FACTORS INFLUENCING THE USE OF ONLINE BANKING IN MALAWI: A CASE OF COMMERCIAL BANKS IN LILONGWE CITY

MASTER OF BUSINESS ADMINISTRATION
DISSERTATION

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UNIVERSITY OF MALAWI
THE POLYTECHNIC

JULY 2024

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MASTER OF BUSINESS ADMINISTRATION DISSERTATION

By

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BSc (Business Management and Entrepreneurship)

A Dissertation Submitted to Management Studies Department, Faculty of Commerce, in Partial Fulfilment of the Requirements for the Award of a Degree of Master of Business Administration

University of Malawi

The Polytechnic

July 2024

DECLARATION

I, Mussa Abbas, declare that this MBA Thesis, submitted for the award of Master of Business Administration at University of Malawi, the Polytechnic, is wholly my work unless otherwise referenced or acknowledged. Further, no part of this thesis has been submitted anywhere for an award of any other degree or examination to any other university or college.

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We, the undersigned, hereby certify that we have read and approve for examination by the University of Malawi, Polytechnic this thesis entitled "*Factors Influencing the Use of Online Banking in Malawi: A Case of commercial Banks in Lilongwe City*".

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DEDICATION

This dissertation is dedicated to the people who have supported me throughout my education especially the management of IBT Welfare for their financial support. Thanks for making me see this adventure through to the end.

ACKNOWLEDGEMENTS

My profound gratitude goes to the almighty Allah for the abundant grace and knowledge He has given me throughout the course of this study. I would want also to say a big thank you to IBT Welfare (my sponsor who provided a scholarship towards my entire study). Again, my sincere thanks should go to my family members and, in particular, my wife Zynab Chikalimba Abbas; my kids, Ridhwan Abbas, Aminah Abbas & Ishaq Abbas; and my Uncle-Mr Maxwell Dimu with care and unflinching support. To all who made diverse contribution to this work, whose names I cannot mention.

In a special way, I acknowledge with thanks the effort of Dr George Dzimbiri who supervised this work and gave me professional encouragement, provided feedback and suggestions for improving the write ups and illustrations based on the earlier drafts of work and checked consistency, accuracy and coherence of the final output. The same should go to Dr George Dzimbiri who also happened to be my lecturer for the entire course work.

ABSTRACT

The study aimed at analysing factors influencing the use of online banking in Malawi using Lilongwe city. Research on online banking has gained attention recently in order to understand how online banking is driven and make recommendations on how it can be effectively improved to bank performance. Despite having literature in cross, the world and in Africa, studies on drivers of online banking in Malawi and in banking sector are limited. This study aimed that closing this gap by analysing factors that influence use of online banking in Malawi commercial banks. The study is of essence to banks because it provides insights on key determinants of online banking and how commercial banks can handle these factors to improve online banking usage. The study research design followed positivist philosophy, deductive approach, quantitative, survey and cross-sectional time horizon. The sampling method used was convenient sampling, and a sample size of 384 was determined using Cochran's equation from a larger population of over 1000 and 273 bank customers participated in the study. The study further collected data using a questionnaire, and a pilot study was conducted on 10 online banking customers outside Lilongwe city. The study employed multiple regression as a data analysis technique since all objectives were cause and effect and hypotheses were developed. Findings of the study show that performance expectancy ($p<0.05$) and demography ($p<0.05$) are positive and significant factors that determine the use of online banking in Malawi. On the other hand, social influence ($p>0.05$) and facilitating condition ($p>0.05$) were found to be insignificant at 95% confidence levels, making them non-predictors of use of online banking in Malawi. The study concluded that demography and performance expectancy significant in helping financial institutions enhance use of online banking. The study also concluded that the uptake of online banking is not dependent on social influence and facilitating condition. Therefore, the study recommends that banks must focus on improving online banking to improve perceptions of banking clients towards the use of online banking. Further banks must focus on commercialising online banking to literate people. The study was cross-section which only provides a snapshot how use of online banking is influenced currently. Therefore, future studies can replicate this study by using a longitudinal study.

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ABBREVIATIONS AND ACRONYMS

CI	Customer innovativeness
MUBAS	Malawi University of Business and applied sciences
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
TAM	Technology Acceptance Model
UTAUT	Unified Theory of Acceptance and Use of Technology

CHAPTER ONE: INTRODUCTION

1.1 Background

1.1.1 Use of online banking

Online banking is a technological channel that allows customers to access banking services and products without visiting a physical bank office (Banu et al., 2019). Online banking can also be defined as a technology that allows customers to transact without paperwork (Mavaza, 2019). The term online banking is used interchangeably with terms such as internet banking and electronic banking (e-banking). In this dissertation, the term online banking will be used instead of the other terms. Online banking includes conducting banking activities such as cash transfers, payments, and chequebook requests without visiting bank branches (Joshi & Khan, 2023).

Modern banking refers to the banking system and practices that have evolved over the years to keep pace with technological advancements and changing customer needs (Murugun, 2023). Modern banking typically includes a range of services such as checking and savings accounts, loans, credit cards, online and mobile banking, and investment services. One of the main characteristics of modern banking is its focus on digital technology, which allows banks to provide their customers with easy and convenient access to banking services anytime and anywhere. Mobile banking apps, online banking platforms, and other digital tools have become essential features of modern banking, enabling customers to manage their finances, transfer funds, and pay bills with ease (Akhter et al., 2022). Overall, modern banking is about providing customers with convenient, flexible, and innovative financial solutions that help them manage their money and achieve their financial goals. Ultimately, the banking option is to give customers a chance to manage money at their comfort zone by either making a deposit or transfers through their computer or phone.

Online banking is a new way of offering banking services. It is a step in creating virtual banking, which will lead to complete paperless banking, eliminating banknotes and other paperwork supporting banking operations. A digital currency has been created to facilitate online banking (Al-Sabaawi et al., 2021). Cryptocurrency is a potential currency. cryptocurrency has opened up investment opportunities and is accepted as a formal currency in specified countries such as the United States of America (USA), Canada, and the United Kingdom (UK).

Bitcoin or cryptocurrency has already made its way into Southern Africa. This means that online banking is evolving into a new age of banking. Today online banking is an integral part of economic growth (Akhter et al., 2022). Therefore, it is true that digital technology has increased operational efficiency for financial institutions even in Malawi by enabling faster transaction processing and reducing costs associated with physical branches.

Online banking is classified into mobile banking, automated teller machine (ATM), debit/credit cards. These classifications of online banking have been elaborated on to demonstrate how distinctive they are and to demonstrate is the breadth of online banking. Mobile banking is a technology that allows customers to transact using their mobile devices (Almajalia, et al., 2023). Almajalia noted that mobile banking became a solution and part of people's lives during the COVID-19 pandemic. The technology enables a customer to connect to the cyber world and transact at any time (Aabdullah et al., 2019). The technology is used differently in developing countries and developed countries. The technology is used for financial inclusion in developing countries and as a way of simply managing money in developed countries (Yazid et al., 2023). The technology benefits both banks and their customers, while banks are improving efficiency, customers are achieving convenience, time optimisation and flexibility (Foroughi et al., 2019). This has made mobile banking become an area of competitive advantage in the banking sector (Shankara et al., 2020). Some of the mobile banking services includes; mobile banking over mobile applications for smart phones, mobile banking over SMS also known as SMS banking and mobile banking over unstructured supplementary service data (USSD).

Technology is a focus in Malawi's 2063 digital economy development. The use of online banking improves financial inclusion and minimises costs such as transportation costs in remote areas. As such, the government is focusing on improving access to mobile phones through tax incentives for mobile phones and reducing the overall cost of mobile phones (National Planning Commission, 2020). Therefore, it has become imperative to examine how the use of this online banking service is influenced. ATM is a technology which helps customers perform financial transactions with the aid of a card and without human assistance (Kessey et al., 2020), As the name suggests, the ATM is an artificial bank teller operating 24 hours a day to make bank teller services available to customers at any time. Kessey and Abassah-Wesley revealed that the technology was introduced in London at Barclays Bank in 1967.

The technology enables customers to deposit, and make payments as well as withdraw money, and it has fees attached to each transaction (Murugun, 2023). The technology is public, which makes its adopters vary based on user demography and social influence (Famose & Onamade, 2022). The ATM in Malawi has become an option to access money when banks are closed. It is not clear if demographics and social influences are the only factors to consider in determining the use of this technology since social influence also impacts how people use ATMs. However, the ATM has been intergraded with online banking. This means that in an event where a customer cannot access any agency to help them withdraw money, they can still get assisted by the ATM (Mavaza, 2019). This makes ATMs significant in developing a digital economy in Malawi.

Debit/credit card is a technology that uses a card like a chequebook to enable a customer to transact and check their account balance (Sathiyamoorty, 2022). The technology has two advantages over traditional banking systems, which are, convenient access to money through ATM and reduce indirect cost of checking account balances (Bachas et al., 2021). Studies done in refugee settings (Martina, 2019) found that debit/credit cards improve information sharing in the sector and reduce cash logistics. This shows that despite enabling refugees to access their funds, humanitarian organisations can keep track of refugees, their locations and expenditures. A study done in Indonesia (Ma'rifah & Faridatussalam, 2023) established that debit/ credit cards have a positive impact on the money supply in a country.

1.1.2 Perceived factors influencing online banking

Online banking has several advantages, ranging from flexibility in banking operations to e-commerce support. In this section various advantages of online banking have been discussed. Online banking provides flexibility in banking operations (Ismaylova, 2020). This means that customers can use banking services at their convenient time. Most banking services are available online, which enables customers to flexibly use banking services (Akhter et al., 2022). Even cash deposits can be done online, which means that online banking is a technology toward a more flexible banking system. Small business owners can pay bills online and have the bank note store the payee’s information for future payments. This is useful when bill amounts vary over time, as business owners can log in and adjust the details of the individual whom they are paying.

Online banking improves efficiency in bank operations (Ismaylova, 2020). The technology enables banks to reduce their operating costs such as labour and service cost (Albort-Morant et al., 2021). Because most banking services can be easily accessed by customers through their phones and computers, the number of customers queuing for bank services is significantly reduced (Foroughi et al., 2019); as such, the bank can operate with a few employees. This enables the bank to reduce its operating costs and increase its profitability. On the other hand, the ability of a customer to transact without waiting in queues improves the speed of service delivery to bank customers. Convenience is one of the most essential advantages of internet banking that outweighs any disadvantages. Making transactions and payments at the touch of a button without having to leave the house or workplace is a convenience that no one wants to give up (Ismaylova, 2020). When compared to visiting the bank, keeping track of accounts over the internet is faster and more convenient (Albort-Morant et al., 2021). Non-transactional services such as obtaining a cheque book online, updating accounts, and inquiring about the interest rates on various financial products, and so on, are made considerably easier by online banking services. To encourage consumers to use online banking, most banks provide low- or no-deposit accounts, as well as lesser penalties for early withdrawal of fixed deposits (Albort-Morant et al., 2021). This sort of banking entails fewer physical exertions and greater rewards. The need to expand office space and hire more people to deal with customers is greatly reduced, resulting in huge cost savings for banks (Foroughi et al., 2019).

Online banking helps customers access their bank accounts and transact at any time (Murugun, 2023). With the promotion of the digital economy, customers can use their debit cards, ATMs, and phones to transact at any time (Foroughi et al., 2019). This has improved financial inclusion and provided a more convenient banking experience. In recent years, online banking has taken a step forward in the form of mobile internet banking, which provides customers with unlimited mobility and allows them to conduct financial transactions while on the go.

