

AFRICA UNIVERSITY

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**THE EFFICACY OF TECHNOLOGY ADOPTION AND USE DURING
AND AFTER COVID-19 ERA AT ABSA BANK LTD SOUTH AFRICA**

BY

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**A DISSERTATION/THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
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Abstract

The aim of this research is to evaluate the impact of Covid-19 on the adoption and use of e-banking technologies at ABSA Bank, and to investigate whether technophobia was a significant barrier to e-banking adoption during the pandemic. Additionally, this study explores how technology was leveraged during and after Covid-19, and identifies solutions to address the challenges faced by individuals who struggled to adopt digital technologies, as most services transitioned from traditional to digital platforms. This study employed a mixed-methods approach, combining both qualitative and quantitative data to examine the effectiveness of technology adoption and use during and after Covid-19. The researcher sought to determine the number of individuals who adopted technology and the reasons behind their adoption. The study population consisted of employees, management, and customers of ABSA Bank of South Africa. The findings indicate that Covid-19 was a catalyst for the adoption of e-banking technologies among individuals who would have otherwise exhibited technophobic tendencies.

Recommendations from the study include the need to investigate the factors contributing to individuals' resistance to new technologies. Identifying potential obstacles can facilitate a better understanding of how to address these challenges and promote effective technology adoption.

The adoption of technology can have far-reaching and varied consequences, including increased productivity, efficiency, and innovation, as well as potential drawbacks such as job displacement, privacy concerns, and physical or psychological harm

Key Words:

Abisa, Efficacy, Technology, Technophobia, Use

Declaration

I declare that The Efficacy of technology adoption and using during and after Covid-19 at Absa bank is my own work and that the sources I have used or quoted have been indicated and acknowledged by means of complete references.

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May God Bless You!

Dedication

Firstly I dedicate this research to myself because during the time of the research I managed to grow academically, mentally and spiritually. I am no longer the person I was before starting this journey. However I give credit to my soul for helping me to accomplish this study and I believe that it will take me to greater heights of success through future endeavors in research.

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List of acronyms

Covid-19	- Coronavirus disease
A.I	- Artificial Intelligence
I.C.T	- Information and Communication Technology
I.D & V on Web	– Identification and Verification on Website
E-commerce	– Electronic Commerce
A.T.M	– Automated Teller Machine

Definition of key terms

Covid-19 – An infectious disease caused by a new strain of coronavirus that was first identified in Wuhan, China, in December 2019

Information and Communication Technology (I.C.T) - The use of computers and other electronic devices to create, access, store and share information.

Technophobia – The fear of new technology and the negative impact it may have on individuals or society.

Artificial Intelligence – The ability of a computer program or machine to perform tasks that would normally require human intelligence.

Chat-banking – A type of banking service that allows customers to chat with a bank representative via text message, social media, or a dedicated chat app.

Abby – An Absa Bank’s tool that learns from human interaction on the Absa banking Application and is able to guide you based on your habits.

Internal Amazon Web Service Cloud Incubator Technology - A comprehensive cloud skills training program with the goals of building cloud fluency for employees and accelerating their cloud adoption journey.

A.T.M – Automated teller Machine is an electronic device that enables customers to perform banking transactions, such as cash withdrawals, deposits, and balance inquiries, without the need for a teller or bank representative.

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Chapter 1

INTRODUCTION

1.1 Introduction

With regard to ABSA Bank South Africa, the purpose of this research was to investigate the effectiveness of the adoption and utilization of technology both during and after COVID-19. Studies have shown that the pandemic had accelerated the adoption of technology, such as video conferencing tools, e-commerce, and solutions for remote work (Bick, Blandin, and Mertens, 2023). This was an attempt by many governments around the world to minimize public behavior in order to reduce the risk of spreading the Covid-19 virus. In spite of the fact that it had been discovered that the utilization of technology during the pandemic had resulted in a number of advantages, such as enhanced levels of efficiency and production (Sixsmith, Horst, Simeonov, Mihailidis, 2022), there were also a number of obstacles and worries. Among these were concerns regarding the long-term impacts of increased screen usage, as well as concerns around the privacy and security of data (Galhotra, Dewan, 2020). In addition, it had been discovered that the effectiveness of adopting and utilizing technology would differ from person to person based on characteristics such as age, level of education, and prior experience with technology. It is undeniable that technological advancements have been essential in assisting individuals and businesses in adjusting to the problems brought about by the pandemic. During the pandemic, a great number of individuals and companies were required to rapidly adjust to the utilization of new technology, such as video conferencing and services that allow for remote work. The effectiveness of these technologies was a critical component in determining whether or not they were successful in assisting individuals and organizations in performing their functions in an

efficient manner throughout this period. The effectiveness of the technologies that were utilized after the epidemic will be a crucial component in determining whether or not these technologies are able to continue to be helpful and relevant in the world that has emerged after the pandemic.

For instance, if it was discovered that a video conferencing tool is less effective than in-person meetings, then it is possible that businesses may be less likely to continue using it in the future.

When assessing the level of success achieved by the implementation of technology, there are a few critical metrics that may be utilized. One of the most essential metrics is the user adoption rate, which is a measurement of the percentage of users who have adopted a specific technology. Another metric that may be measured is the level of satisfaction experienced by users. This can be accomplished through the use of data gathering techniques such as questionnaires or interviews. During the COVID-19 epidemic, a large number of people were compelled to utilize technology in novel and unconventional ways. This may have had an influence on the overall effectiveness of the technology, such as a video conferencing tool, which may have been less effective for individuals who were not accustomed to working remotely. In addition to this, it is essential to take into consideration the ethical consequences of our usage of technology (Heitnab, 1998). As a result of the COVID-19 pandemic, a variety of ethical issues that are associated with technology have arisen. These issues include worries around data security, privacy, and digital inequality. When determining whether or not the utilization of technology is effective, it is essential to take into account these ethical concerns, since they have the potential to have a substantial influence on the technology's effectiveness over the long run.

1.2 Background of the study

The major question that this study seeks to answer is whether or not the utilization of these technologies during the Covid-19 conference and the subsequent implementation of these technologies at ABSA Bank were successful. In light of the fact that it was able to bring about a paradigm change in the application of e-commerce technologies both during and after the pandemic, was Covid-19 a negative event? According to Ali (2019), the implementation of Covid-19 has hastened and pushed the development of literacy skills that are associated with the utilization of technologies in the procedure of purchasing goods and services.

According to Litton (2015), the implementation of e-banking technology has resulted in a significant shift in the way commercial activities are carried out. The assertion made by Martin (2001) that technology is influenced by a variety of social factors is supported by (Feenberg, 2004, Vaishya et al 2020), and it appears to be accurate in relation to the manner in which Covid-19 pushed for a greater adoption of technology in institutions such as banks, churches, shops, government offices, parliament, hospitals, universities, primary and secondary schools, and so on. There is a substantial body of research that demonstrates the strong positive influence that the use of information and communication technology has had in Europe (Freaddolino, & Lombard, 2017). However, the phenomenon known as technophobia has been identified as a factor that hinders the development of e-commerce in certain South African enterprises (Nimrod, 2018). An extreme and unwarranted fear of engaging in activities on the internet is what is meant by the term "technophobia." Due to a lack of interest in technology, e-banking has been developing at a slow pace prior to the Covid-19 conference (Joo & Lim, 2017). However, older internet users are limited by their fear of technology, despite the fact that using the internet is considered to be beneficial in terms of preserving the independence, social connection, and quality of life of older persons (Nimrod, 2018). As a result, it suggests that if an organization such as ABSA Bank accounts for the majority of its business from senior citizens, then the implementation of e-commerce on a large scale will have a negative impact on the organization. The purpose of this exploratory study is to determine whether or not the literature is accurate in relation to the notion that social factors are upward push factors for adoption of technology the adoption of technologies in business is hampered by social factors such as technophobia, according to some authorities, whereas technology is the driving force behind this.

1.3 Statement of the problem

The research gap posed by this research was that, limited research focus on previous studies might have focused on the bank's response to the pandemic, customer behavior, or market trends, but not specifically on the efficacy of technology use within the bank. Secondly, the gap discovered was on rapidly evolving technology landscape that is the pandemic accelerated the adoption of digital technologies, making it challenging for research to keep pace with the changing landscape and assess the long-term impact. Lack of empirical data showed that there may be a shortage of empirical studies examining the effectiveness of specific technologies, such as artificial intelligence, cloud computing, or cyber security measures, within the banking sector during this period. More so, the need for post-pandemic evaluation which is that as the pandemic subsides, it's essential to assess the sustainability and continued effectiveness of technology solutions implemented during the crisis.

There is no equilibrium between the manner in which social factors influence and shape the upward trajectory and how the technophobia theory shape the down ward trajectory of interactive technology development and adoption. The theory, that, technological systems are positively influenced by social factors contradicts the technophobia theory. Studies by Gilber et al (2003) and Nimrod, (2018) maintain that social factors such as gender, age and fear of health hazards associated with G4 and G5 technologies pulls efficacy of technology adoption in a down ward trajectory but the said factors are social factors in their own right. This statement re

There are few ways in which social factors can influence and shape the adoption of technology at Absa bank. Firstly, Social influence refers to the idea that people tend to adopt new technologies because of the influence of others. This can happen through social media, word of mouth, advertising or peer pressure. There is also social learning by which the idea people learn about

new technologies by observing others using them and it can happen through things like tutorials, demonstrations or case studies. Social trust can also influence technology adoption with the idea that people are more likely to adopt new technology if they trust the people or organization. However, Absa bank can use social media platforms like Twitter, Facebook and Instagram to educate and promote new technologies to clients. They can also work with influencers to create and promote positive content about new technologies. Additionally, at Absa bank, they can hold events and workshops to demonstrate new technologies and encourage adoption. For social learning, banks can create educational content like how-to videos, tutorials and FAQs to help customers learn about new technologies.

1.4 Research Objectives

- 1.4.1** To evaluate the impact of technologies on e-banking during and after Covid-19 at ABSA.
- 1.4.2** To measure if technophobia had significant hindrance in the adoption of e-commerce during Covid-19 era.
- 1.4.3** To determine the rate at which e-banking was used at ABSA in the sample space during and after Covid-19.
- 1.4.4** To assess if the perception of technophobic people with regard to adoption of technology was the same during and after Covid-19.

1.5 Research Questions

The research focus of this study is directed by the following research questions:

1.5.1 What impact did technology adoption had on productivity and efficiency during the pandemic?

1.5.2 How did technophobia informed by different demographics, such as age, gender, or location, impacted on the efficacy of technology use?

1.5.3 Did the efficacy of technology adoption change at a faster rate during the Covid-19 era?

1.5.4 Did the Covid-19 alter the perception of people in the different demographics who were normally known to be technophobic?

1.6 Assumption/Hypothesis

H1: There was a significant increase in the adoption and use of technologies at ABSA Bank irrespective of constrains posed by Covid-19.

H2: Technophobia continued to have a significant effect on the use of e-banking at ABSA Bank during and after this Covid-19 era.

H3: There was a significant increase in technology adoption despite the high need of training among the staff at ABSA Bank.

1.7 Significance of the study

i) To business organizations.

1.7.1 This study motivates management in various organizations to embrace adoption of e-commerce technologies for Human Resources training as was the trend during the Covid-19 pandemic.

1.7.2 Increased use of mobile and online banking: Customers at Absa Bank increasingly turned to mobile and online banking as physical branches were closed or had limited hours. **1.7.3**

Increased use of digital ID verification: Absa Bank adopted Identification on Web technology to verify customer identities without requiring in-person interaction.

1.7.4 There was an increase in the use of contactless payments such as mobile payments and cardless ATMs became more popular as a way to reduce the risk of COVID-19 transmission.

i) To the researcher

The purpose of this research was to improve the student's research intellectual capacities by conducting an effect assessment of the instructional technologies and e-commerce technologies that were deployed by enterprises during the Covid-19 period. One of the most significant advantages that researchers who follow this study will experience is the utilization of the Statistics Package for Social Sciences (SPSS).

ii) To the body of knowledge

The study will be guided by the direction taken by the research finding will take and possibly come up with a new theory to explain the gap between the theory of technological development and adoption and the theory of technophobia.

1.8 Delimitation of the study

1.8.1 The study will not get into ABSA's database, but company insights will be used from selected participants.

1.9 Limitation of the study

1.9.1 The study will not be able to cater for every client at ABSA Bank.

- 1.9.2** The research will be carried out on specific employees who were affected by the pandemic.
- 1.9.3** Availability of skills and training for upgrade user skills.
- 1.9.4** Social factors in the business environments like Covid-19 pandemic and technophobia.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

A comprehensive and critical review of existing literature is carried out to establish what is already known about the efficacy and adoption of technologies in businesses. This chapter explores the adoption and usage of technologies at ABSA Bank and, evidence of push and pull effects of some social factors are discussed. This study will be conducted at ABSA Bank to ascertain if the barriers in information and communication technology (ICT) adoption also exist in this private entity. Academic writers on e-commerce among others include (Kurnia, & Chang, 2015; Tarhini, Hone & Liu, 2016, Ziemba, 2016). A stream of research to date has focused on how social factors in the business environment influence technology adoption (Buabeng-Andoh, 2012). The importance of this chapter was to explain the several services which were brought by technology so that clients and employees at Absa bank could adopt during and after Covid-19 pandemic. In this chapter, matters to do with information and communication technology will be discussed whereby issues to do with Internet access and use of SMS instant alert will be explained. Determinants of technology adoption, Barriers of adopting technology in business, Relevance of theories to the study, Abby, Chat banking and Identification and Verification on Web will be explained in this chapter on how they influenced technology to be adopted at Absa bank during and after Covid-19. These services were essential to people during and after the pandemic. However, this chapter explains how these services were being used and how they work to make people's lives easy in terms of banking remotely.

