

**The influence of digital customer experience on loyalty to traditional banks in
South Africa**

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ABSTRACT

This study investigates the factors that influence customer loyalty in the South African digital banking landscape. Digital banking has revolutionised financial management, offering convenient 24/7 access to services. However, adoption rates in developing countries such as South Africa are significantly lower than in developed nations. Given the escalating competition from new digital banks in South Africa, a crucial research problem is to pinpoint how traditional banks can leverage specific digital banking experience elements to cultivate and sustain customer loyalty. This research aims to understand the drivers of customer loyalty within this context. Drawing upon the "experience economy" framework, the study explores how various stimuli constructs, such as perceived ease of use, perceived usefulness, trust, convenience, customer support, app/web attributes, and social influence, influence digital customer experience and, ultimately, customer loyalty. A quantitative approach was used to collect data through a structured questionnaire from a sample of South African digital banking customers. The data were analysed using statistical methods such as regression analysis to determine the relationships between the variables and identify significant predictors of customer loyalty. The results revealed that perceived usefulness, convenience, app/web attributes, and social influence had a significant influence on digital customer experience, while perceived ease of use, trust, and customer support did not exhibit a significant influence. These findings suggest that digital customer experience is primarily shaped by factors such as perceived usefulness, convenience, app/web design, and social influence. While perceived ease of use, trust, and customer support are important, their direct influence on the immediate digital experience appears of less consequence in this context. The study recommends that South African banks should focus on enhancing the practical benefits of their digital platforms, ensuring convenience and user-friendliness, and fostering positive social influence to improve overall customer satisfaction and loyalty.

KEYWORDS: Digital Banking; Customer Loyalty; Digital Customer Experience (DCX); Customer Satisfaction; Perceived Usefulness; Perceived Ease of Use; Convenience; Trust in Digital Banking; Social Influence; App/Web Attributes; Customer Support.

DECLARATION

I, Zama Rose Mthethwa, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Name: Zama

Signature: *Mthethwa*

Signed at Centurion

On the 21st day of January 2025

DEDICATION

This research is dedicated to my family, whose unwavering support, encouragement, and love have been my constant source of strength. To my mother, who instilled in me the values of perseverance and dedication; to my husband, whose patience, encouragement, and unwavering belief in me kept me going; to my children, whose smiles and joy have been a constant source of motivation, reminding me of the importance of perseverance and balance; and to my mentors and friends, whose guidance and insightful advice have been invaluable in shaping this work. Lastly, I dedicate this study to the many individuals in the South African digital banking sector whose experiences and insights have significantly contributed to the findings of this research, offering a deeper understanding of customer loyalty in the evolving digital landscape. Thank you for inspiring and motivating me to pursue this research.

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ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
AWA	App/Web attributes
C	Convenience
CI	Corporate Innovation
CL	Customer Loyalty
CS	Customer Support
CX	Customer Experience
DCX	Digital Customer Experience
DOI	Diffusion of Innovation (theory)
EFA	Exploratory Factor Analysis
FAQs	Frequently Asked Questions
KMO	Kaiser-Meyer-Olkin
MRO	Main Research Objective
PEU	Perceived Ease of Use
PU	Perceived Usefulness
S-O-R	Stimuli-Organism-Response
SPSS	Statistical Package for the Social Sciences (software)
SRO	Secondary Research Objective
T	Trust
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
UI	User Interface
UPI	Unified Payment Interface
UTAUT	Unified Theory of Acceptance and Use of Technology
UX	User Experience
VIF	Variance Inflation Factor

CHAPTER 1. INTRODUCTION

1.1 Statement of Purpose

This research explores the influence of digital customer experience (DCX) on loyalty in the financial services industry in South Africa.

1.2 Background of the Study

Digital banking has transformed the way individuals manage their finances, shifting from standing in long queues at branches to accessing financial services 24/7 (Mujinga, 2022). Digital banking has gained widespread acceptance globally, with high penetration rates in developed countries, fuelled by the growth of the internet (for example, the USA had a 78% digital banking penetration rate in 2023) (Statista, 2023). However, South Africa lags, with a reported digital or mobile banking penetration rate of 36.6% in March 2024 (Statista, 2024). Limited access to the internet, underdeveloped infrastructure, and low-income level are just some of the reasons contributing to this lower adoption rate (Mujinga, 2022).