Banking transactions can be completed 24 hours a day, seven days a week, without the need for a physical visit to the bank. Discounts are another significant benefit of using online banking services that allows users to take advantage of numerous discounts. People can take advantage of a variety of discounts at retail shops when they use their debit or credit cards (Alsaleh & Thakur, 2019). Similarly, monitoring services can be used by customers to keep track of their transactions and manage their budgets.

Technology has made it exceedingly easy for both the bank and the consumer to get information by simply logging in to the bank's website. Nevertheless, financial planning capabilities, functional budgeting and forecasting tools, loan calculators, investment research tools, and equities trading platforms are all examples of online banking services. Aside from that, most banks offer online tax forms and tax preparation services. The World Bank and the Malawi government consider online banking as one of the tools that will mitigate poverty in Malawi and beyond (World Bank, 2022).

Online banking supports e-commerce applications such as online bill payment and online trading (Albort-Morant et al., 2021). Because the response time for this type of transaction is so quick, customers can literally wait until the last minute to send payment. The virtual banking system allows you to transfer money at any time of day or night, 365 days a year. One can get his or her transaction history for various accounts and perform his or her own "what-if" analysis before completing any online transaction. As a result, better money management is possible. E-banking also allows you to check and print balance inquiries, view transaction histories, transfer cash, pay online utility bills, and make online purchases, among other things (Khan et al., 2021). With the coming of online banking, most e-commerce applications are connected to a bank, which means that customers can make transactions such as shopping using their phones or computers. The coming of online banking is a transition into a digital world where papers, including banknotes, will not be required to make payments. The use of online banking has spread rapidly across the globe. It has also become imperative for researchers to understand what is influencing the use of online banking in order to contribute to managerial and theoretical developments regarding online banking. This will secure the success of online banking technology, which has several advantages in business for both the bank and its clients. In the U.S., studies have focused on the effects of performance expectancy in predicting online banking usage but ignored the social aspects that are observed to be a determiner of the use of online payment (AlSaleh & Thakur, 2019).

In the context of Europe, the economic crisis of Spain was a wake-up call for banks to start thinking of ways to be competitive by reducing cost and secure profit, and online banking became one of the key technologies that could save banks from a fall (Albort-Morant et al., 2021). This suggests that online banking is of competitive edge if it can be implemented well. Albort-Morant et al., 2021 observed that the role of demographics in influencing use of online banking has not been extensively researched. This suggests that studies have not been integrative leaving important questions unanswered.

In Turkey, the use of online banking started in 1997 due to demographic changes such as literacy, e-commerce and changes in regulations of financial sector (Khan et al., 2021). It is notable that Turkey adopted online banking in its early stages. Despite several challenges, the facilitating condition in online banking was more convenient compared to the facilitating condition in the UK, which was considered a possible explanation for the use of online banking in Turkey (Khan et al., 2021). This suggests that facilitating condition of online banking could be a key factor in promoting the use of online payment.

The use of online banking has progressed in Asia as well. Online banking is new in Bangladesh but has received a lot of attention by financial institutions in the country, which are agents of economic growth (Akhter et al., 2022). This links the banking industry and economic growth to online banking, confirming that an efficient banking sector will promote financial inclusion and propel economic growth. Generally, the use of online transactions is at the growth stage in Bangladesh, where business transactions and more financial transactions are dependent on online banking opening a portal for e-commerce (Akhter et al., 2022). The aforementioned benefits of online banking in Bangladesh have made banks increase the use of online banking with ease. (Akhter et al., 2022). This portrays an online banking user as an individual looking for convenient and efficient banking solutions. Despite the growth in usage of online banking in Bangladesh, banks are not aware of determinants of this sudden rise in online banking usage (Akhter et al., 2022).

Globalisation in the 1990s has played a role in the development and use of online banking in Asia. For instance, policy reforms in India were made to respond to needs of global markets by incorporating online banking (Banu et al., 2019). Banu et al. (2019) noted that the use of online banking In India was linked to educated people (demography) working in the technology sector, and those pursuing various professions across the globe in India (Banu et al., 2019). This emphasises the need to analyse the causality between demography and online banking usage. However, the research in India did not explore how performance expectancy (such as perceived ease of use) and facilitating condition (such as system errors) do determine the use of online banking (Banu et al., 2019).

Being part of the global community, online banking has also received attention by banks and Africans. In Nigeria, the use of online banking is related to demography (i.e., use of ATMs depends on age, literacy and social standing) (Famose & Onamade, 2022). This suggests that Africans, such as Nigerians, responds to technologies depending on the stage they are in life among other things.

On the other hand, by 2019, 7.3 million of the Ghanaian population, representing 24%, were unbanked and did not have access to online banking (Kessey & Abassah-Wesley, 2020). This means that the unbanked population remained detached from the formal financial system, exposing themselves to poverty and failing to contribute positively to Ghana's economic development. However, to attract more usage of online banking, banks in Ghana are implementing convenient and safe online banking systems (Kessey & Abassah-Wesley, 2020). The study did not factor in other variables such as facilitating condition.

In 2011, the International Development Association (IDA) funded the Malawi government with $28 million to implement a digital financial service, which enables all banks to be connected to a single portal (The World Bank, 2021). The World Bank claims that this project increased adult usage of financial institutions by 40%. In 2020 the IDA also funded the Malawi government with an extra $86 million to improve digital transformation and improve access to finance in the commercial sector (World Bank, 2021). Malawi had registered a total of 900 000 online banking subscribers by 2020 representing a 7.9% increase (Gondwe, 2020). This indicates that Malawi is undergoing a digital transformation. This means that the use of online banking has been driven by individuals themselves. On the other hand, Gondwe revealed that Nat-switch (a portal developed from IDA funding) transactions amounted to MK2.3 billion, which represented a 4.2% decline from the previous quarter (30 September 2019 to 31 December, 2019). On the other hand, Malakata (2023) reported that Malawians have built up trust in online banking, but the perceived cost of online banking is a limitation on its use. Therefore, it is imperative to examine factors influencing the usage of online banking in Malawi.

Previous studies have established that online banking depends on performance expectancy, social influence, user demography, and facilitating condition (Anouze & Alamro, 2018; Hassana & Farmanesh, 2022). However, there is no study which has integrated these variables in one study. This limitation occurred because these studies were depending on one or a few theoretical frameworks.

For instance, studies (Akhter et al., 2022; Bekhit et al., 2022) depended heavily on the unified theory of acceptance and use of technology 2 (UTAUT 2) which was developed by Venkatesh et al. in 2012. This theory has a generic approach and ignores other factors such as system errors in online banking and focuses on performance expectancy. This makes previous studies extensively study performance expectancy and its impact on the use of online banking.

1.2 Problem statement

The use of online banking is a key issue in banking sector. This is because the online banking brings efficiency in the banking sector (Baabdullah et al., 2019; Ismaylova, 2020). Online banking also enables ecommerce (Albort-Morant et al., 2021; Murugun, 2023). This has emphases the need for research on how use of online banking is implied. Studies have found that factors such as facilitating conditions, social influence, user demography and performance expectancy positively and significantly determine use of online banking (Akhter et al., 2022; Anouze & Alamro, 2018; Haider et al., 2018).

On the other hand, results of these studies have contesting findings based on their context. In Bangladesh, Akhter et al. (2022) found that social influence significantly determined use of online banking while in Jordan, Hassana and Farmanesh (2022) found the opposite. Further, in Azerbaijan, Ismaylova (2020) found that gender significantly determine the use of online banking, but in Kuwait, Bekhit et al. (2022) had opposing findings. Baabdullah et al. (2019) highlighted that these contradictions emphasise a need for further research through a replicative study. Khan et al. (2021) contextual differences such as development contribute to a variation of findings as such research should be more reflective of its context and care need to be taken in applying in a different context. The contextual gap in literature is that prior studies have investigated the factors determining online banking in Africa, Asia, Europe and America, but literature on drivers of usage of online banking is missing in Malawi. Further, the conceptual gap in literature is that prior studies have explored the effects of social influence, facilitating conditions, performance expectancy on use of mobile payment through mediators (Baabdullah et al., 2019; Khan et al., 2021). This implies that literature on the direct effect is missing. Therefore, this study aims to fill the contextual gap and conceptual gaps by analysing factors influencing the use of online banking in Malawi using the case of commercial banks in Lilongwe city.

1.3 Research objectives

The study objectives were as follows:

1.3.1 General objective

To analyse factors influencing the use of online banking in Lilongwe City. This was achieved through the following specific objectives.

1.3.2 Specific objectives

i. To establish the influence of facilitating condition on the use of online banking in Lilongwe City.
ii. To examine the influence of social influence on the use of online banking in Lilongwe City.
iii. To determine the influence of performance expectancy on the use of online banking in Lilongwe City.
iv. To assess the influence of user demography on the use of online banking in Lilongwe City.

1.4 Justification for the study

Banks*:* Banks can use the findings of this study to improve their online banking systems and uptake. The study has managerial implications and insights, which help banks extend their online banking uptake in Malawi. Currently, there is no study that can help banks determine if the use of online banking is due to social influence, facilitating condition, performance expectancy or user demography. This study highlights key determinants of online banking usage and makes recommendations on what banks can do to advance the use of online banking.

The Reserve Bank will benefit from the findings by identifying factors underpinning the use of online banking. This is significant in policy formulation. For instance, facilitating condition related issues need to be supported by the Reserve Bank, such as increased cybercrime, will call for strong policies related to online banking policy development. Similarly, high rates of mobile banking down time need the Reserve Bank's intervention. However, policy adjustments cannot happen if the central bank is in dark on how the use of online banking is determined. Scholars/academicians*:* Additionally, the implications of the study are that it is a contribution to the literature in the field of business administration.

1.5 Structure of the dissertation

This dissertation has five chapters. Chapter one presents an introduction that highlights the background, problem statement, research objectives and questions, hypotheses, and significance of the study.

Chapter two presents a literature review of online banking. The Chapter will discuss theoretical framework. This will explain theories underpinning the study by establishing their claims, year of establishment, how they apply to the study and their weaknesses. The second section of the chapter will discuss empirical literature review by focusing on what others have found in relation to the study and gaps which this study aims to fill. The last part will be the conceptual framework which will discuss how variables in the study were studied.

Chapter three presents the methodology that was used as a road map on how the research objectives were met, and hypotheses tested. This included the research design, study area or case selection, sampling design, data collection, data analysis and research ethics.

Chapter four covers the findings and discussions in relation to the objectives of this study. The chapter will contain sections on response rate, demography, descriptive statistics, correlation, model diagnostic tests, reliability and validity, model estimation and output, discussion of results.

Chapter five presents the conclusions that were made based on the findings of the study. The chapter will contain sections on summary of findings, conclusions, recommendations, limitations of the study and areas for further research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter provides an in-depth analysis of relevant literature. The chapter contains a brief discussion on concepts in the study, theoretical framework which will discuss theories underpinning this study. The chapter also contains an empirical literature review in respect to research objectives. The final section of the chapter is the conceptual framework which demonstrates how variables will be studied.

2.2 Conceptual review

In this section, concepts of the study are defined and explained. The study has a special interest on how social influence, user demography, performance expectancy and facilitating condition determine the use of online banking.

2.2.1 Social influence

Social influence relates to a behaviour of a human being which is stimulated by the social environment (Akhter et al., 2022). Social influence relates to how individuals accept technology in relation to a desire to have a social class or being socially influenced.). Subjective norms are also part of social influence where an individual is expected and propelled to behave based on customs of a specified groups (Banu et al., 2019). It is imperative to distinguish subjective norms from theory of planned behaviour from social influence from UTAUT models. In social influence, the individual is at liberty to use technology or not while subjective norms involve enforcement for one to behaviour in accordance with the norms of the group. For instance, subjective norms may include use of online banking app by university student.