2.2 Theoretical Framework

A theoretical framework is a structure that explains the main concepts, variables and relationships in a research study. A theoretical framework is a tool used to organize and interpret data to guide the research processes. It provides a foundation for the study guides in the research processes. It helps to ensure that the research is focused, consistent and logical.

2.2.1 Information and communication technology (ICT)

The use of information and communications technology (ICT), which includes computers, network hardware and software, and a variety of services and applications linked with computers, is becoming increasingly prevalent in the corporate world (Ziemba, 2016). According to Adesola (2011), information and communication technology refers to the utilization of computer systems for the purpose of transmitting, receiving, communicating, and processing data from one location to another through the use of electronic means. This is developed as a result of the growth of technology through the efforts of humans. According to Olla and Choudrie (2013), information and communication technology has the potential to bring about changes in business processes and models, as well as in production and commerce, and in the formation of new patterns in human resources training. In recent years, the application of information and communications technology in online commerce has become an essential component for the continued existence and success of businesses. Companies have discovered a source of competitive advantage and strength through the use of information and Communication technology, (Jamel, Kareem, & Mahmood, 2017). According to Avenyo, Bell, and Nyamwena (2022), numerous companies have made the decision to implement information and communication technology (ICT) as an amazing strategy in order to prevent a complete shutdown and the collapse of their businesses. Ademola John Alawode and Emmanuel Uche

Kaka (2002), defined Information and Communication Technology as the language of the new age and its grammar which is Science that had become an indispensable and veritable tool for enhancing effectiveness and efficiency in all other aspects of life. However, they went on to note that, the banking industry had learnt the grammar and understood the language of the new age and tremendously transformed the industry from what used to be to the economic mover of the worldwide through the magic hands of Computer Science innovations. Other examples of ICT impact on the Banking Industry include the increased process efficiency, which can reduce costs in banks, and the branch renewal, where focus is gradually shifting away from traditional brick and mortar banks towards the dual-bank concept presented earlier. The tendencies above have also produced changes in the structure of bank income. As a result of increased competition that has lowered margins in lending operations (the banks' traditional business), banks have diversified their sources of income and rely increasingly on income from fees services rather than interest rate spreads. Fees charged for services include typical banking activities like payment transactions, safe custody and account administration. Data storage and retrieval is another wonderful innovation brought into the Banking Industry, where specialized software is engaged to create database to be manipulated by Database Management Software (DBMS). A single database created could be used for several purposes within the system in order to eliminate data redundancy.

Woherem (2000) claimed that only banks that overhaul the whole of their payment and delivery systems and apply ICT to their operations are likely to survive and prosper in the new millennium. He advices banks to re-examine their service and delivery systems in order to properly position them within the framework of the dictates of the dynamism of information and

communication technology. The banking industry has witnessed tremendous changes linked with the developments in ICT over the years.

Ademola John Alawode and Emmanuel Uche Kaka (2002) went on to detail ICT infrastructures which were adopted by banks and at Absa bank; they inherited these ICT infrastructures so that life would be easy in terms of transactions. Some of the ICT infrastructures include:

2.2. A) Internet Access:

An important indicator of the general uptake of Information and Communication Technology (ICT) in the Banking Industry relates to the use and availability of Internet. Internet access is a precondition for e-Business, as this is the main channel for e-banking. The general availability of Internet allows for the analysis of overall ICT-readiness in the Banking Industry.

2.2. B) Use of SMS alert:

Instant notification of transactions made was another innovation brought by ICT through the use of smart phone in conjunction with the internet facility in the Banking Industry that is for instance, if one does a transaction using his/her bank card, an SMS notification would come to his or her phone about that transaction or that SMS can bring a One Time Pin (OTP) which is used to verify or allow an online transaction to get through.

2.2.2 How and why the research linked technology to Covid-19

During the COVID-19 pandemic, Absa Bank, like many other organizations, had to adapt quickly to the new reality of remote work, social distancing, and lockdowns. To maintain business continuity and ensure uninterrupted services to customers, the bank leveraged technology in various ways:

Firstly, Digital Channels at Absa Bank accelerated its digital transformation by enhancing its online banking platforms, mobile apps, and digital payment systems. This allowed customers to access banking services remotely, reducing the need for physical branch visits to curb the spread of the virus. Secondly, Remote Work - the bank implemented remote work arrangements for employees, enabling them to work from home using virtual private networks (VPNs), collaboration tools, and cloud-based services. Thirdly, Virtual Customer Engagement at Absa Bank were utilized in digital channels like chatboards, social media, and video conferencing to engage with customers, provide support, and offer financial advice. More to that, Contactless Payments were promoted, such as mobile payments and card transactions, to reduce the need for cash handling and minimize physical contact. Data Analytics - Absa Bank utilized data analytics and machine learning algorithms to monitor customer behavior, detect fraud, and optimize its operations.

The efficacy of technology use at Absa Bank during and after COVID-19 can be credited to: Business Continuity that is technology enabled the bank to maintain operations and provided uninterrupted services to customers, even during lockdowns and social distancing measures. There was also Increased Efficiency meaning digital channels and automation reduced the need for manual processing, improving transaction speeds and reducing errors. Thirdly, Enhanced Customer Experience - Virtual customer engagement and digital platforms provided customers with convenient, 24/7 access to banking services, improving overall satisfaction. Technology helped reduce operational costs, such as branch maintenance and physical infrastructure expenses through Cost Savings. However, by embracing technology, Absa Bank was able to

navigate the challenges posed by the COVID-19 pandemic, ensuring continued service delivery and even improving its operations and customer experience.

2.2.3 Determinants of technology adoption

There are a number of elements that are considered to be major determinants of technology adoption. These include business productivity (Barnes et al, 2019), the size of the business and its pace of growth, the quality of output that is anticipated in the business environment, and the degree to which a company maintains its market share (Bell et al, 2019). According to Avenyo, Bell, and Nyamwena (2022), digitalization is recognized to result in good environmental sustainability. This is accomplished through greater resource efficiency that is a direct outcome of the integration of technologies throughout the entire product lifecycle.

Due to apparent reasons such as larger organizations enjoying the benefits of economies of scale (Lee & Xia, 2006); the literature demonstrates that the size of the firm is a significant factor in determining the adoption of information and communication technology (Bordonaba-Juste, Lucia-Palacios, and Polo-Redondo, 2012). According to the findings of a number of studies (Pan and Jang, 2008), there is a causal connection between the size of an organization and its level of preparedness to implement new technology. According to Oliviera and Martins (2023), the availability or absence of skilled labor in a company at the time that Covid-19 was implemented did not prevent the implementation of information and communication technology innovations during this period of movement restriction. Less attention has been paid to the factors that obstruct consumers to use internet banking, Yujong Hwang et al, (2020). Although Internet banking provides convenience and ease, a large number of customers are still not using the technological facilities provided to them through three types of groups in the adoption advancement: rejecters – those people who avoid taking any initiative to adopt any kind of innovation, and new offerings are not beneficial to them; postponers – the ones who want to adopt but delay the adoption due to situational elements and Opponents – also want to adopt the advanced methods, but have not decided when to adopt. Imtiaz Arif, Wajeeha Aslam and Yujong Hwang (2020).

2.2.4 Barriers of adopting technologies in business

According to Khasawneh (2018) and Gilbert, Lee-Kelley and Barton (2003), a significant number of authors have pointed to technophobia on the part of managers, employees, or customers as a primary reason why the adoption of technology in certain businesses is situated at a very low level. According to Gabbe (2016), the term "technophobia" describes an irrational and disproportionate fear of engaging in activities on the internet. According to Joo and Lim (2017),

before to the Covid-19 conference, e-commerce had been developing at a slow pace due to a fear of technology. According to Nimrod (2018), older internet users are limited by their fear of technology, despite the fact that internet use is considered to be beneficial in terms of preserving independence, social connectivity, and quality of life for older persons. As a result, it suggests that if an organization such as ABSA Bank accounts for the majority of its business from senior citizens, then the implementation of e-banking on a large scale will have a negative impact on the organization. This exploratory study aims to evaluate the authenticity of what the literature says about social elements as upward push factors for adoption of technology. While some authorities believe that social factors such as technophobia hinder the adoption of technologies in business, this study wants to test the authenticity of what the literature indicates.

According to Borhani (2016), the lack of talented and skilled professionals in the sector is the most significant hurdle and difficulty that stand in the way of the application of information technology. (Gono, Hariandranath and Ozan, 2015) conducted a study on the adoption of information and communication technology (ICT) among small and medium-sized enterprises (SMEs) in South Africa. They discovered that the majority of respondents lacked knowledge of ICT and required the assistance of external experts in order to apply it. One of the most significant obstacles to the adoption of technology is a lack of knowledge or skills, which is considered by many to be an independent variable (Pillay, 2016).

The research that is now available has highlighted a number of other obstacles that prevent the widespread adoption of e-commerce. These include a lack of time to implement e-business, the high level of complexity connected with e-business implementation, and the high implementation cost associated with e-business implementation technologies.

It is concerned with an initiative that was intended to help SMEs (small- and medium-sized enterprises). Drawing on the theory of technological frames, Consideration is given to why the technology provider failed to gain the commitment of adopters even though all of the favorable conditions were present. There are four key issues that explain the adoption difficulties: lack of familiarity (with B2B e-commerce), risk aversion, lack of trust (among trading partners), and incongruent cultural practice. Thus according to, Rueylin Hsiao (2001)

2.2.5 Relevance of the Theoretical Frame to the study

The relevance of technophobia theory to this research is that, some people were not able to adjust to technology adoption and use during Covid-19 because of different technologies which were brought up. Technology is believed to be shaped by society (Martin, 2006) and it is through Covid-19 pandemic era whereby ABSA bank was shaped in a way that it could fit in to how business was being conducted during the pandemic. A transition Curve model (Kubler Rose, 2018) has relevance to the study in terms of how clients and employees adopted to new technologies during the pandemic at ABSA Bank. The Kubler-Ross change curve is also known as the five stages of grief (denial, anger, bargaining, depression, and acceptance). The relationship between technology adoption and a transition curve model by Kubler-Rose can be seen in how different stages of adopting new innovations can be welcomed into the system through the following stages:

2.2.4 A) Frustration

Frustration typically sets in as soon as panic subsides. Here, employees and client's brains are still trying to adjust to the new normal and working hard to reduce the stress response. Clients and employees were struggling to learn in this new paradigm of technology adoption during

Covid-19 as their traditional working and banking habits respectively and skills were less effective. Research suggests that frustration is productive for employees and clients learning and retention, but employees and clients typically will not see that on their own as they would still be in denial.

2.2.4 B) Depression

Frustration is followed by depression or the “pit of despair.” At this point, the work is still hard, and people learning technology are not yet seeing the light at the end of the tunnel and are no longer stimulated by the environmental change (lower adrenaline release). The material may also be becoming more challenging with.

2.2.4 C) Experimentation

After depression, things typically start to get better. Clients and employees realized that they might actually be learning and they start to experiment and push out of their comfort zones. Eustress now predominates, as does learning.

2.2.4 D) Decision

If experimenting goes well, clients and employees decided to commit and performance improves, accompanied by a more positive mental making it beyond the pit of despair into experimentation or even integration. However, a number of additional considerations may also be helpful.

According to (The Digital Banker, 2022) on how Absa Bank plants to dominate digital banking in South Africa and beyond; various technological services were introduced meaning this bank wants to keep its customers in the palm of its hands. This notion can be supported by the

relationship between Smart phones and human beings which is that; these days people are mostly glued on their phones to an extent that when it comes to bank, as long as they have the Absa banking application, they can do their business on the phone than to go to the bank physically since most services that are provided at the bank hall can be found on the banking app. However, I believe that, it was through Covid-19 which brought out this situation because during this pandemic, people spent most of their time online since all physical activities were banned and there was a time whereby in terms of entertainment on TV or radio was limited since production of entertainment was low and this forced people also to be glued on their phones either socially or economically. People used to be online for social reasons but there was a time they realized that money can be made online and in doing so, one would also need some access to his/her bank; however thus can be seen that, technology was being embraced during the pandemic era.

At Absa bank, some online services were developed before the pandemic, that is before 2019 meaning these services were there before. However, some of these digital activities started to role in life during the pandemic and most of these digital services were adopted and made punch at Absa because of the rate people started to use them. It was because of Covid-19 that, people started to even know about these digital services since there was a time of that lockdown and people wanted life to traffic on as normal. Some digital services were also introduced for the first time during and after Covid-19 which shows that, Covid-19 impacted muscularly on the efficacy of technology adoption during and in post Coronavirus era (Sharma, 2023)

2.2.6 Identification & Verification (I.D&V) on Web

The Absa Bank was the first institution to offer this service, and its primary objective is to facilitate the opening of new bank accounts on the Absa website by customers. By snapping a selfie, users are able to register a bank account, which will subsequently be validated by the

South African Department of Home Affairs through a comparison of the selfie with their identity document (The Digital Banker, 2022). The significance of this platform lies in the fact that during the Covid-19 incident, when there was a Level 5 Lockdown, individuals were not permitted to go anywhere, and they were also prohibited from congregating in groups so that they could not communicate with one another. On the other hand, this system was crucial since it allowed individuals to open a bank account from the comfort of their own homes and begin utilizing it rather than going out and spreading the virus and catching it. More than that, this service became significant even after the pandemic because it is a tedious experience to wait in line for a long period of time in order to open a new bank account. Despite this, people are adopting this service even after the COVID-19 pandemic because it saves them time and money in comparison to going to the bank and opening a bank account. The only people who are not favored by this system are those who are technophobic; these are individuals who are unable to interact with technology online. During the COVID-19 period, life was difficult for these individuals because they were unable to open bank accounts online. Additionally, these individuals used to spend the entire day waiting in queue to be served inside the bank while they were waiting for their turn.

