computer and subsequently subjected to statistical analysis as well as use of Microsoft Excel sheets for analysis.

#### 3.8 Ethical considerations

The confidentiality of the information provided by research subjects and the respondents' anonymity must be respected, according to one of the ethics principles. In contrast, conducting research necessitates a variety of skills, such as expertise, diligence, honesty, and integrity. This is done to honor and safeguard the rights of human subjects who take part in the current research. According to Copper (2011), all participants in the research should act ethically and conduct themselves ethically. For the benefit of the respondents, the rights to anonymity, confidentiality, and informed consent were observed in order to guarantee ethical research.

Before participants completed the questionnaires, consent was obtained to ensure their safety and ensure that their rights were respected throughout the research. Cooper (2011) defines informed consent as a voluntary agreement to participate in research. The participants were made aware of their rights to freely consent to or decline to participate in this research, as well as to withdraw without penalty at any time. In addition, the respondents were assured that there were no potential risks, costs, or persecution involved and were informed of the study's purpose and data collection procedures.

The respondents' anonymity and confidentiality were upheld throughout the study, which exemplifies why these fundamental principles are essential to any social research conducted

(Copper, 2011). Namelessness is a way not to lay out a connection between the specialist with their reactions (Copper, 2011). In accordance with the informed consent guide included in the questionnaire, neither the employee nor any other participant's name was disclosed in this study to maintain anonymity and confidentiality. According to Copper (2011), confidentiality refers to the treatment of information disclosed in a trusting relationship with the expectation that it will not be disclosed to others without permission in ways that are inconsistent with the original disclosure. In this study, neither the interview guide nor the questionnaire contained any identifying information that would have permitted the respondent to reveal their identity.

# 3.9 Chapter Summary

The population, sample, and instruments used to collect data, as well as the methods used to guarantee the study's ethical standards, reliability, and validity, were all described in this chapter. The researcher sent out a questionnaire to respondents via email in order to collect data from a sample of 52 people. The survey was sent out to ICT employees at the bank as well as other customers of the bank. The majority of the pilot test sample at CABS Bank Zimbabwe was made up of coworkers who were close to the researcher. The next chapter is all about presenting and analyzing the data that was collected.

## CHAPTER FOUR DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.1 Introduction

The findings of the study are presented, analyzed, and then discussed in relation to the literature review in this chapter. The purpose of the study was to develop a model for improving the use of ICTs in banking. Data were gathered through interviews and a questionnaire, with the former administered to managerial employees at the bank under study and the latter to customers and employees who frequent the bank. The study's response rates and a description of the perspectives of the various respondents are presented in the first section of the chapter. After that, the data are also presented and analyzed, and they are arranged in accordance with the research goals.

# **4.2 Response Rate**

The purpose of the study was to collect responses to a questionnaire from 52 people who worked or were customers of CABS Bank Zimbabwe. At CABS bank Zimbabwe, managerial staff were the focus of interviews. Table 4.1 depicts the response rate that was achieved:

Table 4.1: Response rate

Category	Number in sample	Valid responses	Response rate
Questionnaire	49	30	61.2%
Interviews	3	3	100%

Table 4. 1 Response rate

The questionnaire that was sent to a variety of ICT employees and customers at CABS Bank Zimbabwe received a response rate of 61.22 percent. Nearly 40 percent of the responses were disregarded for a number of reasons, including the questionnaire's incompleteness, while the interviews with the Infrastructure, Information Security, and Application manager received a response rate of 100 percent.

# 4.3 Description of Respondents

Table 4.3 below represents the demographic characteristics of the respondents that participated in this study.

Table 4.2: Description of respondents

		Frequency	Percent
Gender	Male	29	56
	Female	23	44
Age group	Below 20	3	6
(Years)	21-30	15	29
	31-40	19	36
	41-50	10	19
	51-60	5	10
Qualifications	High School	4	8
	Certificate/Diploma	13	25
	First degree	30	57
	Higher degree	5	10
<b>Duration of</b>	Less than 2 years	12	23
relationship	2-10 years	30	58
with the bank	More than 10 years	10	19
(Years)			
Role at bank	Customer	45	87
	Employee	7	13

Table 4. 2 Description of respondents

Males made up 56% of the respondents, while females made up 44%. There was no gender bias in the study, which tried to get different perspectives from different people. Six percent of respondents were under the age of 20, while 36% were between the ages of 31 and 40, 19% were between the ages of 41 and 50, and 10% were between the ages of 51 and 60. There were no responses from people over 60 because it was thought that their age might make it difficult for them to participate. The fact that 8% of respondents had completed high school, 25% had earned a certificate or diploma, 57% had a first degree, and 10% had a higher degree indicates that respondents had sufficient education to comprehend the study's topics. Twenty-three percent of respondents have been with the bank for less than two years, while fifty-eight percent have been with the bank for two to ten years, and 19 percent have been with the bank for more than ten years. The respondents appear to have been with their banks for a sufficient amount of time to comprehend the significance of various ICTs to the banking experience. 13% of respondents were bank employees, while 87 percent were bank customers. The purpose of the study was to determine whether employees' and customers' perspectives were different.