2.2.2 Demography of online bank users

Demographics are parameters such as gender, age and education (Bekhit et al., 2022). People who are educated are more responsive to technology use, and this also depends on other attributes such as gender (Albort-Morant et al., 2021). The role of demography in technology acceptance research is mixed. Others have looked at demography as a moderating variable while others have looked at it as an independent variable.

Someone who is illiterate might not know the benefits of using a technology, and this impacts their choice of technology to use. Similarly, demographics, such as income levels, will have a direct relationship with usage of technology. For instance, someone in the lowest income bracket cannot afford online banking fees, making his or her financial status a limiting factor with respect to technology use (Famose & Onamade, 2022). Therefore, demographics have a direct relationship with the use of technology. However, Bekhit et al. (2022) found that relationship between demography and online banking usage is not significant. This implies that literature on demography and online ban usage is not complete.

2.2.3 Performance expectancy (PE)

Perception is a mental process that determines one's state of mind (Gellman & Turner, 2013). These mental processes could relate to perceptions or other mental states such as trust in a system. Perceptions in use of technology could include perceived ease of use, perceived usefulness, perceive risks (Akhter et al., 2022). According to Akhter et al., (2022) perceived usefulness relates to customer's beliefs and tools they have that created willingness for them to use technology.

The term perceived usefulness was Davis's idea, which came to light through his technology acceptance model. Later, Venkatesh et al. (2012) adapted the idea of perceived usefulness and used it as performance expectancy in their UTAUT 2 model. On the other hand, perceived risk is a customer's judgement on how, say, a system is, which propels them to accept a technology. Perceived ease of use is the degree to which customers look at a technology as free from mental and physical efforts in using the technology (Akhter et al., 2022). Similarly, perceived ease of use, was developed by Davis in his technology acceptance model. Later, Venkatesh et al. (2012) adapted ease of use, and used it as effort expectancy in their UTAUT models. These clarifications are made to appreciate why the terms are used interchangeably in technology acceptance research.

2.2.4 Facilitating condition (FC)

FC relates to how banks implement online banking, making it convenient and free from cybercrimes. Studies have looked at security as an integral part of online banking, which can predict the use of online banking (Banu et al., 2019). It is imperative for banks to ensure that their online banking systems exceed the technological capabilities of hackers and related cybercrime activities. Further, system errors such as down time or network issues are facilitating condition and can determine how technology will be used.

2.3 Theoretical framework

The study was underpinned by several theories. In this section, theories underpinning the study will be reviewed based on their applicability in this study, and their strengths and weaknesses. Three theories were adapted in this study; these include the theory of planned behaviour, and the unified theory of acceptance and use of technology. The major theory anchoring the study was the UTAUT framework because it was used as a lens to study 2 objectives.

2.3.1 Theory of Planned Behaviour

The study was guided by the theory of planned behaviour. This theory was developed by Acek Ajzen (Belanche et al., 2020). The theory was introduced in the in 1991 (Belanche et al., 2020). The theory claims that a person will use technology if she/he has the intention to do so, but this intention will depend on subjective norms and attitudes (Ziad et al., 2021). While subjective norms are defined as pressure from organisation or social class, it explains how demographics can play a role in technology use. For example, online banking is mostly used by educated people in Malawi. However, online banking is considered risky by elderly people and pressure among this social group to use online banking is significantly low. Therefore, this theory was adapted in this study to analyse if demographics can predict online banking usage in Malawi. The limitation of this theory is that it ignores other external factors, such as facilitating conditions, which can be a barrier to technology usage.

2.3.3 Unified Theory of Acceptance and Use of Technology (UTAUT2)

The study was mainly guided by the UTAUT 2 framework. The theory was developed by Venkatesh et al. (2021 in Molnar et al., 2013). The theory was propounded in 2012. The theory claims that technology is accepted if an individual intends to use it, and this intention is influenced by several factors, such as performance and effort expectance, social influence, perceived price value, facilitating conditions, hedonic motivation, and habit (Gellman & Turner, 2013). The theory was adapted to examine how social influence, performance expectancy, facilitating conditions, gender and behaviour intention determine online banking usage. The limitation of the theory was that it focused on individual characteristics to use technology and ignores external variables such as governmental regulations.

2.4 Empirical literature review

In this section, an extensive review of what others have done on the factors influencing the use of technology is reviewed. This includes reviews of how facilitating condition determine use of online banking. The section will review how social influence determines use of online banking. Further the section will also review literature on how performance expectancy determines use of online banking. And, lastly, literature on the effect of demographics on the use of online banking is explored.

2.4.1 The Influence of facilitating conditions on the use of online banking

A study done in Pakistan (Haider et al., 2018) found that facilitating condition determine the use of online banking. The study measured facilitating conditions in terms of service quality such as information quality. The study used multiple regression analysis and found that with every one-unit increase in service quality that is information quality (the success of the information in conveying the intended meaning, Baabdullah et al. (2019) there is a 0.257-unit increase in the usage of online banking. The study used a predictive model that can explain the direction of influence and significance testing. However, the study had few variables. Therefore, there was a need for a study in Malawi to determine if the quality of information plays a low in influencing online banking usage in the Malawian context.

A study done in Malawi (Saidi, 2009) found that facilitating conditions such as erroneous transactions limit the usage of online banking. The study used descriptive analysis and was based on the Malawi context. The results have importance in the context of the banking sector in Malawi and capture a variable that is rarely captured in current studies. However, the findings in that study are obsolete; many developments have taken place since 2009. Additionally, the study did not use a predictive model, which makes it difficult to use its findings in future managerial decisions. Very few studies have integrated system errors in their analysis; therefore, evaluating facilitating conditions by factoring in system errors had to fill the gap in literature.

A study done in Jordan (Anouze & Alamro, 2018) found that facilitating condition such as security has a positive and significant influence on the usage of online banking. The study used a predictive model (regression) and found that one unit increase in perceived security will lead to a 0.2 increase in online banking at $p<0.01$.

The study implies that when customers perceive that online banking is more secure, the more likely they are to use it. The study is a directive on how serious banks need to improve security issues in the facilitating condition or administration of online banking. These findings are also supported by studies done in Bangladesh (Akhter et al., 2022) and Zimbabwe (Mavaza, 2019). However, these studies have contradictory findings to study done in Spain (Albort-Morant, Sanchís-Pedregosa, & Paredes, 2021), which had different findings between cities and towns.

2.4.2 The influence of social influence on the usage of online banking

A study done in Bangladesh (Akhter et al., 2022) found that social influence, such as peers and relatives, have a positive and significant influence on the usage of online banking. The study aimed to address the problem of lack of information on factors influencing the usage of online banking among bank managers. The study used a regression model and determined that social influence was the most important variable. The significance level was 0.000, 0.295 beta value and 0.634 *t* value, which were above all other variables. The study findings are a directive that managers need to focus on social campaigns, such as referring a friend, to promote online banking usage. The findings of this study are also supported by a Kuwaiti study (Bekhit et al., 2022) that found social influence to be a significant influencer of the use of online banking. However, the two studies were not based in Malawi, and other valuables such as awareness were not considered in both studies. Therefore, there was a need for an integrated methodology to analyse more variables in the context of Malawi to ensure that managerial decisions are effective.

On the contrary, a study done in Jordan (Hassana & Farmanesh, 2022) found that social influence does not have a significant influence on the usage of online banking. The study aimed at developing a model to be used in understanding how online banking usage is influenced. The study was able to explain how variables relate. However, the study focused on variable mapping instead of determining if a variable has a direct influence on the dependent variable. Therefore, there was a need for a study in Malawi that can inform managers on which variables have a direct and significant influence on the usage of online banking to support strategy development in improving the usage of online banking today and in future.

The study done in Bangladesh, Akhter et al. (2022) also found that social influence such as customer innovativeness was a positive and significant influence on the usage of online banking. The study found that customer innovativeness was the second important variable at a significance level of 0.001, 0.267 beta, and t value of 0.565, which was the second main contributor to variations in the dependent variable (use of online banking). The study captured a unique variable which has not been widely studied. However, the study was done in a different study area which might not be representative of Malawi. Therefore, there was a need to conduct a study that would capture unique variables such as customer innovativeness in Malawi to capture a unique customer perspective.

2.4.3 The Influence of performance expectancy on the usage of online banking

A study done in Malaysia (Al-Gharaibah, 2020) found that performance expectancy such as usefulness of a technology does not have a significant influence on the usage of online banking. The study used regression and found the p-value of PU at 0.507 which is greater than the 0.05 significant level. This means that at a 95% confidence level, we cannot say that PU will influence online banking usage. In the context of the regression model, the regression could not find a unique element of PU that accounted for variations in online banking usage. The study used a predictive model and used graduate students as a case study. The study used biased sampling and its findings are well attributed to graduate students in Malaysia. The study was supposed to capture data from a random sample of bank clients, which would be representative of a larger population, which would bank to develop effective strategies for promoting the usage of online banking.

On the contrary, a study done in Jordan (Anouze & Alamro, 2018) found that expected usefulness of a technology has a significant influence on the usage of online banking. The study used more than 300 samples and used multiple regression and artificial neural networks analytical techniques. The findings in that study were also supported by a study done in Pakistan (Haider et al., 2018), Azerbaijan (Ismaylova, 2020), and Bangladeshi (Akhter et al., 2022). However, this study (Anouze and Alamro, 2018) was much focused on TAM framework as such UTAUT 2 variables such as facilitating conditions were not examined. There was a need for a study in Malawi to address this research gap and this proposed study aims at filling this gap. A study done in Bangladesh (Kabir & Islam, 2021) found that performance expectancy such as customer willingness utilise the technology has a significant influence on online banking usage.

The study used a sample of 150, and the Technology Acceptance Model (TAM) was used to analyse the data. The study implies that managers need to inspire customers to improve their willingness to use of online banking. The findings are also supported by a study done in Malaysia (Al-Gharaibah, 2020). However, this study did not capture variables such as customer innovativeness. The study provided partial findings and there were likely more errors since fewer variables were used to explain the model. Therefore, a study needed to be done in Malawi with more variables to reduce errors and provide comprehensive results that would enable policy and strategy development.

2.4.4 The Influence of user demographic on the usage of online banking

A study done in Azerbaijan, Ismaylova (2020) found that user demography significantly influenced online banking usage. The study found that age, gender, and education influenced online banking usage. The study used a sample size of 95, and descriptive analysis was used. The study captured gender, which is not a widely researched area among recent publications, and the study is relatively current. These findings are supported by a study done by Park et al. (2019), and Joshi and Khan (2023). However, a small sample size was used, and the study used descriptive analysis to get the results, which were supposed to be done through an inferential analysis. The findings can be accepted as descriptive and not predictive. These findings, therefore, could lead to misleading managerial decisions, and a study with an appropriate methodology is needed in Malawi, which will be addressed in this study.

A study done in Kuwait, Bekhit et al. (2022) found that user demography var in how they influence the usage of online banking. The study found that education and gender were significant influencers of online banking usage, unlike age. When taken as a set the study found that user demography does not significantly influence the usage of online banking. The study used multiple regression as a predictive model. However, the selection of this model was not a good suit for the study, for instance, gender was found to have a negative influence, which means a one-unit increase in gender will result in a 0.13 decrease in online banking usage. The variable may not have been well-measured, or the regression model was not a good suit for the study. These findings are difficult to understand and apply. Therefore, a study was supposed to be done in Malawi with appropriate analytical techniques to support the explanation of how variables relate to or influence each other.