When it came to the bank hall, there was a restriction on the number of clients and staff who wished to enter. As a consequence, the provision of services was so slow that some individuals were unable to receive assistance at all.

When it comes to delivering the interaction between technology and I.D. &V on the web, it is contingent upon the manner in which Absa consumers utilize this service, whether it is in a positive or negative manner. In terms of technical theories, the use-abuse model can either be used (for beneficial reasons) or abused (for detrimental goals), as stated by Brian Martin (2020).

For the purpose of creating their bank accounts online rather than coming to the banking hall, Absa clients were and are making effective use of the identification and verification services that are available on the web.

2.2.7 Chat Banking

Account to Jeffrey Arief Mulyono and Sfenrianto Sferianto (2022), the new normal lifestyle during the Covid-19 pandemic encouraged every individual to change their behavior towards digital transformation. However, a banking chatboard was one of the financial technologies promoted by the banking industry to meet the needs of its customers during the pandemic.

However, there is still a gap on different chatboard operate and how they satisfy different clients in terms of its services. According to The Digital Banker (2022), Chat banking gave clients the ability to use social media platforms such as Facebook, Twitter, and Whatsapp to purchase mobile airtime and data, as well as to check their account balances and purchase pre-paid energy. Offering banking services through chat banking was one method of doing so. Included among its advantages were: the enhancement of customer outreach, the provision of self-service capabilities, the promotion of personalization, and the enhancement of data protection and security. However, according to The Digital Banker (2022), the Chat Banking service was first made available by Absa Bank in the year 2018. A year after the introduction of this service at Absa Bank, the Corona Virus also arrived in 2019. According to the services that it offers, it was a high time that this Chat Banking system was needed because one would use it to have Absa bank services during Lockdown. The introduction of this service was a blessing for the bank because it came a year after the introduction of the service. It should come as no surprise that the majority of Absa's clients made use of the Chat banking service in order to purchase pre-paid resources such as energy, airtime, and data, and even to communicate with the

bank while they were at home. The Chat Banking service was also being considered to be one of the best and most utilized services in our post-Covid-19 era. This was due to the fact that as a society, people required hassle-free and convenient methods of obtaining fundamental services. Chat Banking was being regarded as a tool that could save people from having to wait in long queues, and it allowed users to check their balance or make purchases using their mobile device at any time and from any location within the world. All of this is an example of the height of technology adoption because nobody wanted to be in the dark at home without electricity, and people required data in order to use social media or conduct business online, as well as airtime in order to make phone calls. On the other hand, one would acquire these services by means of Chat Banking, and the reason for this was because incorporating technology into one's life enabled one to live a smart life free of hassles. Brian Martin's work from 2001.

2.2.8 Abby

Abby is a tool developed by Absa Bank that was able to learn from human interaction on the Absa banking application and provide you with specific recommendations based on your routines. Artificial intelligence (A.I.) is the creation of computer systems that are capable of doing activities that would ordinarily require human intelligence. Abby is powered by A.I., which is also known as artificial intelligence. In spite of this, this can encompass a wide range of activities, such as recognizing speech, making judgments based on complex data, and even creating art; hence, the ultimate objective is to develop a machine that is capable of thinking and learning in the same way that people do. Absa Abby is able to demonstrate to a customer how to pay for goods by utilizing QR code payments capabilities, link or unlink services on your bank application, send cash instantaneously, and other services that are provided by Absa Abby. This might be interpreted as Absa Bank using this as a means of educating its customers on how to

make use of technology. In order for consumers to be able to accept and made use of the digital services that Absa bank offers, Absa Abby is technology itself. Its goal is to teach customers how to utilize technology. Abby provides them with ways in which they can embrace technology digitally rather than by word of mouth, so that they can have a visual knowledge of learning on how it is done. This service can be viewed as a vital tool for those who are fearful of technology since it allows them to experience how they can adopt technology.

2.2.7 A) Artificial Intelligence

According to Mahfuzur Rahman, Teo Hui Ming, Tarannum Azim Baigh and Monirazzaman Sarker (2021), AI is an essential tool for fraud detection and risk prevention. The absence of regulatory requirements, data privacy and security, and lack of relevant skills and IT infrastructure are significant challenges of AI adoption. The quantitative results indicated that attitude towards AI, perceived usefulness, perceived risk, perceived trust, and subjective norms significantly influence intention to adopt AI in banking services while perceived ease of use and awareness do not. AI significantly mediates the relationship between perceived usefulness and intention to adopt AI in banking services. Financial technology (FinTech) is regarded as a critical determinant of strategic planning in the banking industry. While AI provides various disruptive opportunities in the FinTech space in terms of data collection, analysis, safeguarding and streamlining processes, it also poses a sea of threats to incumbent banks. This study provides vital insights for the policymakers of the banking industry to address the challenges of adopting AI in banking. It also provides the important predictors of the bank customers' intention to adopt AI in banking services. Policymakers can devise their strategies to enhance AI adoption considering the facts.

2.2.9 Internal Amazon Web Service (AWS) Cloud Incubator

According to The Digital Banker (2022), the Amazon Web Services (AWS) project provides employees with the ability to acquire cloud platform capabilities, which in turn helps equip them with the skills necessary to provide superior service to consumers throughout the digital landscape. Because of this endeavor, Absa Bank became the first bank on the African continent to become a member of the Amazon Web Service Skills Guild. As a result of this achievement, Absa Bank was awarded the Outstanding Interactive Chat service award in the year 2021.

The necessity for fresh tactics revolving around innovation and digital banking was evident in the banking industry prior to the pandemic, as stated by Niraw Patel, who is the managing director at the Digital Banker (2021). They put in a lot of effort to ensure that they were at the forefront of those changes and that they offered the greatest goods and services in the South African market and beyond. Nevertheless, this perspective demonstrated that the Bank's services were able to coexist with the Covid-19 pandemic. This was due to the fact that Absa bank was able to complete the necessary requirements during the pandemic in terms of digitalizing the services in order to prevent the spread of the Covid-19 virus.

The adoption of technology at Absa during the pandemic was made easier by the fact that several technical initiatives had previously been implemented prior to the pandemic; however, these initiatives were not being utilized or embraced to the same extent that they began to be during and after the pandemic. The emergence of the Coronavirus in the year 2020, on the other hand, had a positive impact on the utilization of these technical projects. The Digital Banker provides support for this statement by stating, "Thriving amidst the Pandemic." This statement indicated

that Absa bank developed digital strategies during the pandemic. However, the bank placed a significant emphasis on its customers and how it could serve them digitally. When the pandemic struck, it inspired the team to speed up its digital engagement on a global scale. A record growth of 26% in the company's activity on its digital platforms in the year 2020 is evidence that this is the case. The evidence presented here demonstrated that the pandemic had an impact on the adoption of technology at Absa during the COVID-19 pandemic, and that the organization welcomed and utilized the technology. In the article "What digital banking looks like one year post-Covid-19," written by Clark (2023), it was said that, customers of Absa Bank were required to engage with the bank more frequently through the use of the internet. This was due to the fact that President Cyril Ramaphosa had prohibited physical mobility or contact on March 15, 2020, as a result of the national state of disaster. On the other hand, an embrace of technology is stated to have taken place at Absa from the year 2016, specifically through the use of digital banking. The head of digital at Absa Everyday Banking, Subash Sharma, made the observation that the level of technology adoption had been increasing since 2016, with a year-on-year growth of twenty percent in digital adoption. Furthermore, when the Covid-19 pandemic struck in the year 2020, the level of technology adoption and use soared by more than two hundred percent in the use of e-commerce. Nevertheless, the relationship between the adoption and use of technology and the pandemic can be seen as making a positive move in terms of working hand in hand. This is due to the fact that without digital banking or e-commerce, one would not be able to process electronic transactions due to the restrictions of physical contact that were imposed during level 5 lockdown.

2.2.10 Theory of Reasoned Action (TRA)

According to Patricia Maria Silva and Guilherme Ataide Dias, the Theory of Reasoned Action can be imagined that, a user who has the consciousness intention to use a determined information system, derivative from the use attitude, which maybe positive or negative, followed by subjective norms, which are referred to the perception that the user has of the other people's opinion. According to Oliveira Junior (2006), people choose to engage in a behavior, even if they do not agree with it or the consequences of that action, if they believe that a determined person believes that this behavior ought to be his behavior and if they are motivated to please that person. The theory attempts to identify the relationships that exist between beliefs, attitudes, norms, intentions, and conduct, which can be defined as a behavior that is determined by the rejection or use of technology. At Absa Bank, on the other hand, this theory can be related in the following manner: the utilization of I.D. & V on the Web, Chat banking, Abby, and Internal Amazon Web Service was the result of an intention in making the behavior of technology use, and this intention was influenced jointly by the individual attitudes, with these attitude being determined by beliefs and subjective norms in relation to the behavior that was intended (Quintella; Pellicione, 2006). On the other hand, the Theory of Reasoned Action can be used to refer to the use and adoption of technology at Absa bank during the Covid-19 and Post-Covid-19 eras. This was because not all Absa customers gradually migrated to digital banking services; some Absa customers did not adopt digital banking, which is technology use, due to their beliefs. For example, some Absa customers did not want to adopt technology because of popular beliefs that technology is not Godly (it drives one away from God and makes one aware of the evils of the world). During the lockdown era, however, certain customers were required to adapt and make use of technology because that technology had the potential to save them from their day-to-day existence digitally.

A key objective of information technology is to assess the value of technology for users to understand the factors that determined this value in order to deploy IT resources better, Shumaila Y. Yousafzai, Gordon R. Foxall and John G. Pallister (2010).

2.2.11 Conversational

Technophobia is a syndrome when one cannot adapt to new technologies introduced at a work place, system or in the world. In 21st Century world, life revolves technology and if one is afraid to adopt and adapt to technology use, one might find himself/herself on the anger side of failing to access what he/she wants because of the need to use technology to attain goods and services. For one to adopt and adapt to technological systems, it needed time to learn and know how to use these systems so that one could accept new technologies of the world. People had used to conduct business physically with bank tellers and bank Managers. (Clark J, 2023) stated that, some clients used to have problems with Absa banking App – they could not maneuver in solving their bank account problems using the bank app, that is they needed to go to the bank hall for assistance so that they could fix the problem in a secure and safe way but they did not know that as an Absa client, these problems could be solved remotely that is online or through a phone call safely. This means that some Absa clients could not embrace technology with a fear that the use of more technology may lead to cybercrime. However this insecurity state can be described under technophobia because one does not know or is afraid of using technology because he/she is afraid of being scammed but however that's why Absa Abby was introduced so that it can teach clients on how to make transactions in a safe way. Sharma discussed that, Artificial Intelligence and natural language processing is quite significant, but one of the key implementation at Absa this year (2023) is to make sure that there is improvement on quality of Artificial Intelligence services as ensuring sentiment-driven human intervention.

Marcellus Amaechi Chukwu , Edwin Chukwuemeka Idoko (2021) wrote that, the ascendancy of electronic banking (EB) channels lately in Sub-Saharan Africa (SSA) banking landscape has radically upended overall pattern of conducting banking businesses. Clearly, EB is gradually replacing previously manual-based bank traditions. Bank operations that initially require the presence of customer in bank premises are increasingly handled remotely. EB tends to confer on deposit money banks (DMBs) extra competitive advantages regarding ease of customer attraction and account management. E-banking is a system where banking operations are carried out on the electronic platforms through the use of laptops, computer desktops, smartphones, Ipads and other electronic gadgets with or without bank customers' physical presence at bank premises or designated locations. Omotayo in Marcellus Amaechi Chukwu, Edwin Chukwuemeka Idoko (2021) argues that elderly people have historically been late adopters to the world of technology compared to their younger customers. Also, earlier studies document slow adoption of technology based innovations among elderly customers especially in developing climes. However, studies that specifically examine restraining factors regarding elder customers' e-banking usage in deposit money banks are limited. In most developing nations including Nigeria, the elderly constitutes huge market segment often neglected by many managers. Understanding constraints discouraging elderly customers from transiting to EB may be significant in developing strategies and tactics aimed at co-opting the cohort (elderly) into emerging e-banking platform family. A contemporary investigation from less developed nation such as Nigeria is therefore urgent in order to provide deeper understanding regarding those constraints that limit involvement of elderly customers in e-banking. However, this notion can support to how difficulty was it for the elderly at Absa bank during and after Covid-19 in terms of adopting the use of technological services. This can be supported by scenes whereby elderly

needed assistance of Absa employees for them to access the Automated Teller Machine due to lack of literacy skills on how to use the ATM. Furthermore to that, some elderly clients would not be able to use Absa bank mobile applications too. To employees, it was a challenge to some to make a good relationship with new digitalized services introduced during and after Covid-19.

2.2.12 Diversification of digital banking life

According to Sharma (2023), the percentage of customers who have access to digital banking channels at Absa bank has climbed from 20% to 29%. The Absa bank has discontinued the practice of charging its clients for the cost of data when they use the Absa Application. This, to a greater extent, can be seen as a motive that spiked an increase in the use of digital banking at Absa. This is due to the fact that the cost of data is one of the limitations that the majority of people face as a challenge when it comes to purchasing it. In addition to this, the use of free data in terms of using the Absa app promoted digital banking because of restrictions on physical contact. On the other hand, this makes it difficult for people to access digital platforms because some of them might not be able to afford to purchase data. As a result, they are forced to ignore the digital banking system and instead take advantage of more cost-effective methods of banking, such as traveling to the bank in person. This approach, on the other hand, is a disadvantage for network service providers such as MTN, Vodacom, Telkom, and Cell-C since it prevents users from using data when they are using the Absa app. This is a disadvantage for users who spend a lot of time using the Absa app because the more time they spend using the app, the more data they use.