## 4.4 Usage of Information Communication Technologies in Banking

# 4.4.1 Awareness of mobile banking services/platforms

Respondents were asked whether they were aware of any ICT services or platforms that they were offered by CABS Bank Zimbabwe. Figure 4.1 below represents their responses:

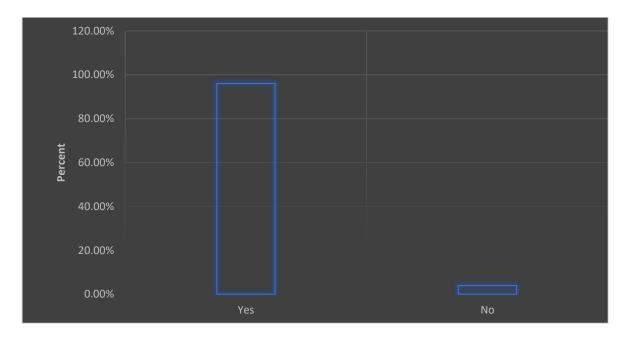


Figure 4. 1 Awareness of Information Technology services/platforms offered by Bank

Nearly all of the people who participated in the survey said that they were aware of the bank's various ICT services or platforms. That means that 50 of the 52 people who took part were aware of these services or platforms, and 3.97% of them were unaware of them, or that only two of the 52 people were aware of them. The findings above showed that the majority of employees and customers were aware of the banks' ICT platforms or services.

# 4.4.2 Online or mobile banking Registrations

The respondents were asked whether they were registered for internet or mobile banking. Their responses are presented in Figure 4.1.

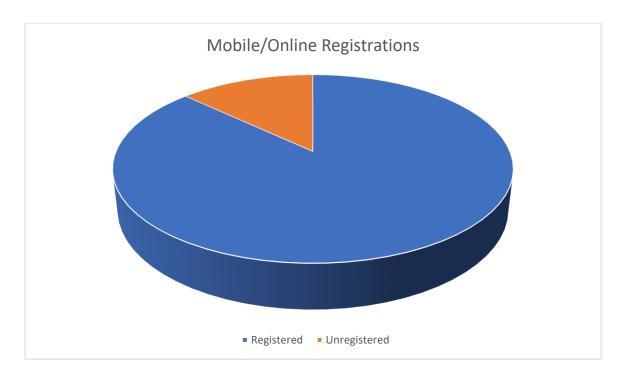


Figure 4. 2 Registration for online/mobile banking

87% of respondents indicated that they were registered for online or mobile banking, while 13% of respondents indicated that they were not. The majority of respondents, however, indicated that they were prepared to register for these services. The discoveries uncovered an exceptionally high take-up and reception pace of on the web and versatile financial administrations among clients and workers at this foundation.

# 4.4.3 Online or mobile banking Registrations

The question asked respondents if they preferred to use ICT platforms to conduct virtual transactions rather than physically access these services. The obtained findings are depicted in Figure 4.3 below:

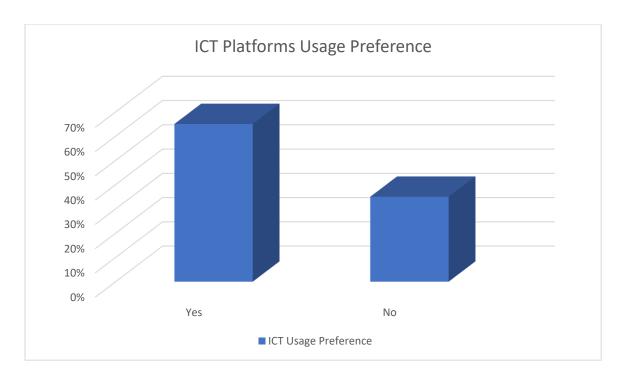


Figure 4. 3 Preference for using ICT platforms

Thirty-five percent of respondents said they preferred to visit the physical location because they wanted to remain connected with the physical banking space, while sixty-five percent said they preferred to conduct transactions virtually by using the various ICT banking platforms. Instead of going to their banks to use these services, the majority of respondents would rather do so online. The results are in line with those of Carmel and Scott (2009), who found that virtual banking was no longer just an option but could one day be the only way to bank.

# 4.5 Hurdles affecting usage of ICT Platforms in Banking

## 4.5.1 Ease of Use

Figure 4.4 depicts respondents' responses as a diagram, including whether or not they found virtual banking platforms easy to use and how long it took for them to adapt.

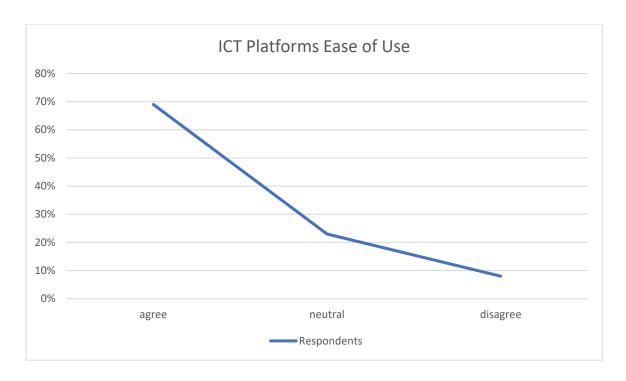


Figure 4. 4 Ease of use

69% of respondents agreed that ICT banking platforms were easy to use, 23% were neutral, stuck in the middle, and the remaining 8% disagreed, expressing their dissatisfaction with these platforms because they were difficult to use. Based on the data that was collected, the majority of respondents agreed that these ICT platforms used in banking were easy to use.