2.5 The Current research gaps and unsolved issues

Table 1: Current Research Gaps and Unresolved Issues

Source	objective	Problem	Findings	Limitations	gap	How to fill the gap
(Haider, Rahim, & Aslam, 2018)	Antedents of online banking adoption	Banks are not aware of key factors driving the adoption of OB	PU, PEOU, TIT & IQ have a positive and significant influence on the adoption of OB	Used bias sampling (judgemental) & possibly outdated Variables such as cost are not included	More variables need to be considered to produce a comprehensive report on Malawi	Look into more variables and determine the key variables to support the adoption theory and practice of OB
(Anouze & Alamro, 2018)	Factors affecting intention to use e-banking	Low intention to use online banking	PEOU, PU, risk and cost affect the intention to use online banking	Focus on intentions context Possibly outdated Use pathways analysis which didn't explain details of the effect.	Study to analyse the direction of effect to support strategic solutions in Malawi	Look into a methodology that can explain the direction of effect for each predictor variable to support strategic decisions and provide possible solutions.
(Ismaylova, 2020)	Identify factors that influence Internet banking adoption	The low adoption rate of online banking in rural areas	Demography (age gender and education), Awareness, PEOU, PU	Focused in rural areas Small sample size Weak methodology hypothesis testing which used a descriptive approach	A study to test the theory using appropriate methodology and analytical techniques	Analyse how variables such as gender influence the adoption of online banking to identify important demographics to target

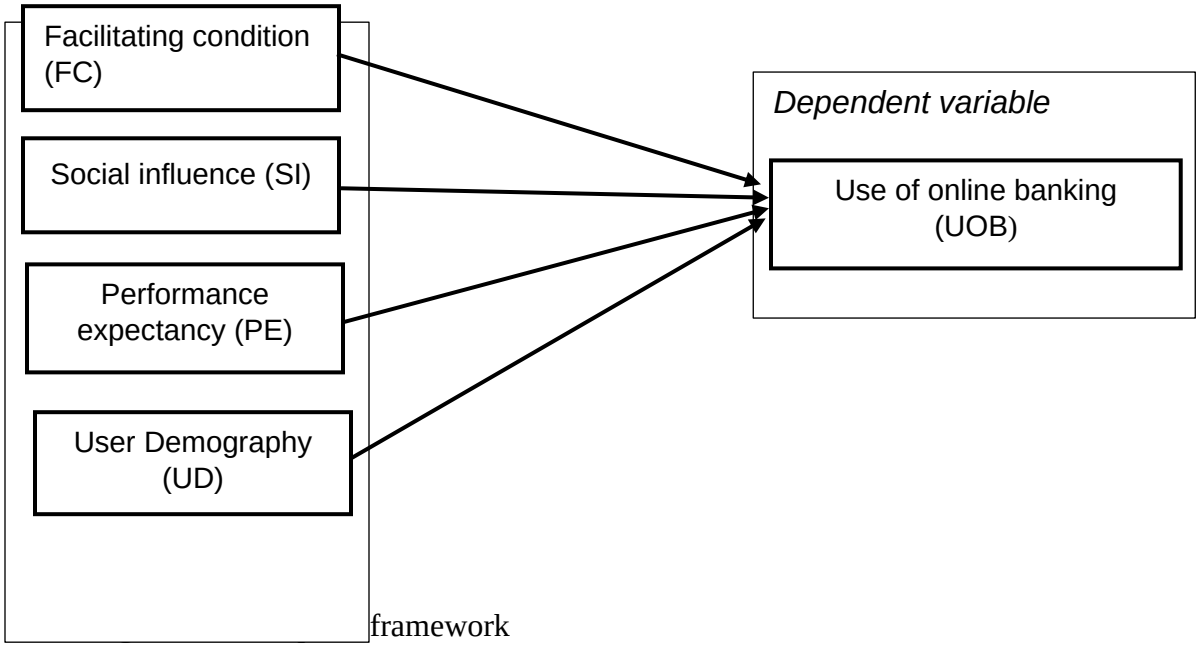
						in the promotion of online banking
(Al-Gharaibah, 2020)	Develop a predictive model to explain customer behavioural intentions regarding the adoption of online banking	Low uptake of online banking regardless that the technology is convenient and cheaper Empirical studies in developing countries are lacking	PEU and customer altitude have a significant influence PU and risk have no significant influence	Focus on graduate students Considered few predictors	Need for a comprehensive report on more variables and focus on all bank clients in the Malawi banking sector	Look into more variables influencing the adoption of online banking to develop a comprehensive predictive model to help banks' strategies and customers adopt online banking
(Mavaza, 2019)	E-banking adoption by Zimbabwean banks	Low adoption of online banking	Lack of trust is the key barrier to adopting online banking	Wrong selection of methodology and weaker analytical techniques Not in Malawi	Need for a methodology that can test the significance and direction of the effect	Use modelling with the capacity to test directional hypotheses to support or reject a particular theory.
(Akhter, Karim, Jannat, & Islam, 2022)	Determining factors of intention to adopt Internet banking services	Lack of information on factors of intention to adopt Internet banking among bank	Risk, PU, PEU, social influence, and customer innovativeness have a significant	Not in Malawi The direction of influence is not explained	Need for a methodology that can explain the direction of influence to help managers understand	Use of analytical techniques to support the explanation of the direction of effect to

		managers to promote the use of online banking	influence		the degree of influence and its direction	support decision-making.
(Bekhit, Leithy, & El-Sayyar, 2022)	Examine factors that are affecting the use of online banking	The limited literature on the topic and missing variables of the study	Risk and demography do not have a significant influence Performance expectancy, social influence and significant influence	Not in Malawi Other variables missing such as cost Analytical techniques for numeric and continuous variables were used for categorical variables	Need for a study to include more variables Use of appropriate analytical technic for nominal or categorical variables.	Use of appropriate analytical techniques for nominal and categorical variables to support accurate reporting.
(Hassana & Farmanesh, 2022)	Propose and examine a conceptual model that best explains the key factors influencing Jordan customer's intention to use SST banking channels	Lack of models to explain the key factors that influence customers to use SST banking channels	Behaviour intention has a significant influence on price value and risk while social influence does not influence behaviour intention	Not in Malawi Focus on variable mapping	Analysis of variables to identify key variables that influence the adoption of online banking	Provide a logical analytical perceptive which easy to understand and can be used in managerial decision making

(Albort-Morant, Sanchís-Pedregosa, & Paredes, 2021)	Explain differing online banking adoption in Spain cities and towns	Adoption varied and no explanation for why others did not use online banking when there was COVID-19 pandemic Lack of studies addressing social-demographic variables	PEOU has significant over UB Adoption factors vary among cities	Focused on process mapping. Not in Malawi	Need for analysis on how the adoption of online banking is influenced to help in managerial decision making	Provide a logical flow on how the adoption of online banking influences without complication to help managers easily understand and make managerial decisions.

2.6 Conceptual framework

Therefore, the study developed a conceptual framework. In the conceptual framework, the theories in the theoretical framework are customised or integrated to form a new perspective on how determinants of online banking can be studied. Figure 2.4 presents the conceptual framework.



framework

The independent variable in the study were facilitating conditions, social influence performance expectancy and user demography. This implies that the dependent variable was use of online banking.

2.7 Research hypothesis (H0)

Based on the theoretical framework in this study, the study developed hypotheses to help verify the theoretical framework underpinning the research objectives of this study. The hypotheses are outlined below.

i. H_1 facilitating condition does not have a positive and significant influence on the use of online banking.
ii. H_2 Social influence does not have a positive and significant influence on the use of online banking.
iii. H_3 Performance expectancy does not have a significant influence on the use of online banking.
iv. H_4 user demography does not have a significant influence on the use of online banking.

2.8 Summary of literature review

This chapter provided an in-depth analysis of relevant literature. The chapter's theoretical framework shows that the study was underpinned by two theories, the UTAUT and TPB. The UTAUT underpinned three research objectives while the TPB underpinned one objective. The empirical literature review shows that on the effects of facilitating conditions on use behaviour studies by Haider et al. (2018) and Saidi (2009) concours that facilitating conditions determines use of online banking. On the effects of performance expectancy, Al-Gharaibah (2020) and Anouze and Alamro (2018) have contradicting findings. Further on the effect of social influence on use of online banking, Akhter et al. (2022) and Hassana and Farmanesh (2022) have contrary results. On the effects of demography, Ismaylova (2020) and Bekhit et al. (2022) have inconclusive findings. Lastly, a conceptual framework was developed to explain how variables are examined in this study with use of online banking as dependent variable and independent variables including social influence, user demography, performance expectancy and facilitating conditions.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

To achieve this objective, this chapter discusses the step-by-step methodology used based on Saunders's onion. To develop an effective methodology, Saunders proposes that research philosophies need to be chosen, then approach and strategies, which must be followed by research choice, time horizon, techniques and procedures.

3.2 Research philosophy

This research used the Positivist philosophy. This philosophy is an epistemological position that advocates working with natural reality to produce a law-like theory (Saunders et al., 2012). The study was based on the principles of observable natural reality. The philosophy which governed this study was that for people to use online banking there must be factors influencing them in real life. This means that the belief of this study was of a positivist, as such a positivist philosophy was adopted for the study.

On the other hand, the ontology of positivism should not be confused with realism. The ontology is objective like in realism; however, in positivism the ontology is external and independent of social actors unlike in realism where the ontology is independent of human thoughts and beliefs (Saunders et al., 2012). On the contrary, the ontology in this study was that the factors influencing the use of online banking are objective and independent of social actors. For example, the price, technical errors, and the usefulness of online banking will influence its use. Therefore, the study's ontology supports positivist philosophy, and the use of this philosophy was justified for this study.

3.3 Research approach

The study used a deductive approach. A deductive approach is based on hypothesis testing and is used with a positivist philosophy (Saunders et al., 2012). Zikmund et al. (2010) inferred that a deductive approach uses deductive reasoning, meaning a theory-building approach that uses a logical approach in making conclusions. The study has developed hypotheses to test if the belief or theory that the use of online banking is influenced by factors such as social influence is significant or spurious. This means that the study did not use an inductive approach, which aims at generating a theory. Saunders et al. (2012) described the inductive approach as a method that builds theory based on observation.

The inductive approach uses observation and makes conclusions (Sekaran, 2003). This means that the inductive approach is a suit for qualitative research and can be used with interpretivism philosophy. However, in this study, the researcher aims at testing the theory of social influence, facilitating condition, user demography, and performance expectancy that influence the use of online banking. To achieve this, a deductive approach was required. Therefore, the choice of a deductive approach was appropriate for this study.

3.4 Strategy

The study used a survey as a research technique. A survey is a research technique that uses a questionnaire to collect primary data from a sample (Sreejesh, Mohapatra, & Anusree, 2014). A survey is used when data will be collected from a larger sample. In this study, a larger sample was required to support hypothesis testing. The survey was recommended to be used in a deductive approach (Saunders et al., 2019). There are several other strategies such as archival, grounded theory, and experiments. However, these are not a good fit for this study; for example, grounded theory is used in inductive and interpretivism philosophy (Saunders et al., 2019) and the data collected cannot be used for theory testing.

3.5 Research methodological choice

The study used the mono-quantitative method. The study had used a single data collection and quantitative analysis techniques. This is what Saunders et al. (2012) referred to as mono-quantitative method. The study has cause ad effects questions which can be ably collected and analysed using a single data collection instrument and a single data analytical technique. The study used quantitative data and used inferential analytical techniques to analyse how online banking is influenced. This means that a mono-quantitative choice was appropriate for the study.