According to MudeerAhmed Khattak, Mohsin Ali, Wajahat Azmi and Syed Aun R. Rizvi, (2023) Banks focus on digital transformation to improve their overall efficiency and reduce operational costs. Banks focusing on diversification might not benefit from digital transformation in context

of stability. The results suggested that investment in technology and increased diversification made banks riskier and more fragile. More importantly, we report digital transformation and the diversification to be substitutes in impacting the stability. In other words, we show digital transformation is beneficial for banks with low-income diversification. The reported findings have implications.

The digital transformation landscape has transformed the way financial services are offered. For instance, it has completely revolutionized the payment landscape (domestic and cross-border), lending ecosystem, wealth management offerings, insurance industry etc. These innovations have brought several benefits such as convenience and speed and have managed to challenge the old age traditional way of offering financial services (Hans, 2020). However, these innovations have certain cost attached to it. The new age startup in the Fintech space have started to challenge the traditional models of commercial banks and has forced the banks to either explore the non-traditional income to maintain the level of income or adopt the latest technologies to keep up with the Fintechs. While the digital transformation has shown to improve the performance of banks mainly through cost reduction and wider customer reach.

2.2.13 Security Concerns

According to Sharma, Absa bank has registered 2.5 million users who identified themselves by biometrics in order to ensure that its customers have a high level of security. This system, on the other hand, is a method of securely managing the identities of online customers, and it is a result of the implementation of technology in financial institutions. The absence of the deployment of technology at Absa indicates that there was not going to be a biometric security system. To further elaborate, Clark mentioned that the security hub was implemented in the Absa app in the year 2022 with the purpose of determining whether or not the credentials or data of customers

were secure or threatened. Nevertheless, this brings about the effectiveness of technology adoption at Absa bank in the Post-Covid-19 period. This is because, as a result of the rise in the delivery of digital banking services, there was a requirement to strengthen the online security of clients' accounts in order to prevent consumers from losing money to cyber thieves.

Belbergui Chaimaa, Elkamoun Najib and Hilal Rachid (2020) stated that, the expansion of information technology has led to a new form of banking. Traditional banking, based on the physical presence of the customer, is only a part of banking activities. In the last few years, electronic banking has emerged, adopting a new distribution channels like Internet and mobile services. The main goal was to allow businesses to improve the quality of service delivery and reduce transaction cost, and anytime and anywhere service demand for customers. However, it increased the vulnerability to fraudulent activities like spamming, phishing and credit card frauds. Then, the main challenge that opposes electronic banking is ensuring banking security.

Saluja and Sohi (2006) in his research study analyzed the customers' perception on preference of e-banking. He focused on the major barriers of e-banking like hacking problems, legal and security issues, etc. Safeena et.al, (2011) in their research study examined the crucial factors that influence the adoption of online banking by potential customers. They also analyzed the advantages and security issues related to online banking. Paul (2013) conducted a survey on customers of various commercial banks of Odisha. She investigated on the prevailing technological rebellion that altered the traditional banking services to e-banking. Hakkeem and Sha (2015) in their research work mentioned that customer satisfaction is highly influenced by the awareness and convenience of online banking services; so, banks need to improve their facilities to retain customer loyalty on their services. Khanna and Gupta (2015) in their research study explained the dependence of factors like technological acceptability, safety, user

friendliness, etc. on the demographic profile of the population. Increasing the efficiency of marketing decisions can be maintained by means of such demographic factors. A.Samsunisa (2015) in his study observed that customer perception of online banking services depends on the age group of customers. He also recommended that the banks must focus on all such age groups for the advancement of banking services.

2.2.14 Theory of Planned Behavior (TPB)

According to Ajzen (1991), the Theory of Planned Behavior was developed with the intention of predicting and explaining human behavior in a variety of different settings. According to Oliviera Junior (2006), the concept of perceived behavioral control in the field of technology refers to the belief as to whether or not one has access to the resources and opportunities that are required to carry out certain behavioral actions. In spite of this, this model can be linked to the efficacy of technology adoption and use during the Covid-19 and Post-Covid-19 periods. This is because, in order for an individual to adopt technology during these periods, it was contingent upon whether or not they possessed smart phones or other devices that would allow them to access their bank application, or whether or not they had the data necessary to connect to the internet in order to access bank services online. This model was also beaten, albeit to a lesser extent, by the diversification of digital banking life system. This system allows customers of Absa bank to use the Absa application on their cellphones without the need for data.

Card Tap-and-go The Card Tap-and-go facility is going to be the name of the new technology that Absa bank is intending to implement at its automated teller machines. The transaction time at the ATM is anticipated to be reduced by up to 12 seconds as a result of this service, which

may also result in a reduction in the number of instances of card theft at ATMs. Furthermore, the utilization of this service will reduce the occurrences of card retention in the event of malfunctions in the ATM's hardware or power, as well as jamming. Consumers do not need to insert their bank card into the automated teller machine (ATM) in order to use the Card Tap-and-go system; rather, they simply tap on the ATM with their bank card. However, consumers are still required to punch in their personal identification number (PIN) as an additional safety procedure. However, because technology is constantly evolving, systems are also undergoing change. Additionally, new technologies are being introduced on a worldwide scale as a result of limits that were placed in order to prevent the virus from spreading further. This was an attempt made by the bank to ensure that it consistently maintains communication with its clientele. The relationship between Covid-19 and Card tap-and-go is that it reduces the amount of time that a person spends at an ATM, which in turn reduces the amount of interaction that takes place between a human being and an ATM machine (no touching of the machine while it is being used). Even though contact restrictions and the pandemic are no longer in effect, the fact that the restrictions that were once imposed brought about a mentality of producing new technologies that helped people during the pandemic, however, continued to bring up ways that help people save time technologically, is evidence that the pandemic brought about the adoption of this technology in the Post-Covid-19 era. This can be seen as evidence that the pandemic brought about another new technology.

Kieran Mathieson, (1991) stated that, Information systems cannot be effective unless they are used. However people sometimes do not use systems that could potentially increase their performance.

2.2.15 'Smart Metal' Bank Cards

The Smart Metal Bank Cards were introduced by Absa Bank in August 2023, and they were renamed bank cards that were used for all of the bank's accounts. As the name suggests, these bank cards are black and made of a material known as "smart metal." In terms of appearance, the face of the new card is embossed with an African basket weave motif, which is in keeping with the card's pan-African identity, as stated by Business tech August (2023). According to Absa bank, it was mentioned that because the majority of its services are accessible on mobile phones, it was essential to venture into the new design of these cards. This is due to the fact that digital cards on mobile banking applications are transitioning to the mobile environment, and also because the majority of Absa customers use digital payment methods for eighty percent of their transactions. According to the Absa group, they have also lowered some fee transactions for their Flex Account users. For instance, withdrawals from till points are now free of charge because they were previously R2; debit card swipes are now R1 per transaction because they were previously R4; and digital payment is now R1 per transaction because it was previously R10 until now.

However, the adoption of technology in Post Covid-19 at Absa bank is being harnessed because eighty percent of the bank's customers are now connected in terms of using digital banking techniques that are supplied by their bank. According to the Technophobia idea, twenty percent of Absa's clients are unable to adapt the usage of technology and are content with traditional banking techniques. This is because they are unable to adopt new technologies. On the other hand, twenty percent of Absa's non-digital users can be classified in such a way that they are unable to afford to purchase smart gadgets or connect to the internet in order to access their banking accounts. This includes the fact that they are unable to connect to the internet. These

individuals might not be able to afford to purchase smart devices, but if they were given the opportunity to use technology, they could be able to make use of it.

Furthermore, Absa bank is pushing e-commerce after the Covid-19 conference by lowering the service fees associated with digital transactions. For example, the rates for digital payments have been decreased from R10 to R1 per transaction. The gap between R9 and other currencies encourages people to conduct more transactions online rather than in person because it saves them both time and money. In addition to this, the Absa bank application may be used without the need for any data, which is a big plus for customers who prefer to do their business online rather than going to the bank in person. Nevertheless, the effectiveness of technology adoption and use during the Covid-19 period led to the promotion of technology learning use in the Post-Covid-19 era at Absa. This was due to the fact that digitalization use during the Covid-19 period was embraced to a greater extent, and it opened the eyes of the majority of Absa customers to the fact that carrying out digital transactions saves time in terms of movement.

2.2.16 Technology Acceptance Model (TAM)

Davis (1989) is the one who first proposed this theory, which focuses on the reasons why users accept or reject information systems and how to improve acceptance. In doing so, it provides a support to anticipate and explain acceptance. The following are the two primary factors that Davis (1989) identified as determining the Technology Acceptance Model:

- i. The degree to which an individual believes that the utilization of a specific system may result in an improvement in his or her performance is referred to as perceived utility.

However, customers at Absa denied that the adoption and utilization of technology services that the bank was providing was going to be of the utmost importance. This was due to the fact that during the Lockdown period during the pandemic, there was a high demand for the utilization and adoption of technology. This was due to the fact that people were not permitted to enter the banking hall as a means of preventing the spread of the virus. In recent times, technology has even been utilized after the pandemic in terms of digital transactions. However, the transition to digital indicated that some of Absa's customers would find it easier to live their lives because they would no longer have to wait in huge lines to be served at the banking halls.

- ii. The degree to which a person believes that the utilization of an information system will not require any effort on their part is referred to as the "facility of perceived use."

Despite the fact that the Technology Acceptance Model is a behavioral model, it may only refer to questions that are directly relevant to the user and his perceptions regarding the functioning of the system.

Absa Bank's adoption and use of technology during and after the Covid-19 earthquake was, to a larger extent, successful as a result of the circumstances that people were forced to endure during the Covid-19 earthquake. In today's world, people's lives are shaped by the circumstances of their lives because in order to survive, one must be able to adapt and conform to the circumstances that are present in the actual world. On the other side, there is a requirement for technology in order for it to generate new answers to the problems that exist in a society. This is necessary in order for people to be able to learn about it, comprehend how to utilize it, and be able to live. One term that might be used to describe this phenomenon is "social shaping of

technology" (Martin, 2001). He made the assumption that technology is a product of society and provides a variety of ways in which it reflects its roots.

According to Brian Martin's theory of biased technology, this theory is a valuable framework that may be used to evaluate technology nonviolent struggle. The idea behind this theory is to consider artifacts as being non-neutral, biased, political, or selectively useful. These services were non-violent and selectively useful because they played crucial roles during the Covid-19 era as a way of curbing the spread of the virus and managed to make people continue to do their banking activities online. The functions of Absa services include Abby, Chat banking, Identification and Verification (I.D&V) in Web, Internet Amazon Services, and others. It is possible to point out that these services included Amazon Services. More so, in the era following the Corona virus, these services are still being used in a positive way to save Absa clients, and this use of technology at Absa is causing the bank to bring new technical applications to for its customers in order to ensure that each and every customer is satisfied with digital banking.

There are some people who will have a tough time swiftly adapting to new technology, while there are others who will be able to learn and use it quickly. It is possible that some individuals would be resistant to using newly introduced technologies because they have the impression that these technologies are being presented as a weapon to destroy people. For example, it was recently claimed that the advent of 5G networks was going to be utilized as a means of distributing the Corona virus. By utilizing the Use-abuse Model, Brian Martin (2001) asserts that people have the ability to either believe that technology is beneficial or that it is harmful, depending on how it is utilized. On the other hand, in this particular setting, many customers of Absa utilized technology in order to save themselves remotely during Lockdown. To this degree, it is possible to support the notion that technology was adopted for the purpose of practical

application. Additionally, it is worth mentioning that during this time period, technology was utilized to a lesser level through the act of cyber theft and by individuals who were not Absa clients. In addition, the services that were described above at Absa are a benefit to the clients of the company because they are able to embrace and apply technology.

According to Victor Raskin's (2015) explanation of the Robotization theory, this theory represents a method by which human people can program and compute codes of actions that they want a robot to perform. A device that is designed to assist or complete the work that is performed by humans is known as a robot. He goes on to say that human intelligence is gradually becoming more capable of imitating human behavior in computers, which is why robotic intelligence is being veiled by human intelligence. On the other hand, this idea implies that a robot cannot perform a task without the involvement of a human being. This is due to the fact that human intellect gives a set of instructions in which a robot is required to participate. On the other hand, the relationship between the adoption and use of technology at Absa bank during and after the Covid-19 conference and the idea of robotization can be wedded together to give us with the reason why technology was adopted at Absa and why it is being used. This is something that can be backed by the services that Absa bank offered to people during lockdown and today, which are machines that were programmed to address a crisis during the Covid-19 that is to serve customers remotely. Abby, Chat banking, and other services were developed as a means of assisting clients or to support consumers with their banking business online or digitally. This idea originated from someone and was programmed into a robot so that it allowed for the introduction of these services.

2.2.17 Conceptual framework

In the efficacy of technology adoption at Absa bank, there was relationship between technology and people in a way that, there was a need for business to move on as usual. However, there was the need to use technology for business to be conducted as usual through the use of cellphone, Ipads and computers. These devices helped business and life to go where by people would transact remotely with the use of these devices.