# 4.5.2 Cost of data and SMS charges

In order to fully utilize ICT platforms in banking, respondents were asked if the cost of data and SMS was preventing them from doing so. In order to perform online banking, one must have mobile data or Wi-Fi, and in order to receive e-bank statements, one must pay for SMS. Figure 4.5 depicts their responses:

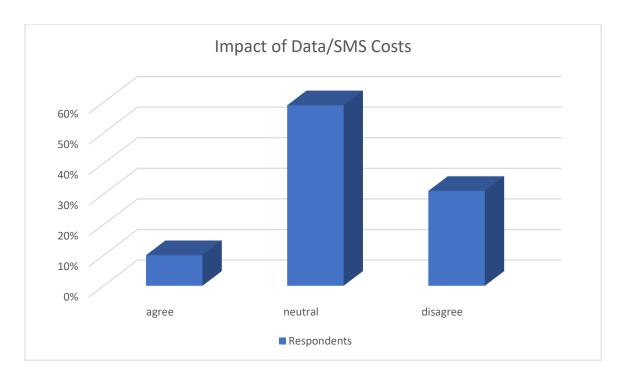


Figure 4. 5 Cost of data and SMS charges

While 59% of respondents were neutral and 31% disagreed, 10% of respondents agreed that the cost of data and SMS was preventing them from transacting on ICT banking platforms. The majority of respondents either agreed or disagreed that they were unable to use ICT banking platforms due to the high cost of data and SMS. The discoveries recommend that the expense of information and SMS was not impeding buyers ICT banking stages.

# 4.5.3 Connectivity Challenges

The question of whether connectivity issues prevented them from transacting on ICT banking platforms was posed to respondents. The following is a representation of their responses:

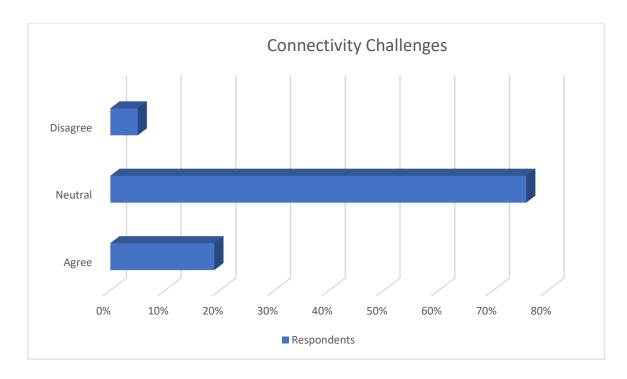


Figure 4. 6 Connectivity challenges

76% of respondents were neutral, 19% agreed that connectivity issues frequently hindered their use of ICT banking platforms, and 5% disagreed. The majority of respondents, according to the findings, were either neutral or in agreement regarding the issue of connectivity issues that hinder their use of ICT banking platforms. The discoveries propose that network difficulties were vital for some degree at blocking use of ICT banking stages.

# 4.5.4 Simplicity of Registering

Respondents were asked whether registration to use internet banking or mobile banking was simple. Their responses are shown in Figure 4.7

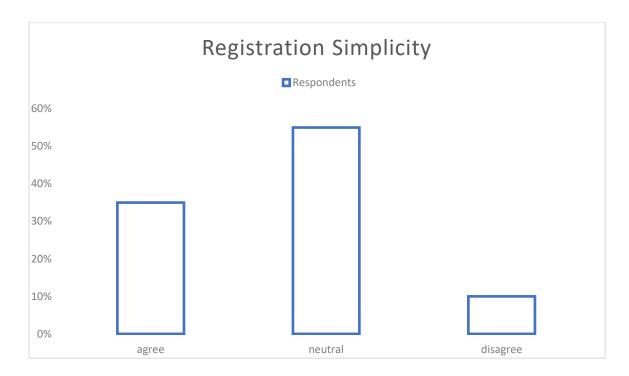


Figure 4. 7 Simplicity of registering

The majority of respondents, or 10%, disagreed that the process of registering to use internet banking or mobile banking was straightforward, while 55% of those polled agreed that it was simple to register. Kapurubandara, 2009) found that registering for mobile banking was difficult for people who were not particularly familiar with ICTs, but the majority of respondents were competent in this situation. According to the findings, while some people found it easy to register for internet banking or mobile banking, others found it difficult.

## **4.5.5 Fraudulent Transactions**

The respondents were asked whether ICT's in banking facilitated fraudulent transactions. They responded accordingly as shown in Figure 4.8

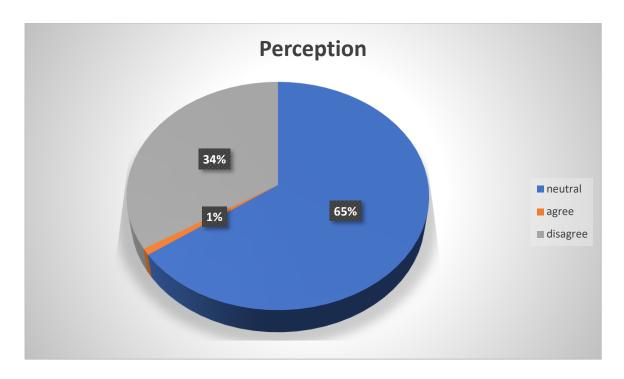


Figure 4. 8 Fraudulent transactions

34% of respondents disagreed that information and communication technology (ICT) in banking facilitated fraudulent transactions, while 65% were neutral and 0.9 percent agreed. The majority of respondents were in agreement that ICTs in banking helped facilitate fraudulent transactions. Amin (2007) discovered that ICTs in banking had sufficient checks and securities to stop fraudulent transactions. According to the findings, ICTs in banking do not aid in fraudulent transactions.