3.6 Time horizons

The study was cross-sectional. A cross-sectional time horizon was used in a survey (Creswell, 2012). Zikmund et al. (2010) define a cross-sectional study as a research design which collects data from a population or sample at a single moment in time. This means that the study captured data at only one point in time to reflect how online banking is being influenced currently. Given that the researcher intended to explore a trend on how online banking usage is influenced over time, a longitudinal study would have been appropriate (Saunders et al., 2012).

A longitudinal study studies a phenomenon over time. On the other hand, longitudinal studies use multiple surveys to collect data over time (Sreejesh et al., 2014). Saunders et al. (2019) claimed that due to time limitations, a longitudinal study can be done using secondary data. However, this study was interested in providing a picture of what is currently happening to help managers resolve current issues.

3.7 Research procedures and techniques

This section discusses research procedures and techniques. The first section will discuss case selection, which relates to the location of the study. After case selection, sampling and population will be discussed. After sampling and population, data collection and data analysis will be discussed.

3.7.1 Case selection

The study was based in Lilongwe City. In 2018, the coverage of Lilongwe city was 393km2 with a population of approximately 989,000 (MacLean et al. 2021). Lilongwe city is one of the cities in Malawi with a rapid growth of 4% per year (Manda & Mwalyambwile, 2024). Ntaukira et al. (2021) reported that the city has the highest population of online bank users in excess of 4, 581,244 mobile banking subscribers only. While there is a boom in mobile banking subscription and usage, there is no study which attempted to find out drivers of online banking usage in this location. It was, therefore, imperative to examine this area on factors that influence the usage of online banking.

3.7.2 Population

The population of the study was all bank account holders in Lilongwe City. A population is a complete set of group members (Saunders et al., 2012). This means that anyone who owns a bank account was a member of a group of people who have a bank account. There are eight commercial banks in Malawi. These banks include CDH Investment Bank, Ecobank Malawi, FDH Bank, First Capital Bank Malawi Limited, National Bank of Malawi, NBS Bank, Standard Bank Malawi and Centenary Bank Malawi. The total population of bank customers with subscription to mobile banking is approximately 5 million.

3.7.3 Sampling

The sampling discusses the sampling techniques and the sample size determination. This section is essential in demonstrating how the study reached at the number of participants from the general population and how each element of the sample was selected. Details are provided in the subsequent sections.

3.7.3.1 Sampling technique

The study used convenience sampling. This sampling method involves selecting cases which could be easily accessed by the researcher (Saunders et al., 2012). Creswell's (2012) definition of convenience sampling includes ease of access and willingness to participate. This means that this type of sampling observes research ethics of voluntary participation. It is a technique used by researchers to collect data from a larger sample economically Zikmund et al. (2010). Saunders et al. (2019) has criticised this method based on bias. This means that the technique does not give an equal chance for cases to be selected in a study. However, it is important to conduct a study on people who are willing to participate than have a low response rate, which defeats the objectives of the study. At the same time, there are several other techniques, such as probability sampling (e.g., random sampling), but these types of sampling are costly and can affect the time horizon of this study. Additionally, other non-probability sampling methods, such as snowball sampling, require participants to recommend their friends to become participants in the study (Creswell, 2012). This would need more time and resources to approach the recommended participants, some of whom might not be interested in the study leading to a loss of money and a low response rate. Therefore, convenience sampling was feasible in this study and suits the time horizon and research design in this study.

3.7.3.2 Sample size

The selection of a sample size was determined by variance or heterogeneity (Zikmund et al. (2010). The sample should be selected at a 95% level of confidence (Saunders et al., 2012). This means that the marginal error should be less than 5%. The marginal error occurs when a sample is smaller than the population. For example, Saunders et al. (2012) demonstrated that in a population of 50 and a sample size is 44 a marginal error will be 5%, and when the entire population is used a marginal error will be 1%.

This means that to reduce errors, a sample size needs to be closer to the population. Zikmund et al. (2010) directed that to determine sample size, variance, acceptable errors, and confidence levels need to be defined. The sample size in this study was determined using Cochran's (1977) sample size formula because the population for the study is large/ not well known. Below is the formula.

$$n_0 = \frac{Z^2 \times p(1-p)}{e^2}$$

Source: Cochran (1977)

Z is a score from the Z table, p is the proportional attribute present in the population (variance) e is the desired level of precision (Marginal error). For this study, the researcher used 95% as the confidence level which, as a Z score is 1.96; because the variance was not known, the research used 50% as the maximum variance, which was 0.5, and the research allowed 0.05 marginal error because the researcher used a confidence level of 95%. Therefore, the sample size was calculated as follows:

$$n_0 = \frac{(1.96)^2 \times 0.5(1-0.5)}{(0.05)^2}$$

$$n_0 = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2}$$

$$n_0 = 384$$

Therefore, the sample size for the study was 384 bank customers in Lilongwe City. Out of 384, 273 completed the questionnaire. 100 customers were drawn from Centenary Bank, 60 from National bank, 50 from FDH, 50 from Standard bank and 13 making a total of 273. The researcher engaged customers to fill the questionnaire while they were on the line waiting for assistance.

3.7.4 Data collection

Data collection using convenience sampling started in the first week of November. The researcher visited 4 banks and distributed questionnaires. This means that the researcher was able to collect data conveniently. Data were collected using a questionnaire as a survey instrument, and a pilot study was done to test the effectiveness of the survey instrument (Saunder, 2012). This process is covered in detail below.

3.7.4.1 Data collection instruments

The data collection instrument was a questionnaire. The questionnaire used fixed-alternative questions also known as closed questions. The questionnaire had five sections. Section A had demographic questions. Section B had to collect information on the use of online banking using closed questions. This means that the dependent variable was measured continuously. The other sections covered other independent variables such as performance expectancy, user demography, social influence, and facilitating condition. The questions on these were also closed. The use of a questionnaires has been used in studies investigating factors influencing the use of online banking in other countries (Al-garaibah, 2020; Hassana & Farmanesh, 2022; Mavaza, 2019). Therefore, the use of a questionnaire was consistent with the literature and was appropriate for this study.

3.7.4.2 Pilot study

A pilot study is a small-scale research product done on a small sample before commencing a full study on a larger sample (Zikmund et al., 2010). The pilot study was conducted on 15 bank customers to test the effectiveness of the questionnaire. A pilot study is done to test how the sample will respond and make adjustment to the research instrument to improve the quality of data collection (Creswell, 2012). The researcher used external pilot study where bank customers outside Lilongwe city were involved at Centenary branch in Blantyre. It is important to notice if respondents can understand questions and respond accordingly. The use of the pilot study helped the researcher identify errors and unclear questions and formulate effective ones to ensure that the measurement scales and questions can collect accurate information to be analysed.

3.7.5 Data analysis

Data analysis is the process of transforming data into meaningful results (Sreejesh, et al., 2014). This section discusses how data were analysed. The first subsection will discuss how variables were measured. The section will also discuss and justify the use of data analysis software. The last subsection will discuss the data analysis technique and justify why it was appropriate in this study. To analyse data in quantitative research, data need to be given a numeric score or measure (Creswell, 2012). Measuring variables is significant in ensuring that computer programs or software recognise data and analyse it. In this study, measurements for variables were adopted from similar studies as follows:

i. The use of online banking (dependent variable) was measured in years, based on Akhter et al. (2022).
ii. Performance expectancy (predictor variable) were measured based on Al-Gharaibah (2020).
iii. Social influence (predictor variable) were measured based on Alsaleh & Thakur (2019).
iv. User demography was measured based on Almajalia, et al. (2023).
v. Facilitating condition were measured based on Machdar (2016).

Table 2: Variable Categorisation and Measurement

No.	Source	Variable	Variable category	Measure of variable
1	Akhter et al. (2022).	Use of online banking	Numeric	Years of usage (0-11 years)
2	Al-Gharaibah (2020)	Performance expectancy (PU, readiness)	Categorical	Likert scale (strongly disagree-strongly agree)
3	Alsaleh & Thakur, (2019)	Social influence (SI, and CI)	Categorial	Likert scale (Strongly disagree-strongly agree).
4.	Almajalia, et al., 2023	User demography		
		Gender	Categorical	Dichotomous (male/female)
		Age	Categorical	Categorical (18-65 and above)
		Education	Categorical	Highest level of education (primary school – PhD and above)
5	Machdar, (2016)	facilitating condition (info quality and system errors)	Categorical	Likert scale (strongly disagree-strongly agree).

IBM SPSS and Microsoft Excel were used for statistical analysis. IBM SPSS and Microsoft Excel are recommended for keeping research data files (Zikmund et al., 2010). IBM SPSS is recommended for multivariate analysis (Sreejesh et al., 2014). In this study, there was more than one independent variable; as such, to analyse this influence, there was a need for a software that would conduct multivariate analysis effectively. Despite that Microsoft Excel can also do multivariate analysis, the researcher preferred SPSS to Microsoft Excel. Microsoft Excel was used for descriptive analysis, tables and charts.

The researcher firstly tested for linearity. This is to check if there is a linear relationship between the independent variables and the dependent variable. If this is violated, the linear regression will fit a straight line into data that does not follow a straight-line pattern (Sreejesh, Mohapatra, & Anusree, 2014). This violation would mean that the result is likely to be false. To avoid this, the research used a scatter plot and determine if there is a linear pattern (existence of linearity).

After testing for linearity, the research tested for normality. Normality is the assumption of a normal distribution. A normal distribution is a bell-shaped symmetric distribution on which numeric data of a variable can be plotted (Saunders et al., 2012). Alternatively, normality can also be tested using PP-Plot (Mooi et al., 2018). This approach was used in the study were observes probabilities were plotted against expected probabilities. The points closer to the normally distributed line were a confirmation of normal distribution. The plot of variables on a normal distribution represents the standardised residuals against normal scores (Chatterjee & Hadi, 2012). If the distribution of residual against normal scores is not normally distributed, then the *F* and *t* statistics and confidence prediction will be compromised (Montgomery et al., 2012).

The research tested the homogeneity of variance after testing normality. Homogeneity of variance can be measured by variability within factor level combination (Landau & Everitt, 2004). The assumption of constant variance can be analysed by plotting residuals against predicted values of the dependent variable (Sreejesh et al., 2014).

After testing for homogeneity of variance, autocorrelation was tested. Autocorrelation is a term referring to the correlation between model errors at different periods (Montgomery et al., 2012). This might happen due to omissions on the right side of the regression equation (Chatterjee & Hadi, 2012).

Lastly, the research tested for multicollinearity. Multicollinearity is a term used when independent variables are strongly correlated (Sreejesh et al., 2014). The higher the correlation between or among independent variables, the more the regression will fail to distinguish them. This will result in treating the variables as one set and increase the potential for spurious results. A variance inflating factor (VIF) was used to test for multicollinearity, and a value of 10 would indicate that collinearity assumptions could be violated.

The study used Linear Multiple Regression Analysis (LMRA) as a data analysis technique. LMRA is an analytical technique that can analyse the relationship between a dependent variable and many independent variables (Saunders et al., 2012). In this study, we have one dependent variable (use of online banking) and four independent variables (facilitating condition, user demography, performance expectancy, and social influence). This means that the use of multiple regression was suited to this study. However, before this technique was adopted, the following assumptions were observed: Linearity, normality, homogeneity of variance, autocorrelation, and collinearity (Sreejesh et al., 2014). Below is the multiple regression equation adopted from Zikmund et al. (2010).

$$UOB_i = b_0 + b_1(SI) + b_2(FC) + b_3(PE) + b_4(UD) + e_i$$

UOB_i is the use of online banking, b_0 is the constant, b_{1-4} are coefficients associated with each independent variable, and e_i is the error. Specifically, FC stands for facilitating condition, SI stands for social influence, PE stands for performance expectancy, and UD stands for user demography. The use of multiple regression has also been used in similar studies done by Al-Gharaibah (2020), Akhter et al. (2022), and Bekhit et al. (2022). Below are steps taken to ensure that data analysis is effective.