Given the large gap in digital banking adoption between developed and developing countries, it is crucial to understand the factors that influence consumers to participate in digital banking. The banking sector faces a challenge in fostering customer loyalty owing to increased competition and customer service sensitivity (Manyanga et al., 2022). These factors have created an “experience economy” where customer past interactions shape future behaviours (Mosa, 2022). The rise of digital technologies has further intensified this trend, requiring businesses to adapt their strategies to meet the evolving needs of digital customers. As a result, banks have digitised their service offerings and are using the latest technology, such as chatbots, robotic process automation (RPA), and machine learning for predicting future behaviours, to ensure they provide a memorable and exceptional digital experience (Bhattacharya & Sinha, 2022; Lappeman et al., 2023; Abildtrup, 2024). This is followed by traditional banks adopting new approaches to user engagement that focus on improving the overall user experience of their website or application (Hari et al., 2022).

In today's digital era, the transformation of customer experience has become crucial for any bank to survive in this digital age. Digitisation is the process of converting analogue information, such as physical objects and paper documents, into a digital format, such as electronic files, images, or data (Van Veldhoven & Vanthienen, 2022). Banks have started to make use of digitisation to meet the evolving expectations of customers and to develop customer-centric solutions (Tsindeliani et al., 2022;

Lähtenmäki & Saraniemi 2022). Digitalisation goes beyond simply converting analogue information into digital format; it involves the use of digital technologies to improve processes, enhance operations, and create new business models. These improvements may include the adoption of digital tools and platforms, automation of manual processes, and integration of digital technology (Armstrong & Lee, 2022). Digital transformation is a broader and more strategic concept than digitisation or digitalisation. It involves the comprehensive integration of digital technologies into all areas of an organisation, fundamentally changing how it operates and delivers value to customers (Naimi-Sadigh et al., 2022). Often, it involves a cultural shift within the organisation to embrace digital tools and processes. For example, a bank may transition to an entirely online banking platform (Naimi-Sadigh et al., 2022).

The rapid growth of digital banking has created a demand for continuous innovation as customer expectations rapidly evolve (Abildtrup, 2024). Features that were once considered advanced can quickly become obsolete, risking customer loyalty and market share for banks that fail to adapt (Ogundipe et al., 2024). Traditional banks are now turning to agile methodologies to enhance customer satisfaction in digital banking (Ogundipe et al., 2024). Agile methodology shifts banks away from traditional waterfall approaches, where projects are rigidly divided into sequential phases (requirements, design, development, testing, deployment) with little room for changes or feedback during the process, and prioritizes flexibility, collaboration, and rapid iteration, which enables faster delivery of customer-centric features. This methodology ensures that banks can still meet evolving needs and keep customers engaged (Abrahams et al., 2023). Banks are also investing in Corporate Innovation (CI), also known as corporate entrepreneurship. CI has become a crucial element for banks to use to reinvent themselves, find new ways to create value, and develop new products, services, and business models that meet the evolving needs of customers (Altahat & Alsafadi, 2021). CI has been defined as how a well-established company fosters or enhances innovation within its business. CI is a growing area of study in the banking sector (Göcke et al., 2022). Several recent studies have explored this concept and its benefits in banking (El Ouakdi et al., 2022; Forcadell et al., 2019; Wang & Du, 2022).