# 4.6 Success Factors in Fostering Usage of Information Technologies in Banking

# 4.6.1 Advertising and Marketing

Respondents were found out if there was successful promoting and showcasing of new innovation in financial arrangements. Figure 4.9 below depicts their responses:

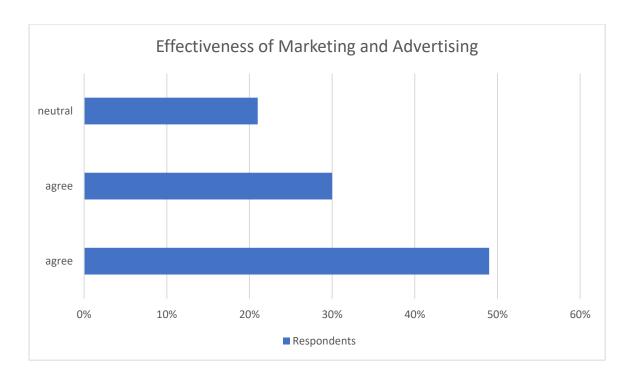


Figure 4. 9 Effective advertising and marketing

While 30% agreed and the remaining 21% were neutral, 49% expressed disagreement that new technology in banking is effectively promoted through marketing and advertising. The majority of respondents disagreed that new banking technology was effectively advertised and promoted. According to Gikandi & Bloor (2010), the introduction of new banking technology necessitates the use of advertising and marketing in order to familiarize customers with it and encourage them to learn how to use it. According to the findings, new technology is largely advertised and promoted in banking.

# **4.6.2** Adequate Investment

The question asked respondents if banks had made sufficient investments to guarantee the security of their virtual transactions. Figure 4.10 shows their responses below.

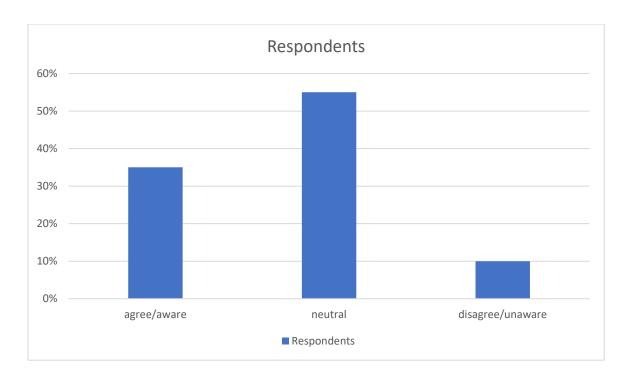


Figure 4. 10 Adequate investment in security of virtual banking transactions

While 55% were neutral and 10% disagreed, 35% of respondents agreed that banks had invested sufficiently to ensure the security of their transactions. The majority of respondents were neutral, meaning they were unsure whether the bank had invested sufficiently to ensure the security of their transactions.

# 4.6.3 Violation of Information Security

The question of whether ICTs in banking support and enhance information security was posed to respondents. Figure 4.11 depicts their responses as follows:

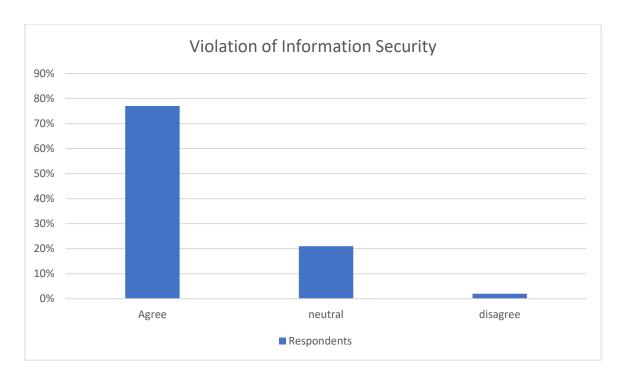


Figure 4. 11 Violation of information security

77% of those polled agreed that information and communication technologies (ICTs) in banking do not violate information security, and 2 percent disagreed, while 21% were neutral. The majority of respondents agreed that these ICTs improve information security in banking. The discoveries agree with (Brody, 2013) who contends that virtual banking is organized in such a way that it improves data security thus it appears to be that ICT's in banking don't disregard data security as shown by the above discoveries.

## 4.6.4 Adequate mechanisms and controls in Protecting the Customer

The respondents were asked if the government and other regulators had enough controls to protect them when they transacted in the banking industry through digital channels and various ICTs. Their responses are depicted in the following Figure 4.12:

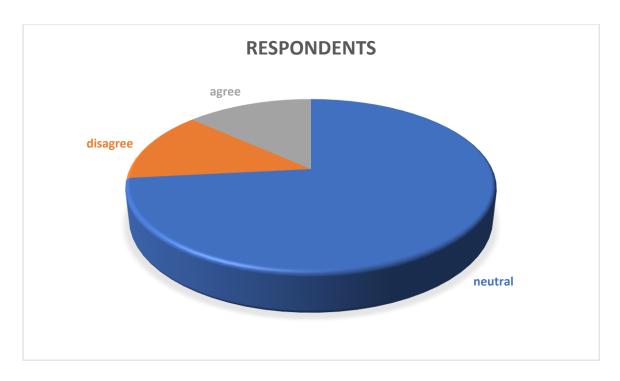


Figure 4. 12 Adequate mechanisms and controls

55% were neutral and 10% disagreed, while 35% of respondents agreed that the government and other regulators had adequate mechanisms and controls to protect customers who transacted through these electronic channels. Since they had not experienced it, the majority of respondents were neutral regarding whether the government and other regulators had adequate mechanisms and controls to protect customers transacting through digital channels. However, they had heard of individuals who had been victims of fraud and crime as a result of the absence of security measures.