2.2.18 Summary

Literature was reviewed in this chapter with an aim to discover what is already known about the efficacy and adoption of technologies in business. This chapter explores the adoption and usage of technology at ABSA Bank South Africa. The Contribution of ICT at ABSA Bank will be investigated and its contribution to the fact that it was adopted and used during and after Covid-19. Barriers of adopting technologies in business at ABSA Bank will be discussed. It is in this chapter where by various theories in technology are discussed with an aim of relating them to the efficacy adoption of technology during and after Covid-19 at ABSA Bank. In this chapter, it was discovered that some of online services had been there at Absa bank before Covid19 but they were not being used compared to how they started to be used during Corona virus pandemic. It was also discovered that, other online services were born during Corona virus and some clients are still adapting to these technological services and trying to harness them whilst other clients and employees have already adopted new technological services at Absa. It can also be noted that, some clients and employees failed to adapt to these technological services due to lack of interest to technology. Another finding which was discovered in this chapter was that, ICT made life easier and convenient for clients and employees during the pandemic and to a greater extent people adopted technology even after Covid-19 from traditional banking because of its convenience in business.

Chapter 3

METHODOLOGY

3.1 Introduction

This chapter mainly focused on different types of methods and techniques that were used to gather information and data from the respondents. The key sections in this chapter consists of: Research design which helped this study in guiding the decisions for methods and procedures used to collect and analyze data; Population and sampling ensured that the results of the study were a representative of the whole group of clients and employees at Absa bank; Sample frame ensured that all individuals represented everyone at Absa bank; Sampling method aimed at obtaining information from the customers and employees that represented other people as a whole; Sample size had to make sure that people were large enough to be represented with the resources which were available; Data collection instruments' purpose was to gather information from people on technology adoption; Analysis and organization of data aimed at turning raw data collected from the sample into meaningful and useful information and Ethical considerations were important in ensuring that the research was conducted in way that was fair, respectful and ethical that is participants were informed about the study and they gave their consent to participate.

3.2 The Research Design

This study used both qualitative and quantitative data. A mixed methods approach was deemed suitable methodology for studying the efficacy of technology adoption and use during and after COVID-19 since the researcher sought to establish the number which adopted technology and

why. In addition to that, this chapter gave information on research design which was used in carrying out the study, justification for the use of specific research instruments, data collection procedures, sampling methods, sampling procedures and sample size were highlighted in this chapter. Transaction data was also collected from banks and other financial institutions to measure the usage of specific technologies and account issues to do with reliability, validity, trustworthiness and research ethics. This data was analyzed using statistical methods to identify trends and patterns in technology adoption and use. Issues of are also highlighted in this chapter.

The adoption and utilization of technology at ABSA Bank during and after the Covid-19 conference was the primary focus of the study. Experimentation, quantitative analysis, and descriptive analysis were the methods of study. This research, on the other hand, was carried out at ABSA Bank through the use of interviews and questionnaires as a research design. The results of this research created a number of individuals who were able to adjust to the adaptation and use of technologies that were being utilized during and after the Covid-19 era. In the course of the study, the number of employees and customers who were unable to adjust to the implementation of technology both during and after the Covid-19 conference were quantified. Investigations were carried out at ABSA Bank in order to collect the necessary information and provide an explanation in accordance with the findings that were produced.

In terms of employees, data was collected, and the researcher was able to discover that the majority of employees at Absa bank had adapted to the technological services they are working with at their organization. This was because it was and essential for them to make use of these technological services in order to be able to assist their customers. In addition to this, it was vital for Absa bank to adapt and make use of technology during the Covid-19 period because there was a strong emphasis on the utilization of information technology in the working environment.

Importance of adapting to Information and Communication Technology included easy capturing and storage of large amounts of data in the organization and it brought convenience to everyone in terms of retrieving data quickly like bank statements, quick access of e-banking and other digital services clients and employees wanted to make use of.

As a result of the study that the researcher carried out, it is considered that thirty percent of the workforce is still in the process of adjusting to the new technology. This may be an indication that they require some time to acclimate to the services that are being provided. The failure of ten percent of the workforce to adopt new technology was the result. However, since learning of new innovations is a process, the researcher through his research and results believed that, those who are still in the process of learning will be able to adjust and embrace e-banking since it is believed that, e-banking is an easy and convenient way of banking for clients and the organization.

When it comes to Absa Bank customers, fifty percent of the customers were successful in implementing and making use of technology for their banking activities. According to the results of the poll, twenty percent of the customers indicated that they are still in the process of learning and attempting to accept the technology that Absa Bank is providing for them. There are certain customers who are falling behind in their adoption and utilization of technology, and they continue to rely on conventional banking and online shopping practices.

3.3 Population and Sampling

According to Sekaran and Bougie (2019), population is the collection of elements, objects or individuals that possess the information sought by the researcher and about which inferences are to be made. In this study, the population included employees, management and customers of

ABSA Bank of South Africa. A population in qualitative/quantitative research is usually purposively selected (Patton & Cochran 2002). The researcher chose 3 categories of respondents namely employees; management and customers with an aim of triangulating the information gathered so as to maximize the trustworthiness of the findings. In this research, the researcher made use of 50 people in his research because that's what he could afford in terms of availability of his resources and the types of people he met.

3.4 Sampling methods and techniques

3.4.1 Sample frame

According to Creswell (2020), a sample frame is a list of all eligible sampling units. Sampling frame is the set of sources material from which the sample is selected. Burns and Bush and Burns (2018), postulates that it is a master list of the entire population. The sample frame for this study comprised of employees customers and management from the ABSA Bank of South Africa. The sample frame is shown in Table 3.1.

Table 3.1: Sample Frame for the Study

Department	Sample Size
Low level employees department	10
Departmental Managers	10
Customer Service department	30
Total Population size	50

3.4.2 Sampling method

Sampling is defined as the selection of some part of an aggregate or totality on the basis of which a judgment on inference about the aggregate or totality is made (Kumar, 2018). Sekaran and

Bougie (2019) posited that sampling depends on the size and homogeneity of the population. Given that the population for the study was drawn from 3 different organizational level at ABSA Bank the population was considered heterogeneous. Hence, the researcher employed the stratified random sampling technique where each department represented the strata. The stratified sampling technique was preferred as it ensured that the four departments were fairly represented in the study as this sampling method ensured equal chance of being selected. The three organizational levels represented the strata such that individuals from each stratum were randomly selected. The other advantage for this sampling technique was that it is associated with no sampling bias (Cooper & Schindler, 2018).

3.4.3 Sample Size

A sample has been defined as the subset of the population (Collis & Hussey, 2018). The sample size for this study was derived using the Cochran's (2015) sample size determination formula shown below:

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

Where N= population size; n=sample size; e= the sampling error

Given the total population size of 50 and the sampling error of 10%, the sample size for the study estimated using the aforementioned formula was estimated to be 10. :

3.5 Data Collection Instruments

The study collected primary data using a survey questionnaire as the research instrument. Malhotra (2020) postulated that a questionnaire is a structured technique for data collection that consists of a series of questions, written or verbal, that a respondent answer. In this study, the

researcher made use of a structured questionnaire which contained close-ended questions. The close-ended questions were rated using the five-point Likert scale ranging from 1 (strongly disagree) and 5 (strongly agree). The questionnaire had five main sections. The first section contained questions relating to demographic information of respondents whilst the remaining sections contained questions relating to each of the research objectives.

The questionnaire was preferred for its advantages of low cost, time saving and confidentiality and anonymity (Bryman & Bell, 2018). However, the use of questionnaires was associated with the high risks of low or non-response. Besides, the questionnaire was considered the most suitable instrument to collect primary quantitative data.

The relationship between questions and research questions was that, in terms of technophobia, it was discovered that the relationship between questions in the instrument and research questions was that, some participants showed that they were finding it difficult to adapt to technology. To add on, technology changed at a faster rate during and after Covid-19 and this made people to harness technology to make their life easier this was evidenced in questionnaires.

3.6 Analysis and organization of Data

Data was collected from Absa employees and clients through questionnaires. 10 questionnaires were distributed amongst 20 people that is, 10 employees and 10 clients. The questionnaires were personally administered by the researcher using the pick and drop method. The respondents were given a week to fill in the questionnaires. To ensure high response, the researcher made follow-ups through emails reminding the target respondents to complete the questionnaires. Data collected, was presented in Pie chart form to show the numbers of people who adopted, still learning to adopt and failed to adopt technology at Absa during and after Covid-19 pandemic.

3.7 Ethical Consideration

The research ensured that it did not cause any harm to the organization in the event that errors were discovered throughout the exercise; the necessity of protecting the rights of human subjects who were engaging in the research and processes (Ketefian 2015). In addition, the manner in which the company operated throughout the pandemic was kept secret, and was taken into consideration in terms of the secrecy of the company and its operations.

In this study, it was decided not to reveal the names of those who were successful in adopting technology services at Absa bank and those who were unsuccessful in doing so. The research only revealed the age range in order to provide the researcher with the ability to present the age range that embraced technology usage the most widely and, on the other hand, the age range that did not adapt to technology use.

In the context of the financial institution, the presentation of its technological adoption and utilization was based on the findings gained from this research. However, the data that was obtained was not shared with anyone regarding the performance of the bank during and after the Coronavirus outbreak. This was because it was against their policy to share their data without their approval. In addition, the data that was obtained from this research was obtained from insights, interviews, and reports and they made it clear that they do not intend to share their primary data that was obtained from their data systems.

Every single person was given a questionnaire, and there was no prejudice based on race because Absa bank is used by people of all different ethnicities. On the other hand, this also brought about a range of ways in which people of different races chose to accept or reject technology.

3.8 Summary

This data was analyzed using statistical methods to identify trends and patterns in technology adoption and use. The population included employees, management and customers of ABSA Bank of South Africa. The research ensured that it did not cause any harm to the organization in the event that errors were discovered throughout the exercise; the necessity of protecting the rights of human subjects who were engaging in the research and processes. This study used both qualitative and quantitative data. A mixed methods approach was deemed suitable methodology for studying the efficacy of technology adoption and use during and after COVID-19 since the researcher sought to establish the number which adopted technology and why.

The research design for this study was a quantitative and qualitative mixed methods approach, with a non-experimental, observational study design. The population of interest was 10 clients and 10 employees from Absa Bank who used technology during and after COVID-19, with a representative sample selected from this population. Data was collected through a combination of survey responses and transaction data. Data analysis involved quantitative through descriptive statistics, correlations methods. Instruments in this research included a survey questionnaire. Ethical considerations included informed consent, confidentiality, and data protection. Data would be stored securely, and the identities of participants would be kept anonymous. All data would be collected and analyzed with the highest ethical standards. The findings of the study would be reported with transparency and rigor, and would be made available to the research community.

Chapter 4

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

In this study, data was collected from questionnaires which were distributed to Absa Bank employees and clients. Data that was presented in this chapter firstly in table format where data for different genders was presented with its frequency in terms of technology adoption, learning to adopt and failed. Multiple bar charts were also included in this section showing a comparison on the difference of how male and female managed to adapt, learn and fail technology adoption and use during and after Covid-19.

The structure of this chapter starts with a table representing distinct group of Absa employees on the frequency of how they adopt, learnt and failed to adopt technology. This information is also presented in a multiple bar chart in showing a comparison of the information. Secondly, there is a table showing distinct groups at Absa bank clients on the frequency of how they adopted, failed and learnt new technological services at the bank.

There is a multiple bar chart in this section used to compare clients and employees on the adoption, learning and failure to adopt technology. However, the use of a multiple bar chat was also used to compare technology adoption between males and females.

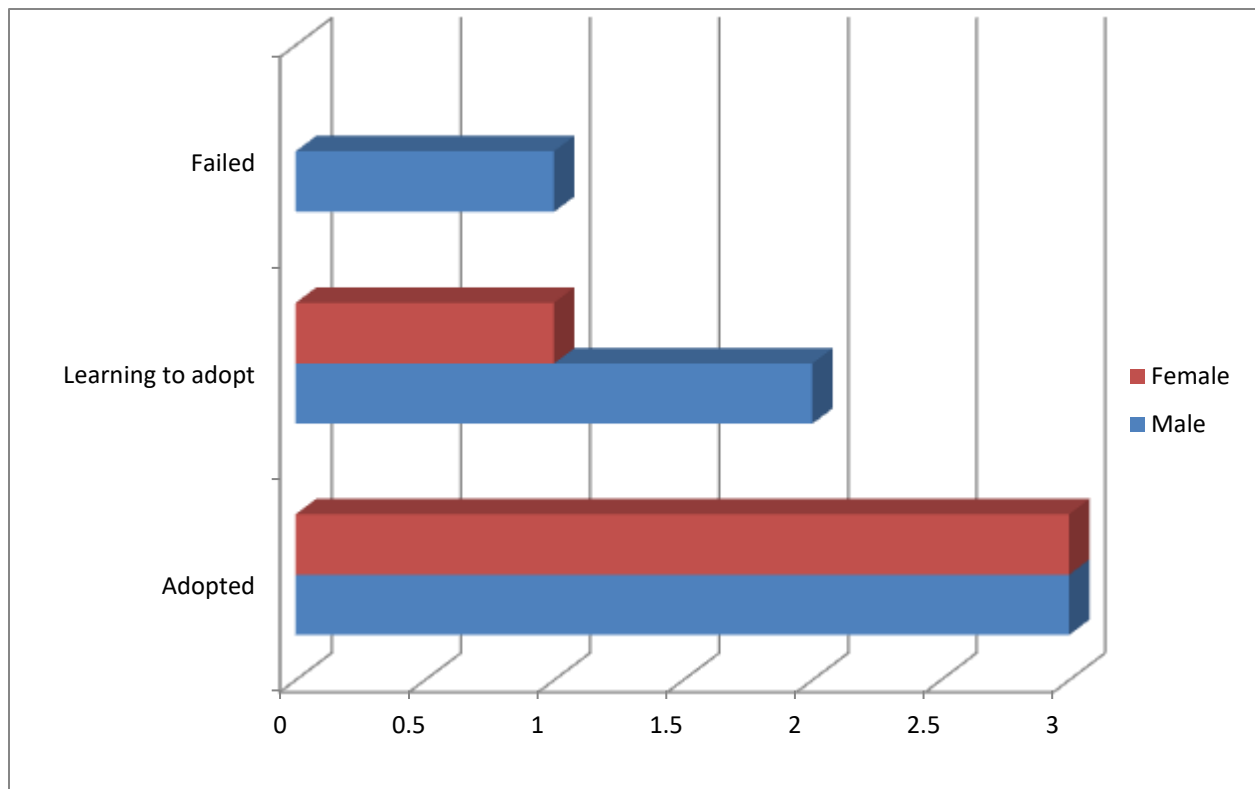
4.2 The impact did technology adoption have on productivity and efficiency at Absa bank South Africa