1.3 Research Problem

Despite the rapid developments in digital transformation of the banking industry, there is insufficient understanding of which digital banking experience factors most effectively drive customer loyalty in the emerging South African market. Thus, the core research problem is to determine what specific digital banking experience factors contribute to customer loyalty for traditional banks in the South African context, thereby enabling them to adapt and thrive amidst rapid digital transformation. The

digital landscape of the banking industry has undergone rapid transformation in recent years, driven by technological advancements, changing customer preferences, and fintech development (Khattak et al., 2023). The COVID-19 pandemic further accelerated this digital transformation, resulting in a 70% increase in smartphone usage globally (Beech, 2020). This rise in mobile phone use led customers to move away from physical bank branches and embrace 24/7 online and self-service banking (Mujinga, 2022; Windasari et al., 2022). As a result, the financial services sector has emerged as a leader in digitalisation, particularly with the rapid adoption of digital banking (Shahid et al., 2022).

The rise of digital banking has presented new challenges. Traditional competitive factors such as service quality, price, and delivery speed are no longer sufficient for banks to gain an edge over competitors (Saeed et al., 2022). The digital banking space has become fiercely competitive and established banks now face intense competition not only from traditional rivals but also from newly launched digital banks in South Africa such as TymeBank and Discovery Bank. These banks are unburdened by legacy systems and branch networks, which allows them to focus on data-driven value propositions and leverage digital technologies to enhance customer experience (Nqala & Magida, 2023). This shift aligns with the emergence of customer experience as a critical factor for building long-term business strategies (Mosa, 2022). As highlighted by Anshu et al. (2022), customer experience has become paramount in shaping customer perceptions and ultimately determining loyalty.

Existing research on digital transformations for banks highlights several benefits, including cost reduction, improved financial inclusion, enhanced customer experience, and wider customer reach (Kim et al., 2022; Khattak et al., 2023; Mavlutova et al., 2022). These findings align with a study by Windasari et al. (2022) that identified ease of use and reward systems as key factors to influence the intention to adopt digital-only products, both factors contributing positively to the user experience. Chauhan et al. (2022) explored the importance of customer experience (CX) in digital banking within the Indian context. The findings of these scholars indicate that CX is positively influenced by a combination of factors: functional clues (service quality, trust, and convenience), mechanic clues (website attributes, design, and perceived usability), and, lastly, humanic clues (customer support and interaction with the bank). Building upon this, Rahayu and Faulina (2022) demonstrated a positive influence of digital customer experience on both customer satisfaction and customer loyalty. Similarly, Shahid et al. (2022) identified convenience, trust, and social influence as crucial factors that significantly improve customer experience when using mobile banking applications.

Thus, traditional banks must find ways to reinvent themselves to remain competitive in the market by providing exceptional customer experiences. Companies that are incapable of adapting to new

technologies or driving customer-centric strategies risk disruption (Rodrigues et al., 2022; Oladele, 2024). Understanding the digital banking experience elements that lead to loyalty is crucial, especially in the South African context where digital banking adoption, while increasing, has not yet experienced phenomenal growth. By focusing on this specific market, valuable insights can be gained to help banks that are operating in the region. This is particularly important given the dynamic nature of the industry and the ever-evolving landscape of customer needs and expectations.

1.4 Research Objective

1.4.1 Main research objective (MRO)

MRO1: The primary objective of this research was to investigate the influence of digital customer experience (DCX) on customer loyalty (CL) within the traditional banking sector in South Africa.

1.4.2 Secondary research objectives (SROs)

The secondary research objectives were:

SRO1a: To investigate the effect of ease of use of digital platforms on digital customer experience.

SRO1b: To investigate the effect of perceived usefulness of digital platforms on digital customer experience.

SRO1c: To investigate the effect of trust on digital customer experience.

SRO1d: To investigate the effect of convenience of digital platforms on digital customer experience.

SRO1e: To investigate the effect of customer support on digital customer experience.

SRO1f: To investigate the effect of App/Web attributes on digital customer experience.

SRO1g: To investigate the effect of social influence on digital customer experience.

1.5 Rationale for the Study

This research was motivated by the rapid transformation taking place in the financial services sector in South Africa as a result of digital transformation. With the increasing adoption of digital banking and the emergence of DCX as a critical factor, there is a need to understand its influence on customer loyalty. Understanding the factors that influence customer loyalty in this specific context is crucial for South African traditional banks so that they can remain competitive. This research was driven by the

need for a deeper understanding of how DCX shapes customer loyalty within the South African traditional banking sector.