# 4.7 Motivation to migrate from Traditional Banking to Electronic Banking

# 4.7.1 Efficient and better-quality service

Respondents were asked whether they agreed that virtual banking solutions resulted in efficiency and better quality of services. Their responses are depicted in Figure 4.13 below

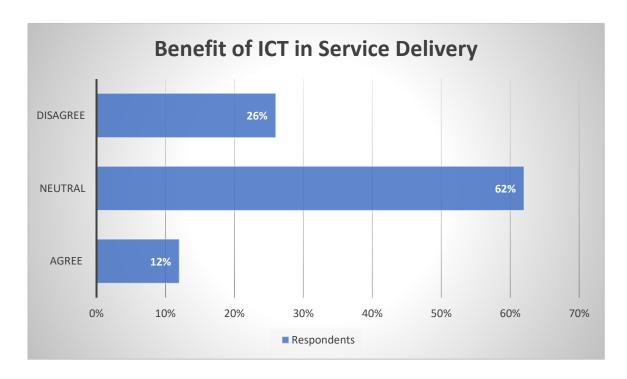


Figure 4. 13 Efficient and better-quality service

12% of those who took the survey agreed that branchless banking solutions improved service quality and efficiency, while 62% of those who took the survey were neutral and waiting to see if they would benefit, while 26% of those who took the survey disagreed. The majority of respondents either agreed or disagreed that virtual banking solutions improved service quality and efficiency. The results indicate that virtual banking solutions have improved service quality and efficiency, and people are eager to reap the full benefits.

## **4.7.2 Lower Cost of Services**

The question, "Do ICTs in banks offer services at lower costs than traditional brick-and-mortar institutions?" was posed to respondents. Figure 4.14 below depicts their responses:

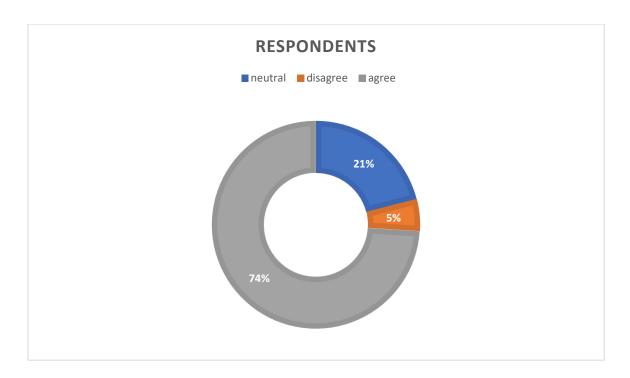


Figure 4. 14 Lower cost of services

5% of the respondents differ that ICT's in banks brought down expenses of administrations when contrasted with customary physical organizations while 21% were unbiased and the larger part 74% concurred of the advantage that these frameworks bring. According to the findings, ICTs in banks have made it easier to provide services at lower prices than traditional brick-and-mortar institutions.

## 4.7.3 Reliable and Convenient

The question asked respondents if they agreed that electronic banking is a safe and convenient option. Their responses are depicted in the following Figure 4.15:

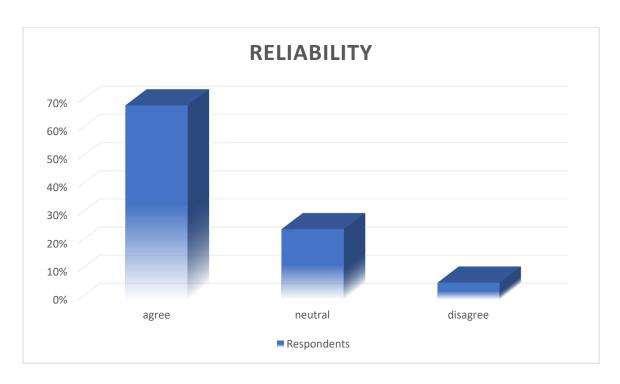


Figure 4. 15 Reliable and Convenient

6% of the respondents differ that ICT's in banking are a dependable and helpful strategy for banking while 25% were unbiased and 69% concurred of the unwavering quality that ICT's bring to banking. The majority of respondents agreed that ICTs in banking are dependable and convenient.

# **4.7.4 Benefits Outweighing Pitfalls**

The respondents were asked whether the drawbacks of these systems outweigh the advantages of using ICTs in banking. Their responses are depicted in the following Figure 4.16:

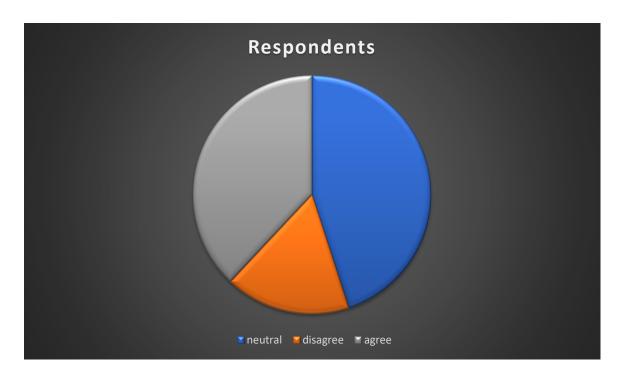


Figure 4. 16 Benefits outweighing pitfalls

17% of respondents disagreed that virtual banking's advantages outweigh its drawbacks, while 38% were in agreement and 45% were neutral. The majority of respondents were neutral and agreed that virtual banking's advantages outweigh its drawbacks. The results indicate that the advantages of using ICTs in banking outweigh the drawbacks.

# 4.7.5 Agility and Accuracy of Digital Channels

Respondents were found out if computerized stages perform exchanges with a lot of deftness and precision. Figure 4.17 below depicts their responses:

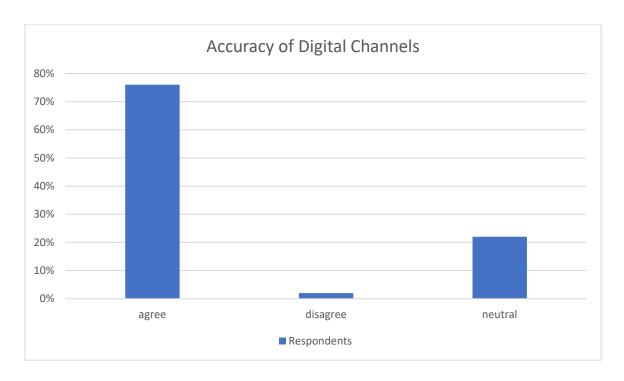


Figure 4. 17 Agility and accuracy of digital channels

Digital platforms perform transactions with a great deal of agility and accuracy, according to 76% of respondents, while 2% disagreed and 22% were neutral. The majority of respondents agreed that digital platforms carry out transactions with a significant amount of flexibility and precision. According to the findings, digital platforms carry out transactions with a great deal of flexibility and precision.