The following table presented three distinct groups of Absa Bank employees that were representative of other employees in terms of the number of employees who were successful in

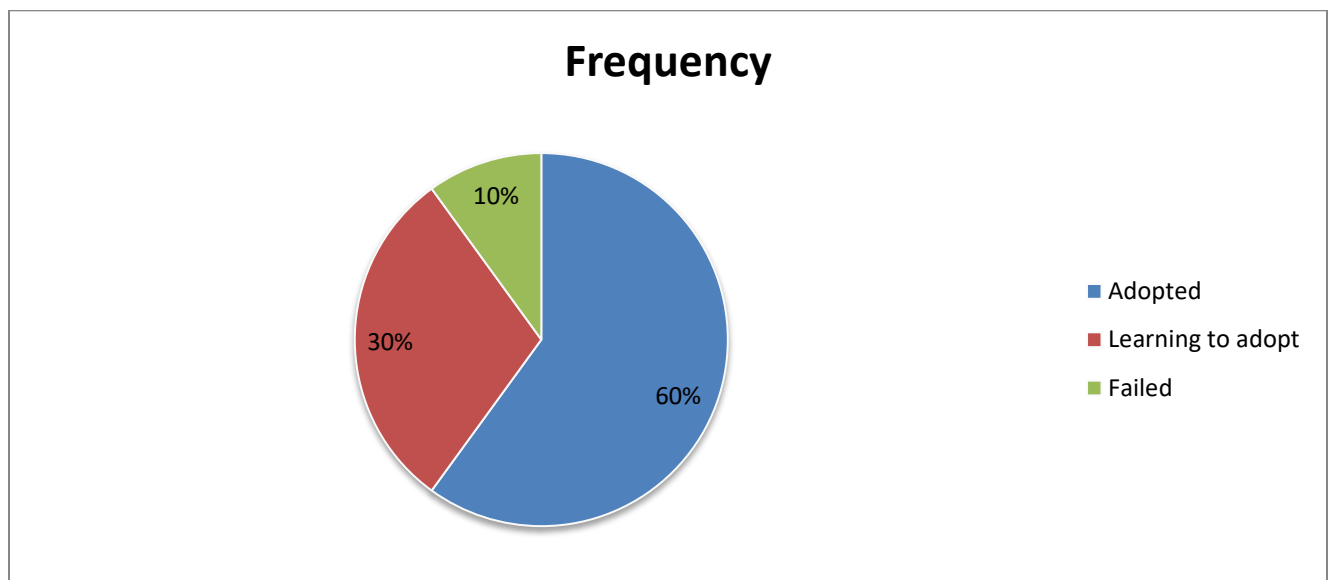
adopting new technical services that were offered during and after the Covid-19 conference. Additionally, there was a group of employees who were still in the process of acquiring knowledge regarding these technologies, as well as other employees who have not yet adopted the technical services that have been provided at the bank.

Category	Male	Female	Total Frequency	Relative Frequency	Percentage (%)
Adopted	3	3	6	$6/10 = 0.6$	$0.6*100 = 60\%$
Learning to adopt	2	1	3	$3/10=0.3$	$0.3*100 = 30\%$
Failed	1		1	$1/10=0.1$	$0.1*100 = 10\%$
Total	6	4	10	1	100

A comparison of Absa Bank employees, both male and female, according to whether or not they were able to accept, still learning, or failed to adopt and use technology during and after the COVID-19 conference is presented in the multiple bar chart that can be found below.



A pie chart below showing Technology Adoption for employees at Absa Bank during and after Covid-19:



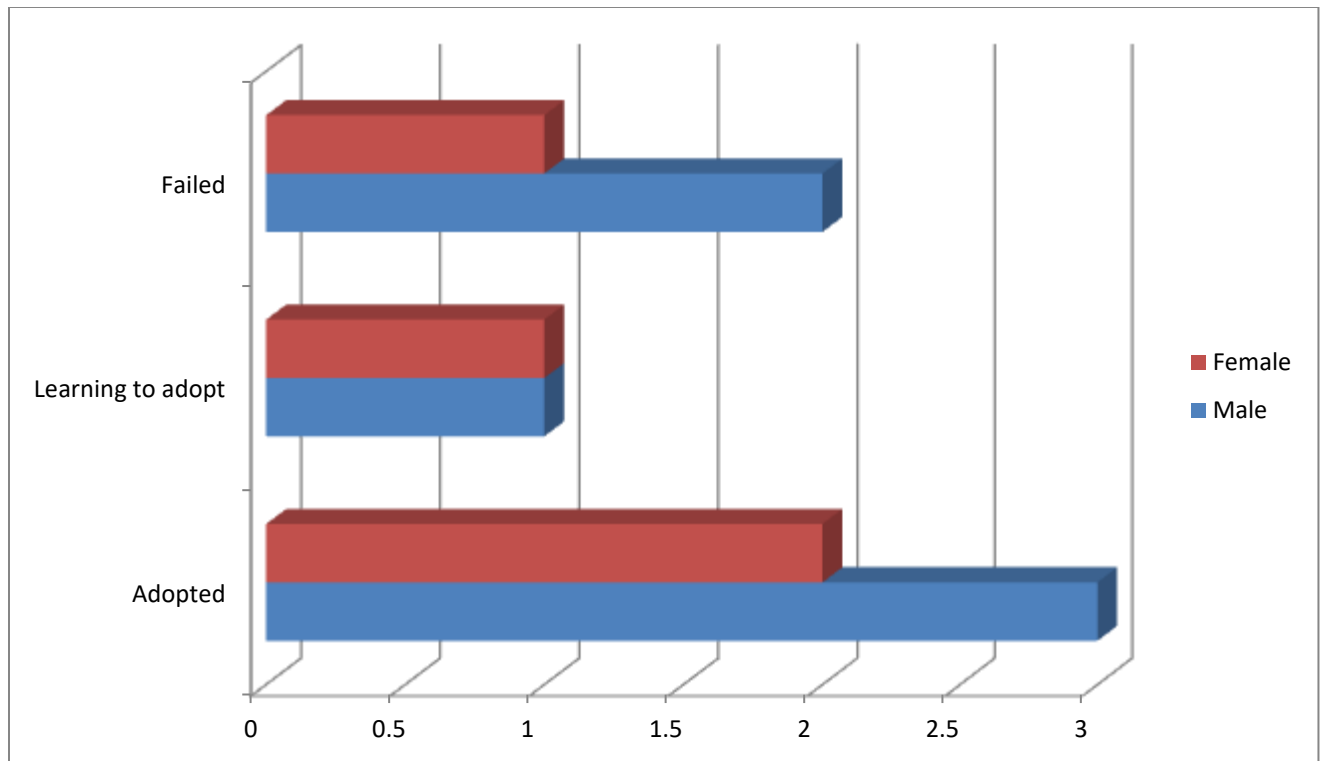
The above Pie chart is showing percentage rate of Absa employees as a whole on their rate of technology adoption and use during and after Covid-19.

Data collected from clients who participated in the efficacy of technology adoption and use during and post Covid-19 era is going to be presented below:

Category	Male	Female	Total Frequency	Relative Frequency	Percentage (%)
Adopted	3	2	5	$5/10 = 0.5$	$0.5*100 = 50\%$
Learning to adopt	1	1	2	$2/10=0.2$	$0.2*100 = 20\%$
Failed	2	1	3	$3/10=0.3$	$0.3*100 = 30\%$
Total	6	4	10	1	100

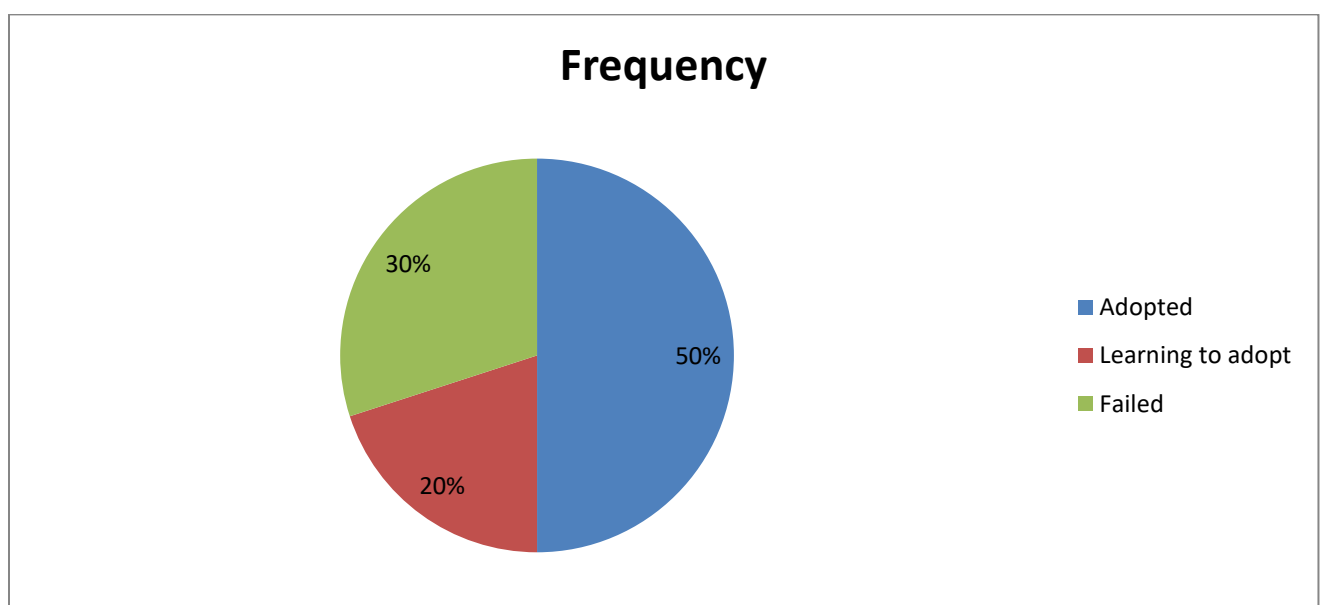
4.3 How did technophobia informed by different demographics, such as age, gender, or location, impacted on the efficacy of technology use?

The Multiple bar charts below is showing a comparison of Absa clients between male and female on which gender did manage to adopt, still learning and failed to adopt and use technology during and after Covid-19.



4.4 Did the efficacy of technology adoption change at a faster rate during the Covid-19 19 era?

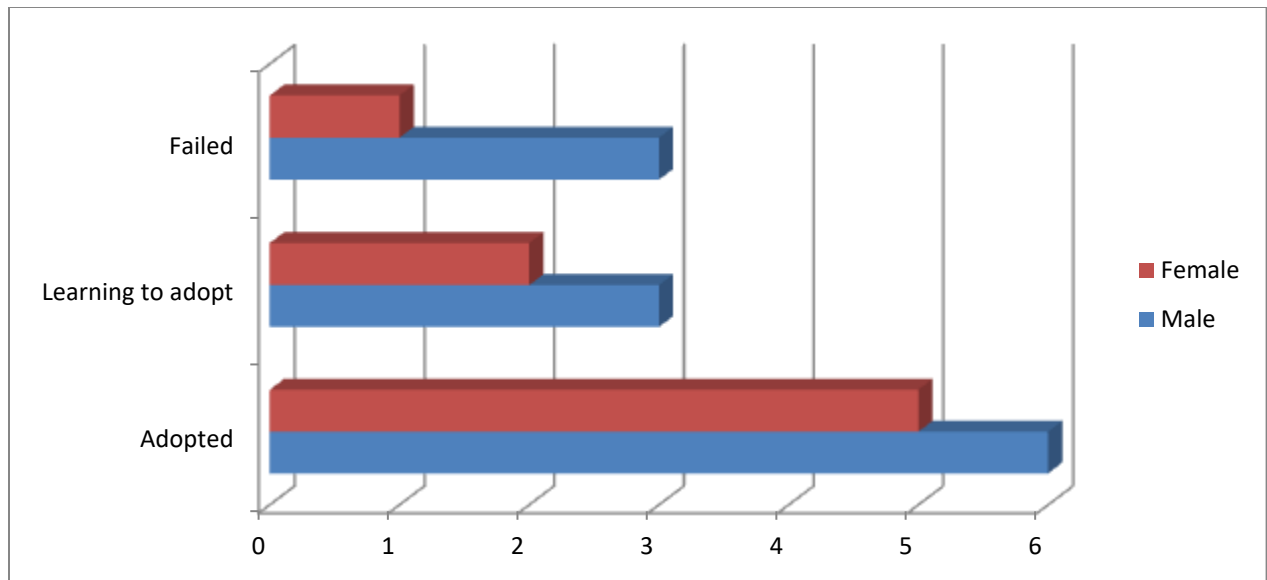
A pie chart showing Technology Adoption for clients at Absa Bank during and after Covid-19:



The above Pie chart is showing percentage rate of Absa clients as a whole on their rate of technology adoption and use during and after Covid-19.