Existing research highlights the positive correlation between DCX and customer loyalty in various contexts (Chauhan et al., 2022; Rahayu & Faulina, 2022; Shahid et al., 2022). However, limited research explores this relationship specifically within the South African digital banking environment with the unique socio-economic and technological landscape of South Africa, which is characterised by varying levels of digital adoption, infrastructure challenges, and customer behaviour patterns. This study aimed to expand the understanding of DCX and customer loyalty in the context of a developing nation's financial services sector, by exploring the South African market. The findings will aid South African banks in developing customer-centric strategies and enhancing their DCX. By understanding the specific DCX elements that influence loyalty, banks can tailor their offerings to meet the evolving needs of their digital customers and foster long-term loyalty. This can benefit customers in several ways. Banks would improve their services to offer customers more convenient, quicker, reliable, and safer banking services. Additionally, this can aid the government's efforts in financial inclusion, making it possible for more people to participate in the formal financial system.

This study acknowledges that it cannot definitively "fill the gap" in knowledge. However, it aspires to contribute meaningfully by offering a deeper understanding of the South African context, adding a local perspective to the existing body of research.

1.6 Delimitations of the Study

This study focused specifically on personal banking within the South African traditional sector. Data collection and analysis were limited to traditional banking customers within South Africa. The study only considered customers who actively use digital banking services; those who primarily rely on traditional in-branch banking were excluded.

1.7 Definitions

The key terms used in the study are defined below.

Customer Loyalty	A customer's tendency to repeatedly utilise a specific brand and repurchase its products or services (Chauhan et al., 2022).
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Digitisation	It is the process of converting analogue information, such as physical objects and paper documents, into a digital format, such as electronic files, images, or data (Van Veldhoven & Vanthienen, 2022).
Digitalisation	It involves the use of digital technologies to improve processes, enhance operations, and create new business models; these may include the adoption of digital tools and platforms, automation of manual processes, and integration of digital technology (Armstrong & Lee, 2022).
Digital transformation	It involves the comprehensive integration of digital technologies into all areas of an organisation, fundamentally changing how it operates and delivers value to customers (Naimi-Sadigh et al., 2022).
Customer Experience	Customer experience involves the cognitive, emotional, physical, sensorial, spiritual and social elements that make up direct or indirect customer interaction.
Digital Customer Experience (DCX)	DCX focuses on digital interactions, rather than face-to-face interactions, by utilising self-service options powered by the latest technologies and digital transformation, such as machine learning, intelligent automation, and artificial intelligence (AI). Adopting this focus has enabled banks to become more customer centric (Karaharli & Touma, 2021).

1.8 Assumptions

The study assumed that respondents provided honest and accurate information when answering questions about their digital banking experiences. Additionally, it assumed that respondents had sufficient access to technology and digital literacy to complete the online survey. Lastly, the research

assumed that the South African financial services sector would remain relatively stable during the data collection and analysis period. Sudden economic shifts or regulatory changes could impact customer behaviour and loyalty.

1.9 Chapter Outline

Chapter 1: Introduction

- Chapter 1 introduces the study's focus on DCX and its influence on loyalty within South Africa's traditional banking sector, highlighting challenges in digital banking adoption. The chapter outlines the research objectives and provides the rationale for the study. It points out the study limitations and assumptions and, lastly, defines the key terms used in the study.

Chapter 2: Literature Review and Theoretical Framework

- Chapter 2 of this study comprehensively explores the theoretical underpinnings related to DCX and its impact on loyalty in the context of South Africa's traditional banking sector. It begins with an introduction to the theoretical foundations and examines the factors that may influence DCX and loyalty through a critical review of scholarly literature.

Chapter 3: Research Methodology

- Chapter 3 focuses on the selection and justification of the research methodology employed. The chapter begins by discussing the importance of choosing an appropriate methodology to uncover insights about the research topic. It follows the research onion model proposed by Saunders et al. (2019), which guided the selection of the research paradigm, methodology, research design, data-collection methods, and data analysis.