3.7.4.1 Analytical procedures

This section covers details on the stages of data analysis. The section discusses how reliability and validity will be tested and how model assumptions will be tested to produce meaningful and authentic results as well as to determine if the data collected will be appropriate to use for multiple regression analysis.

3.7.4.1.1 Reliability and validity test

Reliability is the measure of internal consistency (Zikmund et al., 2010). Reliability ensures that the data collection technique will yield consistent findings if other researchers replicate the study methodology (Saunders et al., 2012). The challenge with using some reliability measures such as split halves is that it depends on how data are divided and manipulated, which sometimes makes split halves have different results (Sreejesh et al., 2014).

To overcome these limitations, Sreejesh et al. (2014) have advocated for Cronbach's Alpha. The use of Cronbach Alpha was adopted in similar studies done by Albort-Morant et al. (2021), Anouze & Alamro (2018), Haider et al. (2018), and Hassana & Farmanesh (2022). This study also used Cronbach's Alpha to measure reliability. On the other hand, validity is the ability of the research instrument to measure what was intended to be measured (Sreejesh et al., 2014). This study used construct validity and convergent and discriminant validity. Sreejesh et al. (2014) define construct validity as the degree to which the measuring instrument represents a logical connection with the theory under investigation. Construct validity has also been used in a similar study done by Hassana & Farmanesh (2022). To be specific, discriminant validity was used.

3.8 Ethical consideration

The researcher observed the principle of informed consent. Saunders et al. (2019) and Creswell (2012) suggest that participants need to be informed about the study and their consent should be freely given. This is imperative in ensuring that participants are aware of the nature of the study and make an informed decision about participating. In the study, the researcher wrote a consent letter and presented it to each participant. This was done to get participants' consent to participate in the study.

Further, the researcher observed confidentiality. Saunders et al. (2019) and Chatterjee & Hadi, (2012) state that the rationale for this ethical principle is to protect respondents from any harm resulting from their identification, and when responses are anonymous, the more reliable responses participants will provide. To achieve this ethical principle the researcher did not collect names of participants or their location, and data collected were only used for data analysis. The researcher was also given the right to process the data confidentially, which meant that data were not shared with any third party.

Lastly, the researcher observed voluntary participation. Saunders et al. (2019) advise that observing this principle, a researcher should not coerce respondents to provide more information, and that participants should maintain their right to respond to questions they want to respond to and can withdraw from the study at any time. To observe this principle, the researcher included in the consent form that participation was free and could be withdrawn at any time. The researcher did not request any further information from participants apart from what they had already provided.

3.9 Chapter summary

The methodology of the study included the researcher design which highlighted that the study will be quantitative. The study used Lilongwe city as a case study involving all bank account holders as the population, The study used convenience sampling, and sample size in this study was determined using Cochran's (1977) sample size formula. The data collection instrument was a questionnaire, and Linear Multiple Regression Analysis (LMRA) as a data analysis technique.

CHAPTER FOUR: FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings of the study and discusses them. The chapter will start with findings and discussions of sample profiles and demographics, then it will present descriptive statistics. After descriptive statistics, findings on the model diagnostic test of least square regression will be presented and discussed. Finally, the chapter will present regression outputs in relation to research objectives. These include the effects of facilitating conditions on use of online banking, the effects of performance expectancy on use of online banking, the effects of user demography on use of online banking, and the effects of social influence on use of online banking.

4.2 Sample profiles (response rate)

The study had a sample size of 384 and 273 of respondents participated voluntarily which represented a 71% response rate. A response rate of 50 % is considered reasonable (Saunders et al., 2019). This implies that the study's response rate was higher enough to represent the tagert population.

4.3 Demography

In this section, sample profiles such as age, gender and education are discussed. From Table 3 5.9% of participants were aged 58 and above. Further, findings established that 12% were participants aged between 48 and 57. Furthermore, 37% were participants aged between 38 and 47. To add, 30% of participants were aged between 28 and 37. Lastly, 15% of participants were aged between 18 and 27. The study was dominated by participants aged between 38 and 47, which constituted 37% of the sample. Further, 54% were female participants while 46% were male. This means that the study was dominated by female participants. Lastly, 5.9% had primary education as their highest education level, 30% had secondary education as their highest education level, 36.3% had college as their highest education level, 20.9% had undergraduate degree as their highest education level, and 7% had postgraduate degree as their highest education level. This means that the study was dominated by participants who had college as their highest education level.

Table 3: Sample Profiles

Category	Sub category	Percentage (%)
Age	58 and above	5.9
	Between 48 and 57	12.1
	Between 38 and 47	37
	Between 28 and 37	30
	Between 18 and 27	15
Gender	Male	46
	Female	54
Education level	primary secondary college undergraduate degree postgraduate degree	5.9 30 36.3 20.9 7

4.4 Outer regression model assessment

In this section, descriptive statistics, data validity and reliability as well as correlation are discussed. This section aims to determine the quality of the data used in this study and how variables relate and how they differ (discriminant validity).

4.4.1 Descriptive statistics

The study analysed the descriptive statistics, and findings are presented in Table 4.

Table 4: Descriptive Statistics

	N	Mean	Std. Deviation
FC	273	2.40	.812
SI	273	2.02	.896
PE	273	2.42	.615
UD	273	2.67	1.225
UOB	273	2.30	.964
Valid N (listwise)	273		

From Table 4, the study found that the mean of facilitating condition (FC) was 2.40 with standard deviation of .8. This means that respondents in the sample rated IF lower and the standard deviation on this rating was less than 1 which means there were lesser variations in the rating. Further, social influence (SI) had mean score of 2.02 and standard deviation of .89. similarly, social influence was rated lower and the deviations in responses were lower than 1. Furthermore, performance expectancy has a mean of 2.42 and standard deviation of 0.6. This means that performance expectancy was also rated lower but had the lowest standard deviation. To add, demography had mean of 2.67 with standard deviation of 1.22, which means demography was rated higher, but had the highest standard deviation. Lastly, use of online banking (UOB) had mean of 2.3 with standard deviation of .964 which means that use of online banking was also rated low with a higher standard deviation. In the subsequent section reliability and validity are discussed.

4.4.2 Reliability and validity of instrument

The study tested the reliability and validity of the data. The analysis used Smart PLS version 4 and findings are presented in Table 5.

Table 5: Reliability and Validity

	Cronbach's alpha	rho_a	rho_c	AVE
UD	0.742	0.697	0.735	0.497
FC	0.718	0.728	0.824	0.563
PE	0.704	0.68	0.778	0.486
SI	0.721	0.751	0.826	0.622

From Table 5 the Cronbach's alpha was above 0.7 for all variables. The composite reliability and average variance extracted was at least 0.5 for all variables, which is recommended for convergent validity (Almajali et al., 2023). This means that convergent validity was achieved (Anouze and Alamro, 2019). Below is a test for discriminant validity, which is presented in Table 6.

Table 6: Discriminant Validity

	UD	FC	PE	SI
UD	**0.701**			
FC	0.216	**0.688**		
PE	0.501	0.484	**0.673**	
SI	0.188	0.526	0.425	**0.607**

From Table 6 above, each AVE root value is higher than its highest correlation value, which means that discriminant validity was achieved (Ma'rifah & Susetyo, 2023). The subsequent section will discuss correlation.

4.4.3 Correlation of variables

The essence of the correlation is to establish if a relationship between a dependent variable and its predictors exists (Haider et al., 2020). The study aimed at describing the relationship among variables in the study, and findings are presented in the Table 7.

Table 7: Correlation

		SI	UD	PE	FC	UOB
SI	Pearson Correlation	1	.172**	.232**	.077	.244**
	Sig. (2-tailed)		.004	.000	.205	.000
	N	273	273	273	273	273
UD	Pearson Correlation	.172**	1	.459**	.002	.562**
	Sig. (2-tailed)	.004		.000	.977	.000
	N	273	273	273	273	273
PE	Pearson Correlation	.232**	.459**	1	.238**	.739**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	273	273	273	273	273
FC	Pearson Correlation	.077	.002	.238**	1	.206**
	Sig. (2-tailed)	.205	.977	.000		.001
	N	273	273	273	273	273
UOB	Pearson Correlation	.244**	.562**	.739**	.206**	1
	Sig. (2-tailed)	.000	.000	.000	.001	
	N	273	273	273	273	273
**. Correlation is significant at the 0.01 level (2-tailed).						

Table 7 shows that there is a weak positive (0.244) and significant ($p<0.05$) relationship between use of online banking (UOB) and social influence (SI). There is also a strong positive (0.562) and significant ($p<0.05$) link between user demography (UD) and use of online banking (UOB). There is also a very strong positive (0.739) correlation between performance expectancy (PE) and use of online banking (UOB). Lastly, there is a weak positive (0.206) and significant ($p<0.05$) relationship between facilitating condition (FC) and use of online banking (UOB). This means that all predicators have a positive and significant correlation with use of online banking (UOB). On the other hand, all predictors have a weak correlation among themselves. Below are the regression assumptions.

4.5 Multiple regression assumptions

The study tested for assumptions of multiple regression to ensure that the regression model provides accurate results. The study tested almost all assumptions, which included linearity, normality, homoscedastic, multicollinearity, and autocorrelation. These are discussed below.

4.5.1 Linearity test

The first assumption of the least square regression is that there is a linear relationship between predictor variables and dependent variable. Scatter plots are used to determine if there is linearity between a dependent variable and its predictors, which can be done by plotting independent variable against dependent variable (Mooi et al., 2018). Figure 2 below shows linearity test through scatter plot.

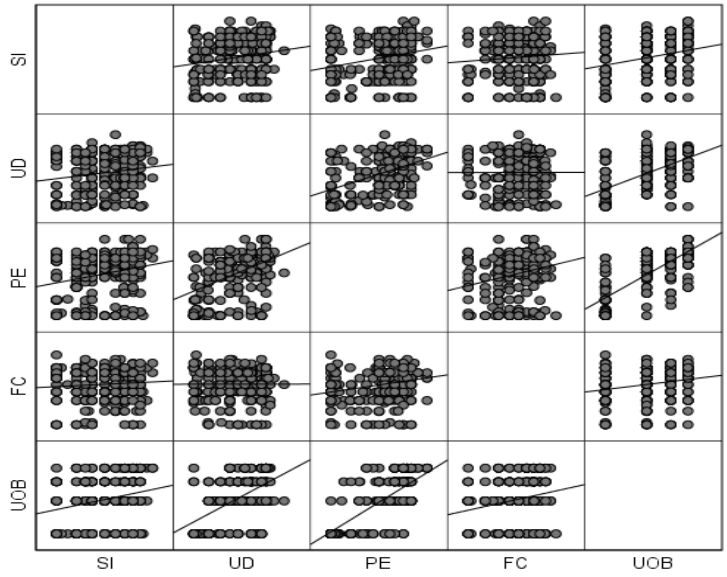


Figure 2: Linearity test

From Figure 2 above, all independent variables demonstrate a linear relationship with the dependent variable. This means that when facilitating condition (FC), user demography (UD), performance expectancy (PE) and social influence (SI) increases, use of online banking also increases. Mooi et al. (2018) highlighted that if this assumption is violated, that is, there is no linearity, then the data collected do not fit the regression model. However, all variables in the study met linearity assumptions which means that the data collected fit the regression model.