# 4.8 Chapter Summary

The findings of the study were presented, analyzed, and discussed in relation to the literature review in this chapter. The study's use of questionnaires and interview guides, as well as a description of the respondents, were presented in the first section of the chapter. After that, the data presentation and analysis were completed and organized in accordance with the research goals. The study's summary, findings, and recommendations are presented in the following chapter.

## CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The conclusion of the research is the primary focus of this chapter, which will begin with a summary of the study and a discussion of the major themes that served as the study's foundation. It also conducts a retrospective search of the most important factors and evaluates whether the study's objectives were met. Additionally, the chapter aims to offer conclusions and suggestions for enhancing the utilization of ICTs in banking institutions.

#### 5.2 Discussion

In relation to CABS Bank Zimbabwe, the study examined the trends and developments in the global banking industry that have necessitated the shift toward the use of ICTs in banking.

A case study was used in the study, and a stratified random sampling method was used to select 52 participants from the sample. To select a sample that represented each stratum, systematic sampling was used. One questionnaire was given to bank employees, and the other was given to bank customers. Data was inspired through interview directs these were utilized to get greater lucidity and data from the top administration at this establishment.

The significant discoveries for the review are:

- 1. The majority of participants are aware of mobile banking platforms and services, and they are registered on them.
- 2. One third of the participants were biased in favor of these platforms because some were familiar with the physical structure.
- 3. Two thirds of the participants found the various ICTs to be easy to use, while one third were neutral and some found it very difficult to use these systems.
- 4. Connectivity issues, costs for data and SMS, act as a barrier to accessing these services.
- 5. The majority of the participants have a perception of uncertainty regarding the proper measures that will

#### 5.3 Conclusions

#### **5.3.1 Conclusions**

In light of the fact that the rate of ICT adoption in banking is directly correlated with the motivation to migrate, it is essential to ensure that issues related to motivation and migration are addressed prior to other minor ties.

In order to comprehend how an innovation will be viewed by its intended beneficiaries—the customers and other individuals who utilize these banking services—a rigorous cost-benefit analysis must be carried out. It was demonstrated beyond a reasonable doubt by the responses of the participants to the questionnaires and interview guides in this study; that the advantages of implementing and utilizing ICTs in banking outweigh the disadvantages. As per the consequences of the review, an expanded utilization of ICT's in banking would thusly bring about lower functional expenses for the financial establishment and bringing about lower administration charges to clients. The institution benefits from the reduction of operational costs and service fees because these factors directly contribute to an increase in profit margins, customer base, and market share. The banking community is hungry for lower service fees, higher interest rates on savings, lower interest rates on mortgages, and lower interest rates on loan facilities. These things can only be provided by banks that are cautious about the costs of running a business in such a competitive environment.

#### **5.3.2 Success Factors**

The critical success factors that serve as the foundation for the successful implementation of these systems in banking are the difficulties with connectivity and the ease with which ICTs can be used in banking. According to the findings of the study, factors such as ease of use or complexity had an impact on how ICTs were utilized in banking. Because of this, it is necessary to pay attention to these factors in order to guarantee an increase in the utilization of these platforms.

The importance of user training and awareness, user interface friendliness, and registration on the virtual banking platform were emphasized. To reduce service outages and downtimes, it is necessary to address issues with power and network connectivity. It was discovered that the rate of ICT use was directly related to the uptime and availability of services. However, prolonged service outages as a result of a loss of network connectivity and difficulties related

to power posed a barrier to improved ICT use in banking. To encourage the use of ICTs in banking, financial institutions should make an effort to develop user-friendly virtual banking or ICT platforms.

## **5.4 Implications**

Data rates, security, and privacy issues were identified in this study as obstacles to the effective use of ICTs in banking. The expense of information, call and SMS rates is likewise a component that is decelerating the use pace of ICT's in Zimbabwe. Data costs, security, and privacy concerns all have the potential to stymie use of these platforms and services in the country, so they should not be ignored. Based on the perspectives of the respondents, the obstacles in this study had a trick effect. Backwardness in technology adoption was a major concern for the respondents, as other institutions offered Ecocash services and ZIPIT, but the study institution did not appear to offer any of these services.

#### 5.5 Recommendations

#### 5.5.1 CABS Bank Zimbabwe

The spread of data and participating in educative publicizing to draw clients on to virtual and portable stage needs to move along. By pushing large volumes of transactions through virtual platforms, which are less expensive to operate, banks would maximize their profit margins and be able to take advantage of economies of scale with a greater number of customers using these banking platforms.

The banks ought to shape key organizations and coalitions with portable administrators and arrange extraordinary information, phone and SMS rates to advance utilization of these ICT administrations. Numerous respondents to the study cited the high cost of data services in the country as a major barrier to using online and mobile banking applications, which require users to connect to a bank's website or online servers in order to conduct business.

The banks ought to put a great deal in reinforcement power in their server farms and run repetitive organization joins to ensure administration accessibility to clients. Most of the time, power outages or fiber damage cause service interruptions that last a long time and cause downtime.