Chapter 4: Presentation of Findings

- Chapter 4 presents the results of the data analysis, including descriptive statistics, correlation analysis, and regression analysis. It focuses on two models. Model 1 examines the influence of the independent variables (Perceived Ease of Use, Perceived Usefulness, Trust, Convenience, Customer Support, App/Web Attributes, and Social Influence) on DCX. Model 2 explores the relationship between DCX and Customer Loyalty. The chapter includes statistical outputs, such as coefficients, p-values, t-values, and multicollinearity statistics, which are used to evaluate the significance of each factor in predicting DCX and Customer Loyalty.

Chapter 5: Discussion of Results

- Chapter 5 delves deeper into the theoretical and managerial implications of the study, providing insights into how banks can leverage the findings to improve their DCX and foster customer loyalty.

Chapter 6: Conclusions and Recommendations

- Chapter 6 provides a comprehensive conclusion to the study. It summarises the key findings, discusses their theoretical and practical implications, and suggests avenues for future research in the field of DCX and loyalty. Additionally, recommendations are made for digital banking institutions on how to optimise customer experiences and enhance loyalty through targeted improvements to their digital platforms.

CHAPTER 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter explores the theoretical foundations of this research by examining the factors that influence DCX and, in turn, the influence of DCX on loyalty. A critical review of relevant scholarly literature is presented to evaluate the core arguments, key concepts, and prominent theories from leading researchers in the field. Through this review, the chapter aims to synthesise existing knowledge and identify potential answers that meet the research objectives. These potential answers are presented as hypotheses, ensuring a clear connection between the research objectives and the conceptual framework established through the literature.

2.2 Background

According to Ogundipe et al. (2024), the digital banking industry is highly competitive, with customer expectations constantly evolving. Digital banking, also known as mobile or online banking, allows customers to access various features such as checking balances, transferring funds instantly, tracking transaction history, receiving notifications, and even trading stocks using a mobile device (Zhou, 2012; Alnemer, 2022). Digital banking is not just beneficial for customers but also benefits the banks that employ it (Shahid et al., 2022). By embracing digital tools, banks can deliver financial products and services in a faster, more efficient way, which translates as reduced transactional costs, ultimately boosting their profitability and allowing them to reinvest in providing better overall service to their customers (Alnemer, 2022; Alsmadi et al., 2022).

There has been a growing interest in understanding customer experience in general, since it is an interactive process that includes emotional and cognitive factors. However, this experience cannot be generalised across all customers, as what works for one may not work for another (Vergallo & Mainetti, 2022). For traditional banks, a positive customer experience primarily involved standard processes that included human interactions in physical branches (Dehnert & Schumann, 2022). DCX focuses on digital interactions, rather than face-to-face interactions, by using self-service options powered by the latest technologies and digital transformation such as machine learning, intelligent automation, and AI. These digital interactions have enabled banks to become more customer centric (Karahanli & Touma, 2021). According to Windasari et al. (2022), to understand the digital banking experience, the

following factors should be considered: service quality, functional quality, perceived value, service customisation, service speed, employee-customer engagement, brand trust, digital banking innovation, perceived usability, and perceived risk. Shahid et al. (2022, p. 3) describe this shift between traditional banking experience and DCX as a move from a “service-centric system to customer-centric system”.

In the world of digital banking, researchers have identified several key factors that distinguish physical customer experience from DCX in traditional banking (Chauhan et al., 2022). Initially, Shin and colleagues (2020) identified usefulness, employee-customer engagement, security, and convenience as factors that determine Kim, E., Kim, M., & Kyung, Y. (2022). A case study of digital transformation: Focusing on the financial sector in South Korea and overseas. DCX. At the same time, in their research Islam et al. (2020) focused on website interactivity, customisation, ease of use, and perceived usefulness as factors that influence the customer experience in digital banking. Achieving a positive DCX depends on how well a bank undergoes digital transformation. Among the factors that have been identified as having an impact on digital transformation is operational excellence, which is vital for its success. Operational excellence in this context involves optimising processes, improving efficiency, focusing on meeting customer needs, and enhancing overall performance through digital initiatives (Baslyman, 2022). Thus, achieving a positive DCX relies on the successful execution of digital transformation.