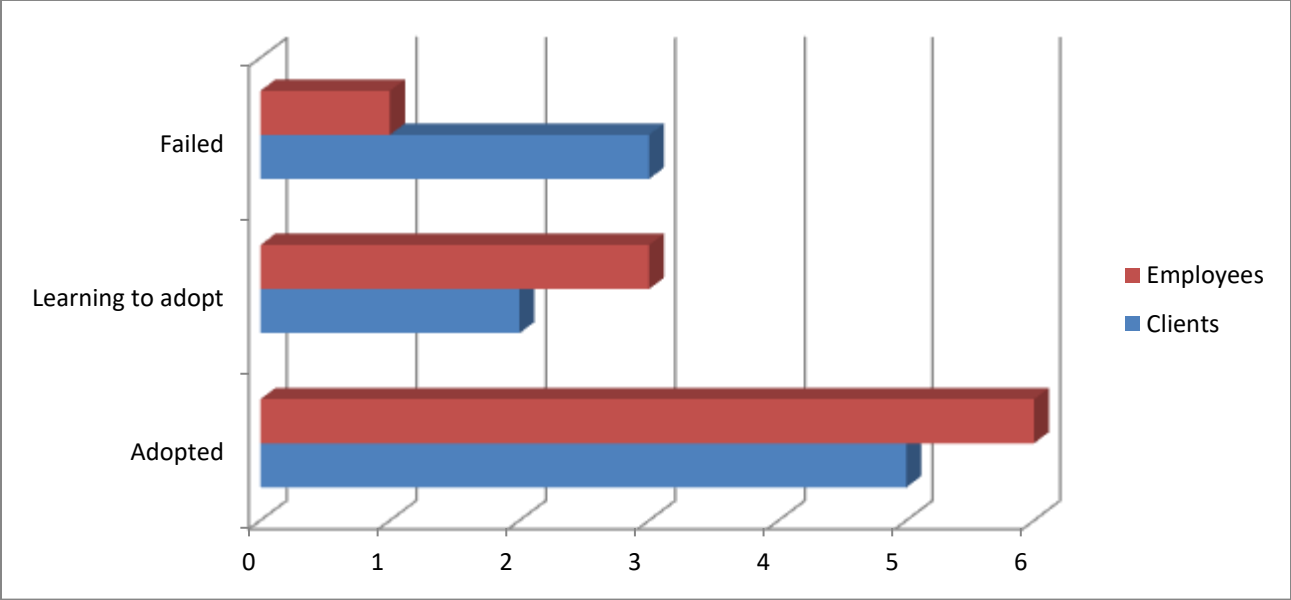
The table below shows a combination of clients and employees at Absa on how they adopted and use technology as a whole. This combination was brought out since clients and employees interact with each other in terms their day to day business. However, it is important to see their compatibility in the use and adoption of technology during and after Corona virus.

Category	Male	Female	Total Frequency	Relative Frequency	Percentage (%)
Adopted	6	5	11	$11/10 = 1.1$	$1.1*100 = 110\% / 2 = 55\%$
Learning to adopt	3	2	5	$5/10 = 0.5$	$0.5*100 = 50\% / 2 = 25\%$
Failed	3	1	4	$4/10 = 0.4$	$0.4*100 = 40\% / 2 = 20\%$
Total	12	8	20	1	100



A multiple bar chart above is showing a comparison between clients and employees at Absa bank for males and females.

Category	Clients	Employees	Total Frequency	Relative Frequency	Percentage (%)
Adopted	5	6	11	$11/10 = 1.1$	$1.1 \times 100 = 110\% / 2 = 55\%$
Learning to adopt	2	3	5	$5/10 = 0.5$	$0.5 \times 100 = 50\% / 2 = 25\%$
Failed	3	1	4	$4/10 = 0.4$	$0.4 \times 100 = 40\% / 2 = 20\%$
Total	10	10	20	1	100



4.3 Discussion and interpretation

The findings of this study were based on the ways in which customers and employees at Absa bank adopted and utilized technology during and after the Covid-19 conference, respectively. In the first place, when it came to employees, there was a distribution of fifty percent male and fifty percent female in terms of the adoption of technology. In terms of the adoption and utilization of technology, these genders collectively accounted for sixty percent, which indicated that they were successful in adopting and utilizing the technical services that were implemented at Absa bank at and around the time of the post-Covid-19 era.

In the second place, the findings that were discovered in terms of employees who are still learning how to use and embrace technology amounted to thirty percent of the population that was sampled. On the other hand, out of the thirty percent that was discovered, twenty percent belonged to males, which indicated that this gender was more prevalent among females, who accounted for ten percent.

According to the findings of the research, there were no female employees at Absa bank who failed to adopt and learnt technology during and after the Corona virus pandemic. The remaining 10% of employees are those who failed to learn and adjust to new technological services that were introduced at Absa. Additionally, this 10% of employees are male.

It was found in this survey that fifty percent of Absa customers accepted and made use of online technologies both during and after the Covid-19 pandemic. On the other hand, males made up the majority of the fifty percent, accounting for thirty percent, while females make up twenty percent.

Clients who were still learning how to adapt and use technology were found to be composed of 10% males and 10% females, which resulted in a total of 20% of clients who were still learning how to accept and use technology

The individuals who did not accept technology were responsible for thirty percent, and of that thirty percent, twenty percent of the customers were males and ten percent were females.

In addition, this study incorporated all of the individuals who took part in the research in order to obtain information regarding the manner in which customers and staff embraced and utilized technology both during and after the COVID-19 pandemic phase. On the other hand, the findings revealed that 55% of employees and clients embraced and are making use of technology; 25% of these participants are classified as being in the process of learning to adapt technology, and 20% of the sample did not adopt technology. This study found out that the gender that contributes the most to the category of technology adoption is the male gender, with thirty percent of the total, while the female gender contributes twenty-five percent.

If I may add, ten percent of women are learning how to adapt and use technology, while fifteen percent of men are doing so. 15% of people who failed to adapt to technology usage were men, while only 5% of people who were female failed to adapt to technology adoption and use. The majority of people who failed to adopt technology use are males.

When the researcher looked at these data outcomes, the researcher discovered that twenty-five percent of the participants were still in the process of learning how to adapt and use the digital services offered by Absa bank. This can demonstrated to show that this group will eventually be able to become accustomed to and make use of technology. According to the Transition curve model, positive production will be the result if the organization is able to harness the use and adoption of technology (Rose, 2018). One thing that should be taken into consideration is that if twenty-five percent of the participants are able to learn how to use technology and fifty-five percent of the participants have already adopted technology, then in the future, eighty percent of the population will be using online technological services at Absa because it will be a convenient way to conduct business online. It is possible that those who were unable to adapt technology may eventually become motivated to learn about technology and will be able to adopt and use the digital services offered by Absa bank.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This concluding chapter of the research presents the summary of the main findings as well as the conclusions drawn from the findings. The chapter further presents the recommendations for managerial implications as well as recommendations for further research. This research aimed at evaluating the impact of technologies on e-commerce during and after Covid-19 at ABSA and to measure if technophobia had significant hindrance in the adoption of e-commerce during Covid-19 era.

5.2 Summary of findings

The main aim of this research was to examine the impact of Covid-19 on the adoption and use of technologies in the banking sector. It was found out that indeed Covid-19 was a push factor in the adoption of e-banking technologies for some people who under normal circumstances resampled technophobia tendencies. When it comes to technophobia, literature showed that; access to technology, education, and attitudes toward technology are some of the numerous elements that influence an individual's capacity. Absa bank was not spared on this. At Absa bank factors to do with educational attainment and attitudes towards technology found out to be limiting factors which were suffocated by COVID-19 resulting in a speedy adoption of technology as people moved into the new normal. Pressured by Covid-19 people who otherwise were technophobia got to appreciate that technologies being utilized, are more user-friendly than others. This study has found out that in the after month of Covid-19 there has been a quick pace

at which technology is developing, hence it is essential to have continual conversations about the ways in which new technologies are being utilized and adopted.

What impact did technology adoption had on productivity and efficiency during the pandemic? How did technophobia informed by different demographics, such as age, gender, or location, impacted on the efficacy of technology use? Did the efficacy of technology adoption change at a faster rate during the Covid-19 era? Did the Covid-19 alter the perception of people in the different demographics who were normally known to be technophobic?

5.3 The impact did technology adoption had on productivity and efficiency at ABSA

Use of modern technologies by employees and clients went up by 60% at Absa during Covid-19 as confirmed by results in table on 4.2 this result confirmed the assertion by Barnes (2019) that productivity goes up when more and more technologies are used. Instead of posting a shrinking business output, at Absa it was business unusual. The deployment of technology had a tremendous impact on the level of productivity and efficiency that was achieved during the pandemic. Customers were able to access their accounts and perform transactions remotely thanks to the widespread use of online banking services, such as mobile apps and online account management. These meant that customers were no longer needed to physically visit bank offices in order to complete their financial activities. In addition, the implementation of technologies such as artificial intelligence and machine learning enabled financial institutions to automate a significant number of their procedures, which resulted in an improvement in both the proficiency and precision of their operations. Additionally, the deployment of technology at Absa bank was a significant component that contributed to the bank's ability to continue operations throughout the epidemic. Despite this, there were a few difficulties that were related with the quick adoption of

new technology at Absa. For instance, there was a requirement for more robust cyber security measures in order to protect against the increased risk of cyber-attacks. On top of that, there were some consumers who had trouble adjusting to the new technology, which resulted in a decrease in customer satisfaction in certain instances. In the future, Absa bank will be required to continue investing in technology while simultaneously guaranteeing that its clients are able to access and make efficient use of the technologies that are being invested in. This is going to be very necessary in order to keep up with production and efficiency. At Absa, the effectiveness of the utilization of technology was influenced by a variety of demographic parameters, such as age, gender, and geography. Generally speaking, older clients have expressed lower levels of satisfaction with online banking services. This low level of happiness is largely related to a lack of familiarity with the technology. From a gender perspective, it was found that women were more satisfied with the services provided by online banking than men were. This could be attributed to the fact that women are more comfortable with technology. In terms of location, clients in urban regions tended to have higher levels of satisfaction with online banking than those in rural areas. This is likely owing to the fact that urban areas have better access to high-speed internet. These demographic variations underscore the necessity for Absa to adjust their technological products to match the requirements of their varied customer base in order to fulfill their specific needs. The provision of additional training and support for customers who are older, the provision of alternate channels for customer care for customers who live in remote areas, and the consideration of the requirements of female consumers when developing new technologies are all potentially included in this category. Absa bank's use of technology during the pandemic brought up a number of ethical concerns, including data privacy and security, digital inequality, and employee monitoring. These concerns were brought up with the help of

technology. The increased amount of client data that Absa collected and processed online gave rise to significant concerns over data privacy and security. This data was susceptible to hackers, which might put the privacy of customers at risk and could potentially result in financial damages. Another issue of concern was digital inequality, which meant that consumers who did not have access to high-speed internet or smartphones were at a disadvantage when attempting to use banking services. Concerns around employee surveillance were also raised as a result of the increased use of technology, as financial institutions may utilize monitoring tools to remotely check staff productivity. During the course of the epidemic, Absa's embrace of technology did, in fact, see a shift in its effectiveness. At the beginning of the pandemic, there were certain teething problems with the mass adoption of new technologies. These problems were caused by the pandemic. Some financial institutions, for instance, had a difficult time keeping up with the unexpected surge in demand for online services, which resulted in disruptions to the services they provided and lengthy wait times for customer support. On the other hand, as time went on, they were able to increase the capacity of their infrastructure and enhance the dependability of their online services. The effectiveness of Absa's use of technology was further improved by the fact that clients were more accustomed to and comfortable with the technologies. It is anticipated that the long-term repercussions of Absa bank's deployment of technology during the epidemic will include a more permanent move to digital banking services, a stronger attention on cyber security, and a restructuring of the workforce in the banking industry. As a result of the broad adoption of technology that occurred during the epidemic, it is quite probable that an increased number of consumers will prefer to use digital banking services in the future, even after the virus has been eradicated. Because of this, there is a possibility that the number of physical bank branches will decrease, while there will be an increase in investments made in digital

infrastructure. In addition, financial institutions will be required to make investments in more robust cyber security measures in order to safeguard client information against cyber-attacks.

The decision on online banking adoption is a strategic choice by banks with multiple purposes. A theoretical and empirical model resulted that banks with larger geographic market adopted online banking earlier, and banks' online banking adoption was motivated by having competitors that had already adopted technology and more to that, online banking was a substitute for physical branches, Dongwe He, Kai You, Enging and Jun Wu (2019)

5.4 Implications

When technology is adopted, it can have a variety of repercussions that can be far-reaching and varied. On the one hand, new technologies have the potential to bring about a number of advantages, including greater production, efficiency, and innovation. However, they can also have unexpected repercussions, such as the displacement of jobs, worries about privacy, and even bodily or psychological injury. For example, during the COVID-19 conference, some employees at Absa lost their jobs as a result of new technologies that were now performing the same tasks as human labor. In the process of developing and implementing new technologies, it is essential to take into consideration the potential ramifications that these technologies may have for individuals, corporations, and society as a whole. As an illustration, the development of artificial intelligence and robotics has resulted in increasing concerns regarding the loss of jobs (Dirican 2015). This is due to the fact that certain functions that were previously carried out by humans can now be carried out by machines. In addition to this, the growing prevalence of digital computing technology. The adoption of new technologies has the potential to have a substantial influence on the manner in which individuals utilize technology. For instance, the

broad penetration of smartphones has altered the manner in which individuals communicate with one another, gain access to information, and engage with the environment that surrounds them. As new technologies are deployed, they have the potential to have a domino effect on other aspects of people's lives, such as the ways in which they study, work, and interact with one another. In the process of planning and implementing new technologies, it is essential to take into consideration these implications, since they have the potential to have far-reaching ramifications for both individuals and society. Banks, like other service organizations, strive to improve customer services level and tie their customers closer, Guyo, Jattani Alamitu (2014). Technology adoption positively and significantly influences operational efficiency of commercial banks.