To combat cybercrime, the bank ought to make investments in physical security, networking security devices, and software security mechanisms. The bank's data centers, which house crucial servers and networking equipment like routers, firewalls, and core switches, should have robust access controls like biometrics. In order to avoid the risk of incurring significant financial losses when transacting through virtual platforms, it is necessary to invest in networking security practices like the use of firewalls, intrusion prevention systems, strong cryptographic software mechanisms, and other authentication mechanisms in addition to physical security measures.

Additionally, the banks should try to reduce complexity by designing their systems with the end user in mind. The idea of abstraction, which entails preventing the user from seeing complex programming constructs and encouraging simplicity through user-friendly graphic user interfaces and systems that are simple to use, should be implemented by designers.

The bank should also be competitive by encouraging ICTs by introducing the well-known bank-to-wallet service ZIPIT and Ecocash, which is convenient for a number of individuals and overall customers.

## 5.5.2 Regulators and Government

In order to safeguard banking institutions, corporations, government departments, and individuals from suffering significant losses as a result of cybercriminal activities, the government ought to participate in the necessary legislative processes and ensure that cyber security laws are enacted. Cybercriminals would be discouraged from targeting the ICT platforms of financial institutions as a result of the laws, which would result in long-term imprisonment for those found guilty of these crimes.

Additionally, the government ought to think about making significant investments in information and communication technologies (ICTs) and providing law enforcement personnel with the necessary training and expertise to effectively deal with cases involving cybercrime, which is frequently committed on virtual/online or mobile banking platforms.

To avoid the effects of the current cash shortages on the economy, the government's relevant arms, such as the Ministry of Information and Communications Technology, Postal and Courier Services, should continue their efforts to reduce data rates and telecommunication services in order to encourage use of virtual banking services. The public authority ought to

keep supporting for framework sharing among the portable organization administrators in the nation to lessen their functional expenses because of buying comparable foundation.

The national bank (Save Bank of Zimbabwe) ought to make energetic observing structures and component to ensure powerful checking of the exercises and exchanges being done on these virtual stages. They ought to put system to counter debasement, forestall issues, for example, double evaluating and speculative cost climbing because of the coming of these financial advances. The RBZ ought to consistently audit downwards the assistance charges of online exchanges to advance utilization of these virtual stages.

#### 5.5.3 Customers

When you use virtual banking, you can save money on loans, mortgages, and other financial transactions from the convenience of your own home, including balance inquiries, withdrawals, fund transfers, and bill payments. Customers would gain a lot by switching from traditional banking methods to virtual platforms. They would save money, get better service, and be more convenient because they could do business from the comfort of their own homes at any time. As a result, they should use these virtual platforms in their daily lives.

## **5.6 Suggestions for Further Research**

In order to mitigate the risks of cyber theft that are frequently associated with ICTs in banking, additional research should be conducted in the area of cyber security and its effects on financial institutions. In order to encourage the use of virtual banking platforms, additional research is required on the establishment of strategic alliances and partnerships between banks and mobile network operators.

#### REFERENCES

- Ajigo, T. A., Baraza, E., & Wu'adongo, J. O. (2021). The Effect of Interest Income on the Financial Performance of Commercial Banks in Kenya: The Moderating Role of Virtual Banking.
- Alalwan, A., Dwivedi, Y., & Williams, M. (2014). Examining factors affecting customer intention and adoption of internet banking in Jordan.
- Arahita, C. L., & Hatammimi, J. (2015). Factors affecting the intention to reuse mobile banking service. *International Journal of Research in Business and Social Science* (2147-4478), 4(4), 15-23.
- Berntsson-Svensson, R., & Aurum, A. (2006, September). Successful software project and products: An empirical investigation. In *Proceedings of the 2006 ACM/IEEE* international symposium on Empirical software engineering (pp. 144-153).
- Bosah, M. Department Of Marketing, Faculty Of Business Administration (Doctoral Dissertation, Department Of Marketing, Faculty Of Business Administration, University Of Nigeria, Enugu Campus).
- Bowen, P. L., Cheung, M. Y. D., & Rohde, F. H. (2007). Enhancing IT governance practices:

  A model and case study of an organization's efforts. *international Journal of*Accounting information Systems, 8(3), 191-221
- Bryman, A. (2014). June 1989 and beyond: Julia Brannen's contribution to mixed methods research. *International Journal of Social Research Methodology*, *17*(2), 121-131.
- BULAMA, U. B. (2016). STUDENTS'SATISFACTION WITH THE AVAILABILLTY OF E-RESEOURCES, INFRASTRUCTURE, STAFF COMMITMENT AND STUDENTS INVOLVEMENT IN COLLEGES OF EDUCATION IN NORTHEASTERN NIGERIA.
- Burke, R. R. (2002). Technology and the customer interface: what consumers want in the physical and virtual store. *Journal of the academy of Marketing Science*, 30(4), 411-432.
- Chindudzi, M. G., Maradze, M. T. C., & Nyoni, M. T. The Impact of Digital Banking on the performance of Commercial Banks In Zimbabwe.