2.3 Theory Base

Researchers on the topic of DCX within banking have made use of a range of theories. The theories that are most applicable to the current study are examined in this section. The first theory to be looked at is Rogers’ (1995) Diffusion of Innovation (DOI) theory, which states that the key to customer adoption lies in both their existing knowledge and the effectiveness of the communication about the innovation. A study by Sanjeetha et al. (2022) investigated the factors that influence a client’s usage of web-based banking services offered by traditional and Islamic banks in Sri Lanka, using the Rogers’ (1995) diffusion of innovation theory. The findings suggest that compatibility may influence individuals' inclination towards using Islamic banking services, while factors such as awareness, complexity, relative benefit, ambiguity, service quality, and observability have been found to influence online banking usage (Sanjeetha et al., 2022). A study by Shahid (2022) looked at the determinants of Unified Payment Interface (UPI) adoption based on the DOI theory, where results indicated that factors such as relative advantage, complexity, and observability significantly influence users’ intention to use UPI.

Another theory considered for this study is the Technology Acceptance Model (TAM). TAM suggests that a user's intention to use a technology is determined by its perceived usefulness and ease of use (Davis, 1989). A study by Bekmukhambetova and Németh (2023) based on TAM empirically examined changes in traditional banking by highlighting the importance of user-centred design in online banking. The study focused on perceived usefulness, ease of use, and a positive user experience. The findings revealed perceived usefulness, perceived ease of use, and attitudes towards use to be key determinants in the adoption of online banking services. Hassan et al. (2023) conducted a study based on the TAM model and the Theory of Planned Behaviour (TPB) that focused on customer adoption of digital banking services in Malaysia. This study highlighted the value of focusing on customer experience as a factor influencing digital banking adoption.

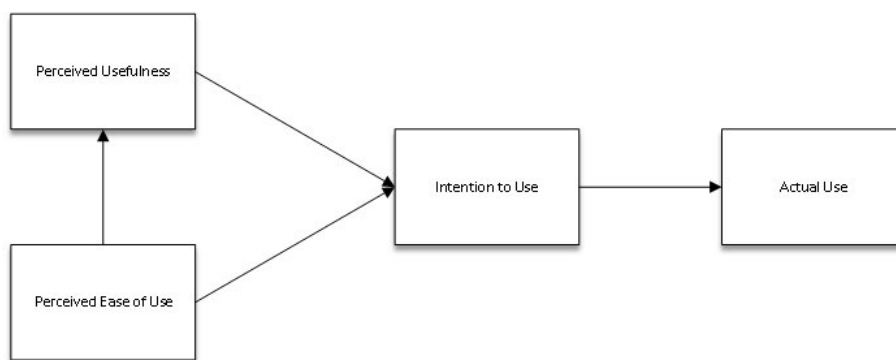


Figure 2.1: TAM theoretical framework (Davis, 1989)

A third theory considered for this study is the Theory of Reasoned Action (TRA). TRA suggests that an individual's behavioural intention is determined by their attitudes toward the behaviour and subjective norms, which are influenced by social pressure (Ajzen & Fishbein, 1975). Additionally, the Unified Theory of Acceptance and Use of Technology (UTAUT) combines elements from different theories such as TAM and TRA to provide a more holistic understanding of technology adoption (Venkatesh et al., 2003). According to Susanto et al. (2023), this theory combines elements of social cognitive theory with the acceptance of information technology.