4.5.2 Normality test

The second assumption of the least square regression is normality. This assumption considers a normally distributed regression error, and if this assumption is violated the *t* statistics might be incorrect (Mooi et al., 2018). Mooi et al. (2018) highlighted that to test for normality it is not about testing for normality for a dependent variable but rather to test for normality of the error terms. One way of testing linearity is by using a P-P Plot of standardised regression residual.

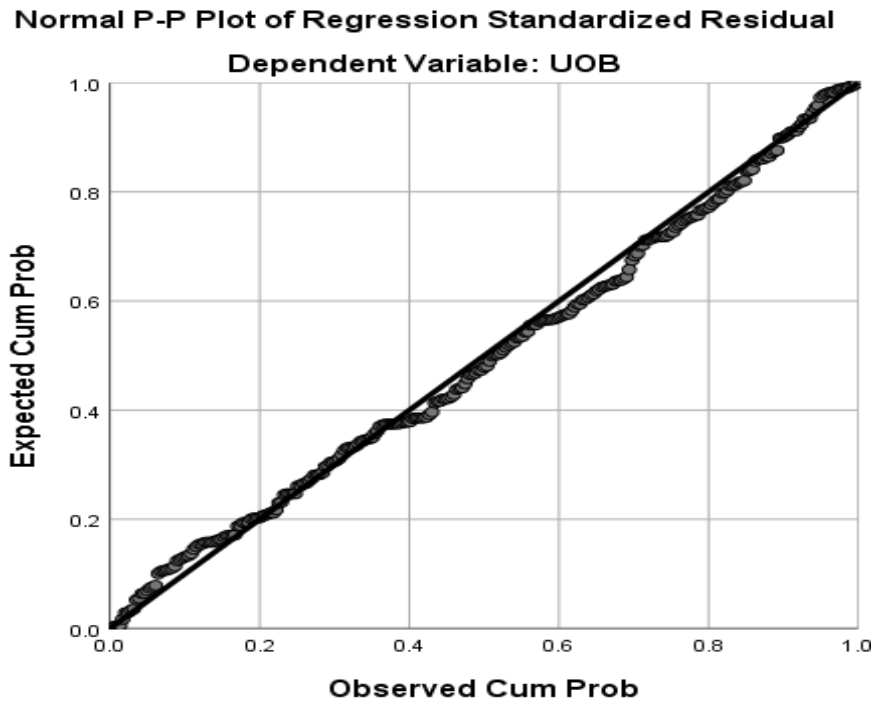


Figure 3: Testing for Normality.

From Figure 3 above the residuals of the regression model lay closer to the normal distribution line, which demonstrates that there is normality of residual, a confirmation that the study did not violate the assumption of normality.

4.5.3 Homoscedastic test

The third assumption of least square regression is that data values for independent and dependent variables have at least equal variance (Saunders et al., 2019). When data values for independent and dependent variables differ, a funnel shape is formed in a scatter plot, which shows that the error in variance increases when dependent variable increases, and this is referred to as heteroscedastic (Mooi et al., 2018). Mooi et al. (2018) has clarified that heteroscedastic affects the unstandardised beta (βs) of the regression model because the increase in error of variance makes the standard error to be high, which affects the significance of the βs making them not significant when they are significant. Figure 4 below shows the scatter plot on homoscedastic test.

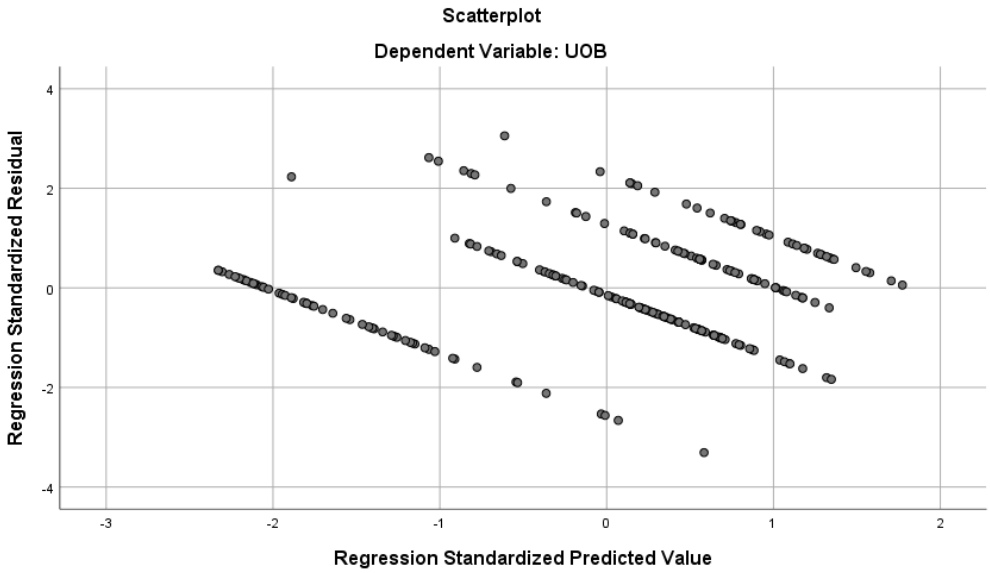


Figure 4: Homoscedastic test

From Figure 4 above, there is no risk of heteroscedasticity because the data points are not bell shaped, which means that when use of online banking increases the error variance does not increase (Mooi et al., 2018). This means that the study has a homoscedastic situation, which means that the significance of unstandardised beta is not at risk.

4.5.4 Multicollinearity Test

The fourth assumption of multiple regression is that predictor variables are independent of each other. When predictor variables are highly correlated, a condition called multicollinearity is created, which is a violation of the assumption of independence. Multicollinearity is a condition at which highly correlated predictor variables cause coefficient estimates to have an inflated standard error making the regression model fail to distinguish the predictors (Arkes, 2023). Findings on the multicollinearity test are presented below.

Table 8: Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
SF	.940	1.064
UD	.772	1.295
PE	.714	1.400
FC	.928	1.078

From Table 8 above, all main predictors in the regression model had tolerance below 1, which is acceptable in claiming that the variables are colinear (Akhter et al., 2022). Further, the table shows that all main predictors in the regression model had a variance inflating factor (VIF) below 1.5. This means that the there was no risk of multicollinearity because all variables had a VIF below 10. Given that a variable had VIF of 10, then it could be dropped from further regression analysis as it is a practice in regression studies (Eden et al., 2020). However, all variables in this study are qualifying for further investigation. This is also supported by findings from studies done by Banu et al. (2020) and Baabdullah (2019) who found a VIF value less than 10 and concluded that their predictor variables had no issues of multicollinearity and were cleared for regression analysis.

4.5.5 Autocorrelation

The last assumption of the regression model is that there is no autocorrelation, which means that error terms among two variables are not correlated. To test for autocorrelation, Durbin-Watson test is used. Mooi et al. (2018) provides details on how the Durbin-Watson analyses autocorrelation. Mooi et al. (2018) highlighted that the Durbin-Watson statistic tests the null hypothesis with the aim of proving that there is no auto correlation. The Durbin-Watson uses the value between -4 and +4 as acceptable range for autocorrelation. When the value of Durbin Watson falls beyond -4 and +4 then an alternative hypothesis is accepted. Table 9 below shows the results of the Durbin-Watson test.

Table 9: Autocorrelation Test

Model	R	Durbin-Watson
1	.785[a]	1.562

The study had a Durbin-Watson value of 1.5, which shows that there was no autocorrelation among predictors in the regression model. Durbin and Watson, who developed this model in 1950, asserted that a Durbin-Watson value between 1.5 to 2.5 is acceptable in clamming that there is no autocorrelation (Akhter et al., 2022). Therefore, the study did not violate the assumption of autocorrelation because the Durbin-Watson value is within the acceptable range.

4.6 Multiple Regression Outputs

Multiple regression outputs include model summary, analysis of variance, and coefficients. These are discussed in the subsequent sections.

4.6.1 Model summary of the regression

The model summary demonstrates the degree of goodness of fit, which is provided by the R square and the adjusted R square (Saunders et al., 2019). The table below shows the model summary results for the regression model.

Table 10: Model Summary

Model	R^2	*R* Square	Adjusted R^2	Std. Error of the Estimate
1	.785[a]	.616	.610	.12391
a. Predictors: (Constant), FC, UD, SI, PE				
b. Dependent Variable: UOB				

From Table 10 above, the R square is .616, which means that 61.6% of the variation in use of online banking is explained by only significant factors in the regression model (Saunders et al., 2019). Further, the adjusted R square is .610, which means that 61% of variations in use of online banking are explained by all factors in the regression model. This means that the goodness of fit is above 60%, which shows that the regression model was a fit for the study. The researcher also tested if this goodness of fit is statistically significant using variance analysis.

4.6.2 Analysis of Variance (ANOVA) of the Regression Model

The study tested if the R square and the regression model are a good fit for the study, and the findings are presented in a Table 11 below.

Table 11: Analysis of Variance

Model		Sum of Squares	*df*	Mean Square	*F*	Sig.
1	Regression	6.601	4	1.650	107.48	.000[b]
	Residual	4.115	268	.015		
	Total	10.715	272			

a. Dependent Variable: UOB

b. Predictors: (Constant), FC, UD, SI, PE

The Table shows the *F* value of 107.47, which was significant. This means that the probability that the variations in use of online banking accounted for by user demography, social influence, facilitating condition and performance expectancy do not occur by chance ($p<0.0001$) (Saunders et al., 2019). To put it differently, at 99.9% confidence level, the regression model is a good predictor of use of online banking and the R^2 is valid.

4.6.3 Coefficient of Regression Analysis

The study also analysed the regression coefficients based on each research objective. Findings are presented in Table 12.

Table 12: Coefficient of Regression Analysis

Model		Unstandardised Coefficients		Standardised Coefficients	*t*	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.078	.027		-2.851	.005
	SI	.070	.049	.056	1.424	.155
	UD	.300	.045	.287	6.653	.000
	PE	.708	.055	.579	12.933	.000
	FC	.086	.053	.064	1.622	.106

a. Dependent variable UOB

Table 12 shows that all predictors had a positive unstandardised beta, which means that all predictors had a positive influence on the use of online banking. Further, the standard error for the regression was less than 0.06, which shows that the errors in prediction were very low. The *t* statistics show that performance expectancy and user demography had the highest contribution to the variations in use of online banking. Finally, the *p* values for performance expectancy and demography were 0.000 which means that performance expectancy and demography were the only significant predictors. This also means that the possibility that the effect of performance expectancy and user demography on use of online banking happens by chance is less than 0.001 while the probability that facilitating condition and social influence on use of online banking happens by chance is 10%. The subsequent sections discuss these findings in relation to the research objectives.

4.7 Facilitating condition on the use of online banking

Results of the study shows that the unstandardised beta for facilitating condition is .086. This means that for every 1% increase in online banking facilitating condition, use of online banking increases with 0.8 as shown in Table 12. This shows that the relationship between facilitating condition and use of online banking is positive.

Further, findings also show that the *t* statistic for facilitating condition is 1.622. This means that the regression was able to account for unique variations in use of online banking, which were accounted for by facilitating condition and were greater than zero. This shows that the null hypothesis is not confirmed. However, the *P* value for facilitating condition is .106 which means that at 95% confidence, facilitating condition does not account for significant variations in use of online banking.

The study findings are challenging findings in studies done by Bekhit et al. (2022) and Haider et al. (2018). Those studies established that when facilitating condition of online banking is improved, use of online banking will also improve. The studies emphasised that information quality and errors in facilitating condition of online banking significantly influence use of online banking. While the researcher was expecting similar results, it is surprising that use of online banking in Malawi does not significantly depend on facilitating condition of online banking. This could be due to the benefits outweighing the facilitating condition challenges. The cost and time of transaction when using online banking could also be considered advantageous compared to traditional banking.