Banking has been more accessible to a large number of people as a result of technological advancements; nevertheless, this has also resulted in the creation of a digital divide, which places individuals who do not have access to technology or the skills necessary to use it at a disadvantage. This divide has the potential to result in further financial exclusion and inequality in the future, particularly in countries that are still in the process of developing. For this problem to be resolved, financial institutions will need to make investments in programs that aim to improve digital literacy and ensure that everyone has equal access to technology.

5.5 Recommendations

For those individuals who have not been successful in utilizing and adopting new technologies at Absa bank, there are a number of recommendations that can be given. To begin, it was essential to conduct an analysis of the factors that contribute to an individual's resistance to new

technologies. The identification of potential obstacles that may be keeping them from making good use of new technology can be facilitated by this.

To continue, it was essential to make sure that persons who were having difficulty in utilizing new technology had access to sufficient training and support materials. It was possible that this would help to ensure that they possess the knowledge and skills necessary to make successful use of the technology presented.

There was also the possibility that it would be essential to locate alternative technologies that were either more user-friendly or suitable with the requirements of an individual. It was essential for individuals who were successful in utilizing and adopting new technologies at Absa bank to continue keeping up with the most recent developments and to remain informed about new technologies that may be beneficial. This is because these technologies undergo upgrades on a daily basis that are suitable for both individuals and the bank.

It was also essential for them to share their achievements with others, as this would assist in motivating and encouraging others to make use of and adopt innovation in technology. In conclusion, it is essential to continue with the practice of utilizing the technology and to look for possibilities to broaden their knowledge and skills. It was because of this that they will be able to continue to reap the benefits of new technology, which will help to ensure that they are able to do so.

At Absa, there are a number of recommendations that are specifically geared for persons who are learning to use and accept new technology. To begin, it is essential to begin with more manageable stages and to concentrate on being proficient at a time. Your feelings of being overwhelmed and discouraged will be reduced as a result of this. Secondly, it is essential to

engage in consistent practice, even if it is only for a few minutes here and there each day. This will assist in developing familiarity with the technology as well as confidence in its use. In conclusion, it is essential to seek assistance and support whenever it is required, whether it is from a friend, a member of one's own family, or an expert. This will help to prevent the individual from becoming frustrated and will guarantee that they are able to make any necessary progress in their learning.

The importance of Absa investing in cyber security cannot be overstated. Over the past few years, there has been a widespread increase in the frequency of cyber-attacks, with the financial industry being a primary target. Not only may cyber-attacks result in financial losses, but they can also damage a bank's brand and the faith of its customers. Through investments in cyber security, financial institutions are able to safeguard the data of their consumers and avert substantial losses. In order to launch attacks on computer systems, cybercriminals are continually creating new methods and tools. On the other hand, in order to stay one step ahead of the competition, Absa must continually keep an eye out for the most recent dangers and update their technologies. Ensuring that all employees receive training in cyber security even with the most advanced systems in place, banks are still susceptible to human error. In addition, all employees need to receive training in fundamental cyber security principles, such as the administration of strong passwords and the identification of phishing schemes.

Technology, on the one hand, has the potential to provide a multitude of advantages, including enhanced productivity and convenience. When it comes to interacting with their finances, however, a significant number of customers still place a high value on the personal touch that comes with chatting to a real person. In order for Absa to ensure that its consumers continue to feel heard and respected, it is essential for the company to strike the appropriate balance between

the two. Absa ought to make certain that clients also have the opportunity to speak to a human person in the event that they feel the need to do so, even if they have previously communicated with a Chabot. In this manner, the financial institution is able to offer the advantages of the speed and efficiency of technology as well as the personal touch that comes from human engagement.

It is essential for Absa to embrace innovation in order to maintain its competitiveness and relevance. Artificial intelligence (AI), block chain, and quantum computing are examples of new technologies that have a great deal of potential for the banking industry. For instance, artificial intelligence can be utilized to enhance customer service, identify fraudulent activity, and offer individualized financial guidance. Increasing both security and transparency can be accomplished through the use of block chain technology, and quantum computing can be utilized to analyze enormous volumes of data. Banks those are not willing to adopt these emerging technologies run the danger of falling behind their competitors.

5.6 Suggestions for Further Research

Before putting new technologies into action, it is recommended that Absa take into account both the possible dangers and benefits associated with the use and adoption of emerging technologies. This can be accomplished by doing a cost-benefit analysis, which involves weighing the costs and benefits of a technology, such as the costs of implementation, maintenance, and training, against the possible benefits, which may include enhanced efficiency, productivity, or safety. A further recommendation is to adopt a user-centered approach, which involves taking into account the requirements and preferences of the individuals who will be utilizing the said technology. Last but not least, it is essential to make preparations for the ongoing support and maintenance of

new technologies in order to guarantee that they are utilized in an effective and efficient manner over the course of time.

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Appendices

Appendix 1: Questionnaire

ABSA BANK QUESTIONNARE

Thank you for taking the time to answer these questions. The following questions are about to know how technology was adopted and used during and after Covid-19 at Absa Bank.

1. Briefly describe how you first understood about Covid-19?

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.....

2. What is your age?

.....

3. Are you a Male or Female

.....

4. How Covid-19 pandemic did affect you socially and economically?

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5. What measures were put in place at your work place during the beginning of the pandemic and how did you responds and managed to accept them?

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6. Did the bank stopped all of its operations or there were other forms of operations which were put in place during the Level five lockdown?

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7. If yes to the above question, it was for how long until operations started to resume?

.....

8. Which methods of communication were being used during lockdown and what technological devices and software were being used?

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9. What technological services were introduced at your company as a way of continuing with operations?

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10. What were the challenges faced during the introduction of these new technologies at your organization?

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11. Did some employees lost their jobs due to technophobic issues or they were changed departments of work?

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12. How new technologies did improve business operations and can it be said they changed business positively compared to older systems before Covid-19?

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13. How can you compare new and old technologies at your bank in terms of performance at your organization or bank?

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14. What advice can you give on other business organizations about technology adoption and use and why?

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15. What challenges did you face with your clients in terms of adapting to your new technology systems and how did your clients react in adapting to these new systems?

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16. How new technologies affected you day to day business?

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17. New technologies which were introduced during Corona virus era are you still using them or not and why?

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Appendix 2: A.U Ethics form



AFRICA UNIVERSITY
CA United Arab Emirates - Rabat - Mauritius

AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE (AUREC)

For office use only

Protocol no: _____

Type of review: ☐ Full Committee ☐ Expedited ☐ Exempted ☐

Office stamp

Fees paid/receipt number: _____

APPLICATION FOR INITIAL REVIEW

NB: This form must be completed by all persons/teams applying for ethical review by AUREC. Upon completion by the investigator(s)/researcher(s) it should be submitted electronically to AUREC, Africa University, Fairfield Road, Old Mutare, P.O. Box 1320, Mutare. Application fees (to cover the costs of reviewing proposal) should be paid to the Africa University Business Office, and proof of payment should accompany each application. Please complete all sections of this application form. If there is insufficient space on the form you may use additional pages.

Check list

This checklist is meant to aid researchers in preparing a complete application package and to help expedite review by the AUREC. Please tick all boxes as appropriate (Indicate N/A where inapplicable).

CONTACT PERSON'S NAME : CHAGWIZA TATENOA CLEMENCE

CONTACT ADDRESS: 31 KLIPBANK FARM, GROBLERSDAL,

EMAIL ADDRESS : chagwiza94@gmail.com

CONTACT NO: +27 22 535 1188

UNDERGRADUATES

		Applicant	AUREC
1	Application form duly completed		
2	Electronic version of research proposal to aurec@african.edu		
3	Consent forms in English and local language of study population		
4	Advertisement or letter or card used for recruiting participants and any supplementary information (if applicable)		
5	Data collection tools being administered during the study in English and local language of study population (if applicable) included in the proposal		
6	Budget and timeframe included in the proposal		
7	Approval letter from your academic supervisor/college or institution		
8	Approval letter from authorities where study will be conducted		
9	Application fee paid at AU Business Office and receipt (or copy) attached to application form		

POST GRADUATES AND OTHER RESEARCHERS

		Applicant	AUREC
1	Application form duly completed	✓	
2	Electronic version of full research proposal (chapter 1 – 3 completed) to aurec@african.edu	✓	
3	Proposal summary (see guidelines below)	✓	
4	Consent form in English and local language of study population	✓	
5	Advertisement or letter or card used for recruiting participants and any supplementary information (if applicable)	N/A	
6	Data collection tools being administered during the study in English and local language of study population (if applicable)	✓	
7	Budget and timeframe	✓	
8	Approval letter from academic supervisor/college or institution (if you are a student)	✓	
9	Approval letter from authorities where study will be conducted	✓	
10	Application fee paid at AU Business Office and receipt attached to application form	✓	
12	CV's for D Phil and PhD candidates	N/A	

Chagwiza

Signature: Investigator/Researcher

TATENOA

Name

21/02/2024

Date

1. General information

1.1. Study title: THE EFFICACY OF TECHNOLOGY ADOPTION

Application for Initial Review Form, Version 1.0, 13 July 2020

AND USE DURING AND AFTER COVID-19 AT
ABSA BANK LTD SOUTH AFRICA.

- 1.2. Name of Principal Investigator(Pi)/ Researcher: CHAGWIZA, TATENDA. C
- 1.3. Nationality of Investigator/Researcher: ZIMBABWEAN
- 1.4. Proposed date of start of study: (dd/mm/yyyy) 30/06/2023
- 1.5. Expected duration of study: 9 months
- 1.6. Study site(s) in Zimbabwe: _____
- 1.7. Sites outside Zimbabwe: SOUTH AFRICA
- 1.8. Study budget: R10 000 Source of Funding: SELF
- 1.9. Is the researcher a student? Yes/No
- 1.10. If Yes, indicate the following:
- 1.10.1. Name and address of institution: AFRICA UNIVERSITY
- 1.10.2. College: OF BUSINESS, PEACE, LEADERSHIP & GOVERNANCE
- 1.10.3. Level of study Undergraduate/Master's/PhD MASTER'S
- 1.10.4. Name of Supervisor: DR. A. KANDIERO
- 1.11. If No to question 1.10, then indicate the following:
- 1.11.1. Name and address of institution: _____
- 1.11.2. Academic Title of PI: _____
- 1.11.3. Existing Qualifications: _____
- 1.11.4. Co Investigators: _____

Names:	Qualifications	Institution

2. Statement by the investigator

I Tatenda Chagwiza certify that the information in this application document and the accompanying documents is true and complete in all respects. I confirm that the application has NOT been rejected by any other ethics review committee.

Signature Chagwiza Date: 21/02/2024

Insertion Research: Tatenda Chagwiza
Message

Hilary Mangwenya (ZA) <Hilary.Mangwenya@absa.africa>
chagwizatc@gmail.com <chagwizatc@gmail.com>

Wed, 13 Mar 2024 at 13:36

> Whom It May Concern

the undersigned wish to confirm that Tatenda Chagwiza completed a research on our organisation as part of his MBA dissertation. To the best of my knowledge, the information gathered is true and accurate and the process did not breach any of our ethics and governance requirements.

Sincerely,

Hilary Mangwenya
Head – Investments & Liquidity Solutions
Relationship Banking
+27 82 562 3571/+2782 575 7645
hilary.mangwenya@absa.africa
25a Sandton Campus South, 15 Alice Lane, Sandton, 2196, South Africa

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A Bank Limited is a subsidiary of Absa Group Limited and is an Authorised Financial Services Provider and Registered Credit Provider, registration number: TCP7.

Appendix 4: Assessment form

AFRICA UNIVERSITY CBPLG MASTERS DISSERTATION PROGRESS ASSESSMENT REPORT

1. Student Details.

Student Name:	TATENOA, CLEMENCE		
Student Surname:	CHAGWIZA		
Student ID Number:	221065		
Student's Email address:	chagwizate@africau.edu		
Academic department:	BUSINESS, PEACE, LEADERSHIP & GOVERNANCE		
Date/Year of first registration:	01/08/2022	Expected date/year of Graduation:	08/06/2024
Reporting Period:	22 months		

2. Supervisor Details

Name of Supervisor:	DR. A. KANDIERO
Supervisor's Email address:	kandieroa@africau.edu

3. Dissertation Information

Research Title:	THE EFFICACY OF TECHNOLOGY ADOPTION DURING & AFTER COVID-19 AT ABSA BANK SOUTH AFRICA
-----------------	---

4. Account of work done (Summarise progress per chapter or section)

Stage	Comments		Student's Signature	Supervisor's Signature	Date of Submission
	Done	work in progress			
Proposal & Defense	✓		Chagwiza		15/04/2023
AUREC Submission & Clearance	✓		Chagwiza		15/05/2023
Chapter 1	✓		Chagwiza		15/06/2023
Chapter 2	✓		Chagwiza		15/07/2023
Chapter 3	✓		Chagwiza		15/08/2023
Chapter 4	✓		Chagwiza		15/09/2023
Chapter 5	✓		Chagwiza		15/10/2023
Final Dissertation Defense	✓		Chagwiza		23/11/2023
GSC Submission and Clearance	✓		Chagwiza		23/04/2024

Email back to:

hodme@africau.edu

Cc: gsc_cbplg@africau.edu and cbplgsec@africau.edu

1