To capture the digital experience of customers, this research makes use of the Stimuli-Organism-Response (S-O-R) framework, which suggests a linkage between stimulus, organism, and response (Mehrabian & Russell, 1974). This theory is used in conjunction with the TAM theory, which was initially rooted in Ajzen and Fishbein's (1975) the Theory of Reasoned Action. Building on the TRA, Davis's TAM theory (1989) introduced two constructs, "Perceived Usefulness" (PU) and "Perceived Ease of Use" (PEOU), to understand users' beliefs about the technology, ultimately predicting their attitude and subsequent acceptance of the technology. These two theories are employed in the current

study to understand consumer behaviour and experience surrounding digital banking. Stimulus (S) from the S-O-R framework is used to assist in understanding customer interactions with digital infrastructure or features such as apps, chatbots, and online platforms, which influence cognitive states and ultimately shape the DCX (Mkpojiogu et al., 2024). The organism (O) is used to represent the DCX, examining how individuals process their cognitive, emotional, and physiological reactions to the stimuli (Shahid et al., 2022). Lastly, Response (R), which is the action triggered by the digital banking experience, assuming it is a positive customer experience, can then be expected to lead to loyalty (Mokha & Kumar, 2022).

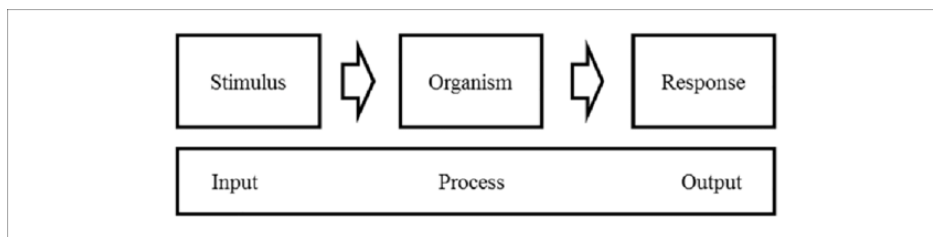


Figure 2.2: S-O-R theoretical framework (Mehrabian & Russell, 1974)

The theoretical framework utilises two constructs from the TAM theory: ease of use and perceived usefulness. While TAM has been used to explain technology adoption in the past, it is not sufficient to capture the evolving landscape of customer perceptions and experiences. To address this gap, the study borrows additional constructs from existing literature on DCX in banking. These DCX constructs are trust, convenience, customer support, app/web attributes, and social influence (Shahid et al., 2022; Chauhan et al., 2022).

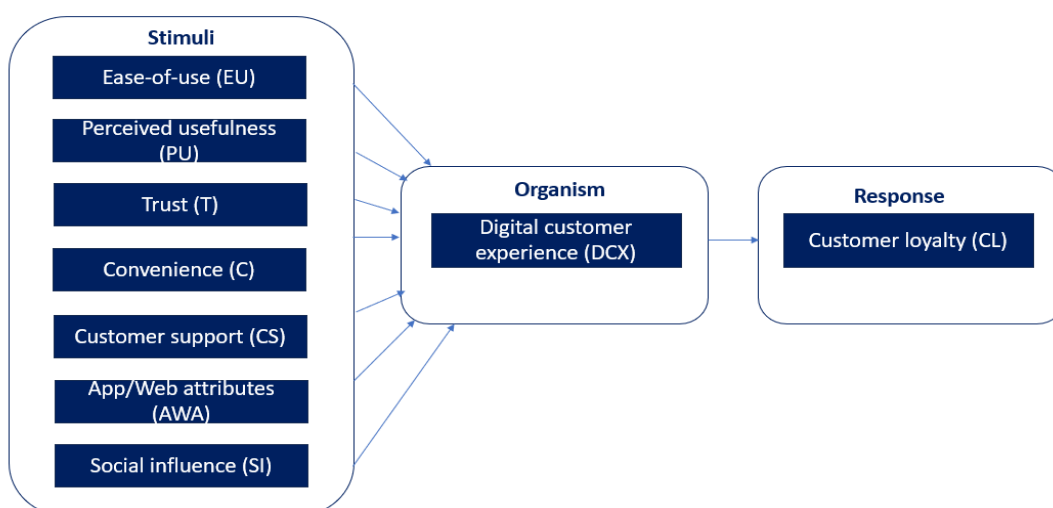


Figure 2.3: A theoretical framework adapted from S-O-R (Mehrabian & Russell, 1974) and TAM (Davis, 1989)

Figure 2.3 presents a theoretical framework that combines the TAM and S-O-R theories. This framework was derived with the aim of providing a comprehensive understanding of how users interact with digital banking platforms and how their experiences influence their behaviour. TAM focuses on individual beliefs and attitudes towards technology, while the S-O-R framework provides a broader perspective by considering not only individual perceptions but also external stimuli. By integrating the two theories, it was anticipated that the research objectives for this study could be effectively addressed.