The findings also do not support claims made by Venkatesh et al. (2012) in in their UTAUT model. The claimed that effort and performance expectancy of a technology determine the use of that technology. Errors and information quality are some characteristics of online banking performance that customers expect and can impact on their decision in choosing a technology. For instance, if customers are expecting that online banking will be convenient for transacting at any time, online banking errors such as network errors may impact negatively on customer expectations. However, the findings in this study do not support this claim. This means that there are other factors that determine use of online banking in Malawi.

4.8 Social influence on the use of online banking

Results of the study shows that the unstandardised beta for social influence is .070. this means that for every 1% increase in social influence, use of mobile banking increased with 0.07% (refer to Table 10). This shows that the relationship between social influence and use of online banking is positive. Further, the findings also show that the *t* statistic for social is 1.424. This means that the regression was able to account for unique variations in use of online banking, which were accounted for by social influence and were greater than zero. This also shows that the null hypothesis was not confirmed. However, the *p*-value for social influence is .155 which means that at 95% confidence, social influence does not account for significant variations in use of online banking.

The findings are supported by a prior study done by Hassana & Farmanesh (2022) who found that social influence does not have a significant influence on use of online banking. This shows that increase in social influence does not significantly increase use of online banking. However, these findings have been contested in a study done by Akhter et al. (2022) and Bekhit et al. (2022) who found that social influence has positive and significant influence on use behaviour of online banking. For example, Akhter et al. (2022) findings show that when social influence increases by 1%, usage of online banking will increase by 0.2%, which is significant. Yet these findings do not reflect the Malawian context. The use of online backing is significantly dependent on other factors rather than social influence. This is because online banking is a more personalised technology which decisions to use it could significantly depend on individual related factors.

The findings do not support the UTAUT which was developed by Venkatesh et al. in 2012. The theory claimed that technology is adopted because of social influence. However, the findings of this study do not agree with this claim. What the findings have demonstrated is that the uptake of online banking cannot be significantly attributed to social influence.

4.9 Performance expectancy on the use of online banking

Results of the study show that the unstandardised beta for performance expectancy is .708. This means that for every 1% increase in performance expectancy, use of online banking increases with 0.708% (refer to Table 10). This shows that the relationship between performance expectancy and use of online banking is positive. Further, findings also show that the *t* statistic for performance expectancy is 12.933. This means that the regression was able to account for highest unique variations in use of online banking, which accounted for performance expectancy and were greater than zero. This also shows that the null hypothesis was not confirmed. Further the *p* value for facilitating condition is .000, which means that at 95% confidence, performance expectancy accounted for significant variations in use of online banking.

The findings are consistent with prior studies by Anouze & Alamro, (2018), Akhter et al. (2022), Al-Sabaawi et al. (2021), Banu et al. (2019), Kabir & Islam, (2021), and Mavaza (2019), who found that performance expectancy has a positive and significant effect on usage of online banking. The studies emphasise the role of perceptions such as usefulness, which are performance expectancy process. This is because the online banking technology is developed with a bank client in mind as such the connection between the technology and performance expectancy is significant in determining if one can use the technology. Performance expectancy such as usefulness are key in determining behaviours such as technology usage.

The findings are in support of claims made in the UTAUT model. The model asserted that performance expectancy determined technology usage. The theory suggests that perceived risk and perceived cost are factors that determine if one should adopt a technology or not. This means that the findings in this study confirm that performance expectancy determines the uptake of online banking in Malawi.

4.10 The influence of demography on the use of online banking in Lilongwe City

Results of the study show that the unstandardised beta for demography is .300 (refer to Table 10). This means that for every 1% increase in demography, used of online banking increases with 0.30%. This shows that the relationship between demography and use of online banking is positive. Further, findings also show that the *t* statistic for demography is 6.653. This means that the regression was able to account for unique variations in use of online banking, which were accounted for by demography and were greater than zero. This also shows that the null hypothesis was not confirmed. Further the *p* value for facilitating condition is .000, which means that at 95% confidence, performance expectancy accounted for significant variations in use of online banking.

These findings are supported by prior studies done by Ismaylova (2020), Joshi and Khan (2023), and Park et al. (2019) and who found that demography has a positive and significant influence on use of online banking. This means that changes in demography will lead to proportional changes in use of online banking. On the contrary, Bekhit et al. (2022) found that demography does not have a significant influence on use of online banking. This implies that changes in demography will not have a significant impact on use of online banking. Therefore, the situation in Malawi demonstrates that usage of online banking depends on demography. This could be as a result of factors such as subjective norms where literate people are more familiar with technology and how to use it in comparison to illiterate people. This has also been posited in the TBP theory which underpinned the study.

The findings support the claims made in the TBP. The theory claims that subjective norms determine technology use. Subjective norms may include religion, age groups and gender groups. For example, technology usage is higher in millennials and generation z while significantly lower in baby boomers. The findings of this study have confirmed that subjective norms such as age determine technology usage.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the conclusions made from the research findings. The chapter will summarize the main findings. After the summary of the main findings, conclusions of the study will be made. After conclusion the recommendations will be made. After recommendations limitations and recommendations for further research will be made.

5.2 Summary of the findings

The study found that when taken as a set facilitating conditions, social influence, user demography and performance expectance contribute to 61% variations in use of online banking. The analysis of variance in the model confirmed that the variations account for by the R square are significant at $p<0.05$. below are specific conclusions in relations to specific objectives.

5.2.1 Facilitating condition on the use of online banking

The study found that correlation between facilitating conditions (FC) and use of online banking (UOB) was significant ($p<0.01$) with a weaker correlation coefficient of .206· the study also found that when taken as a set, FC has a positive effect with a coefficient of .086 but does not have a significant influence on UOB ($p>0.05$).

5.2.2 Social influence on the use of online banking

The study found that correlation between social influence (SI) and use of online banking (UOB) was significant ($p<0.01$) with a weaker correlation coefficient of .244. Further the study also found that when taken as a set, SI has a positive effect with a coefficient of .070, and does have a significant influence on UOB ($p<0.05$).

5.2.3 Performance expectancy on the use of online banking

The study found that correlation between performance expectance (PE) and use of online banking (UOB) was significant ($p<0.01$) with a stronger correlation coefficient of .739. Further the study also found that when taken as a set, PE has a positive effect with a coefficient of .708, but does not have a significant influence on UOB ($p>0.05$).

5.2.4 User demography on the use of online banking

The study found that correlation between user demography (UD) and use of online banking (UOB) was significant ($p<0.01$) with a stronger correlation coefficient of .562. Further the study also found that when taken as a set, UD has a positive effect with a coefficient of .300, but does not have a significant influence on UOB ($p>0.05$).

5.3 Conclusions

The study concludes that facilitating conditions (FC) does not have a significant effect on use of online banking (UOB). This is significant in informing banks that the current uptake of online banking is not significantly depending on facilitating condition in Lilongwe City. This can help banks utilise resources by allocating or improve online banking systems rather than committing resources on factors which might not help banks achieve their online banking usage goals.

The study concludes that social influence (SI) does not have a significant effect on use of online banking (UOB). The results are significant in informing banks that the presence of social influence is not the pillar of online banking. Further, the findings are fundamental in helping banks rethink on how they are committing resources on social influence such as social media and other social influence approaches aimed at uplifting the use of online banking.

The study concludes that performance expectancy (PE) does have a significant effect on use of online banking (UOB). The results are fundamental in informing banks that the usage of online banking is significantly dependent on performance expectancy. This hints banks to focus and enhance the performance of online banking. The results highlight that the performance expectations that customers towards online banking are very critical for banks to address or aim to maximise. This also advocates for banks to understand the UTAUT 2 claims on performance expectations and its relevance to technology usage in commercial banks particularly online banking.

The study concludes that user demography (UD) does have a significant effect on use of online banking (UOB). The results on are important in informing banks that demography related factors contribute positively to variations in use of online banking. This according to the theory of planned behaviour, social class, education levels and age groups are determining the direction of online banking. This encourages banks to advance their understanding and how they can make user demography work for their online banking usage goals.

5.4 Recommendations of the study

The study makes the recommendations based on facilitating condition, social influence, performance expectancy and user demography in a way that helps banks improve the use of online banking. These recommendations are provided in the following sections.

5.4.1 Reduce mobile banking errors

Based on the study findings, facilitating condition does not have a significant effect on online banking usage, however, by improving system errors a bank can improve the usage of online banking. Likewise, Banu et al. (2019) also highlighted that customers tend to use online banking if it has minimum errors and by focusing on reducing errors in online banking systems.

5.4.2 Use shared stories to capture non-users of online banking

Despite that the study found that the effect of social influence was not significant when taken as a set with other variables, banks can still benefit from shared stories which can be shared on their social media platforms, website and other media outlets such as radio. Bekhit et al. (2022) recommended that this approach helps a bank get new users of online banking.

5.4.3 Improve online banking security

While the study has found that performance expectancy strongly determines use of online banking, it is important for banks to continuously upgrade the security of online banking to enable customers to continuous perceive the technology as secure and reliable. Albort-Morant et al. (2021) has recommended banks to focus on improving cyber security in online banking which is one of the factors contributing to negative perception of online banking and usage.

5.4.4 Increase civic education on online banking

Based on the study findings, when individuals are more educated and getting older, they tend to use online banking more. This means that improving civic education on mobile payment will translate into an increase in online banking usage. Similarly, In Azerbaijan, Ismaylova (2020) recommended that banks should educate their customers on online banking. Further, Al-Sabaawi et al. (2021) also recommended policy makers in financial sector to educate customers on online banking which will promote online banking.

5.5 Limitations of the study

i. The study was cross-sectional, and this means that the study did not provide findings on how online banking was determined over time. As such the study findings, best reflect the current situation on how online banking is determined.

ii. The study findings are reflective of a situation in Lilongwe city and not Malawi.

iii. Although the regression model was a good fit for the data, the study focused on only four predictors; this could have an impact on the error of prediction, that is to say, if more variables could be included in the model, there might be more insights.

5.6 Areas for further research

i. The study recommends future studies employ a longitudinal study in determining use of online banking

ii. The researcher recommends a replicative study in other parts of Malawi to compare the results of this study and see if they hold true across Malawi.

iii. The researcher recommends future studies include more variables and factors in more observed variables to further improve understanding of use of online banking.

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APPENDICES

Appendix 1: Questionnaire

A. User demography

i. What is your age?

ii. What is your gender?

iii. What is your highest education level?

B. Use of online banking

(Encircle the option that best represents your position or period)

i. How many years have you been using online banking services such as ATM, debit card and mobile banking?

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Performance expectancy

(Encircle the option that best represents your position between options a b c d or e)

i. Online banking is useful?

a. Strongly disagree b. Disagree c. Neutral d. Agree e. strongly agree

ii. I am ready for online banking technology

a. Strongly disagree b. Disagree c. Neutral d. Agree e. strongly agree

C. Social influence

i. I use online banking because someone recommended it

a. Strongly disagree b. Disagree c. Neutral d. Agree e. strongly agree

ii. I use online banking out of my desire to adopt new technologies to have social status.

a. Strongly disagree b. Disagree c. Neutral d. Agree e. strongly agree

D. Facilitating condition

i. Online banking service quality such as Information quality of online banking is accurate and timely

a. Strongly disagree b. Disagree c. Neutral d. Agree e. strongly agree

ii. I often experience online banking system errors and breakdowns

a. Strongly disagree b. Disagree c. Neutral d. Agree e. strongly disagree

The end