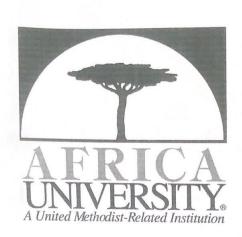
- Davis, F. D., & Venkatesh, V. (1996). A critical assessment of potential measurement biases in the technology acceptance model: three experiments. *International journal of human-computer studies*, 45(1), 19-45.
- Delgado, J., Hernando, I., & Nieto, M. J. (2007). Do European primarily Internet banks show scale and experience efficiencies?. *European financial management*, *13*(4), 643-671.
- DeYoung, R. (2005). The performance of Internet-based business models: Evidence from the banking industry. *The Journal of Business*, 78(3), 893-948.
- Dulock, H. L. (1993). Research design: Descriptive research. *Journal of Pediatric Oncology Nursing*, *10*(4), 154-157.
- Even, A., Pliskin, N., Curley, K., Carmel, E., & Zimmermann, S. (2009). Panel: ICT-enabled global work-Past, present, and future.
- González, V. M., & Mark, G. (2004, April). "Constant, constant, multi-tasking craziness" managing multiple working spheres. In *Proceedings of the SIGCHI conference on Human factors in computing systems* (pp. 113-120).
- Irving, R. H., & Higgins, C. A. (1991). *Office information systems: management issues and methods*. John Wiley & Sons, Inc..
- Joe, J., O'Brien, J., McIntyre, C. E., Fortin, M., & Loudon, M. (2002). The Walkerton Inquiry.
- Kotrlik, J. W. K. J. W., & Higgins, C. C. H. C. C. (2001). Organizational research:

  Determining appropriate sample size in survey research appropriate sample size in survey research. *Information technology, learning, and performance journal*, 19(1), 43.
- Li, X., Yuan, J., Shi, Y., Sun, Z., & Ruan, J. (2020). Emerging trends and innovation modes of internet finance—results from Co-word and Co-citation networks. *Future Internet*, *12*(3), 52.
- O'brien, J., & Marakas, G. (2009). Introduction to information systems. McGraw-Hill, Inc..
- Osei, A. M., Seth, A., & John, A. (2015). Customers" preference In Service Delivery, An Assessment Of Tam And Idt On The Means-End Theory In The Banking Industry: A

- Case Of Ghana Commercial Bank Ltd In Ghana. *European Journal Of Business And Social Sciences*, *3*(11), 79-100.
- Ovia, J. (1997, June). New technologies and performance enhancement. In *A paper presented* at the 13th Annual Bank Directors Seminar Abuja.
- Polatoglu, V. N., & Ekin, S. (2001). An empirical investigation of the Turkish consumers' acceptance of Internet banking services. *International journal of bank marketing*.
- Saunders, M., Lewis, P. H. I. L. I. P., & Thornhill, A. D. R. I. A. N. (2007). Research methods. *Business Students 4th edition Pearson Education Limited, England*, 6(3), 1-268.
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178.
- Zamiri, M., Mahamed, S., & Baqutayan, S. (2012). Exploring factors that influence knowledge sharing behavior via computer. *Journal of Emerging Trends inc Computing and Information Science*, *3*, 799-805.

#### **APPENDICES**

# **Appendix 1 AUREC Approval**



COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE

29 / 03 / 2023

Africa University Research Ethics Committee

# REF: APPROVAL FOR THE SUBMISSION OF PROPOSAL

has submitted his/her proposals with instruments for research. I have gone through the proposals and research instruments and therefore, I am approving that they are in a position to be reviewed by your esteemed committee.

Respectfully submitted

Supervisor's Name

Supervisor's Signature

Trouthy Makarabra (mr) makarabra

H.O.D's Name

H.O.D's Signature

# Appendix 2 Approval from CABS Bank Zimbabwe



#### AFRICA UNIVERSITY

(A United Methodist-Related Institution)

CABS BANK ZIMBABWE

1 January 2023

Dear Sir/Madam

#### RE: Requesting for permission to carry out research at your company

I am a student at Africa University in my fourth year studying an honors degree in Bachelors of Computer Information Systems. I am kindly seeking for your permission to carry out research at your organisation. It is a requirement to carry out a research proposal before obtaining the bachelor's degree.

The case study I am working on is entitled THE IMPACT OF DIGITILIZATION ON BANKS IN ZIMBABWE. I

declare to abide by the rules and guidelines concerning the research and any information obtained will be handled with confidentiality as per the University Research Ethics Committee.

Your favourable response will be greatly appreciated.

Yours faithfully

Kundai Mboto

As per the requirements, if you agree and approve this request, kindly sign below;

Authorization

I hereby approve that KUNDAI MBOTO is allowed to carry out a research at

CABS BANK ZIMBABWE

CABS COMPUTER CENTRE CENTRAL AVENUE

1 1 APR 2023

P. O. BOX 2798 HARARE, ZIMBABWE

# **Appendix 3 Questionnaire**

Dear Respondent

The purpose of this survey is to find out what you think, how you feel, and what worries you have about the effects of digitization at CABS Bank Zimbabwe.

You are not required to include your name anywhere on this questionnaire as a means of protecting the confidentiality of the information you provide because the information you provide will be treated in a confidential manner. The purpose of this study will be to make use of the provided data. Kindly complete the questionnaire, please. It will be greatly appreciated if you respond.

Age of partic	cipant:		
20-30	31-40	<b>1</b> 41-50	□ <sub>51+</sub>
Gender:			
Male	Female		
(Tick (√) ap	propriately)		
1. Please ra	ate your competenc	y with computers	
Advance	ed		
Intermed	diate		
☐ Novice			
2. Do you	currently have a bar	nk account?	
Yes			

$\square$ No
3. How often do you use your bank account?
Everyday
Occasionally
Once in a while
4. What banking services do you use the most?
□ A.T.M
Online Banking
Mobile Banking
5. What influences the choice of bank you use?
Answer:
6. Are you aware of digitilization of banks in Zimbabwe?
Yes
$\square_{ m No}$
Other reason

7.	7. If Yes then how was your experience when using digital banking services?				
8.	What are the benefits of Digital banking?				
9.	What are the drawbacks of Digital Banking?				
10	Do you think banks should Invest more in digital banking? If Yes then Why				
11	Do you think traditional banking should be replaced by digital banking? If yes then Why				
		_			