2.4 Hypothesis Development

This section outlines the approach taken in the present study to address the research objectives by establishing links between the theoretical framework, the hypotheses formulated on the basis of the theories and supporting studies, and the research objectives. The conceptual framework proposed here serves as a roadmap for developing the data-collection instrument and subsequently utilising the gathered data to address the research objectives.

The conceptual framework provides the foundation by integrating the relevant theories, concepts, existing knowledge, and models that underpin the study. These theories guide the formulation of hypotheses, and the selection of specific variables and constructs relevant to this research, which provide a deeper understanding of factors that influence DCX and, ultimately, loyalty. The hypotheses are set out below.

The influence of digital customer experience on customer loyalty

In terms of DCX, previous literature has shown that a positive and significant relationship exists between DCX and loyalty (Shahid et al., 2022; Chauhan et al., 2022; Ahmad et al., 2022; Heckel & Waldenberger, 2022). Heckel and Waldenberger (2022) emphasise the importance of fostering positive customer experiences within marketing strategies, highlighting how such experiences play a critical role in securing customer loyalty. Consequently, the positive experiences felt by customers will directly influence their loyalty. Molinillo et al. (2022) define loyalty as positive actions towards a company such as repeat purchases, a strong preference for a particular brand, and advocacy through word-of-mouth recommendations. The intense competition in the digital banking sector has compelled banks to prioritise strategies aimed at enhancing customer loyalty, which heavily depends on the quality of

customer experience offered by the bank (Shahid et al., 2022). Given the established relationship between DCX and loyalty, the following hypothesis was derived:

H1: Digital customer experience has a positive influence on customer loyalty.

Perceived ease of use (EU): Ease of use is a crucial factor because it significantly contributes to shaping the overall digital banking experience for users (Mutambik, 2023). It refers to the degree to which customers' understanding of a technology facilitates its adoption (Davis, 1989). A study by Mutambik (2023) on customer experience in open banking found that a simple, user-friendly app leads to a positive experience by providing users with a sense of control, which then leads to a positive emotional response. Ease of use is particularly important for those who are less comfortable with technology, as complex interfaces can cause frustration. However, even for “tech-savvy” users, ease of use still plays a vital role in the overall experience (Martínez-Navalón et al., 2023). Ease of use in digital banking is related to ease of access, loading time, navigation, and understanding of the concepts used in the digital platform and has been found to affect DCX positively (Chauhan et al., 2022; Martínez-Navalón et al., 2023; Nguyen et al., 2022). Based on these studies, the following hypothesis was derived:

H2: Ease of use has a positive influence on the digital customer experience.

Perceived usefulness (PU): Perceived usefulness refers to an individual's belief in a particular technology's ability to achieve a goal or task (Davis, 1989). According to Ghani et al. (2022), perceived usefulness refers to the benefits and advantages that a user expects to gain from using a particular technology, such as saving time, based on the confidence they have in that technology. It encompasses users' perceptions of how effectively the digital banking platform meets their needs, simplifies their banking processes, and improves their overall banking experience (Sainy & Singh, 2023). An individual's beliefs or perceptions regarding technology are influenced by their prior experiences, which affect how they process information and make judgements (Iman et al., 2023). A study by Al-Gasawneh et al. (2022) found that perceived usefulness has a positive and significant influence on post-purchase behaviour. Another study by Sainy and Singh (2023), which examined the attitudes of digital banking consumers, found that perceived usefulness has a positive and significant influence on the attitudes of digital banking consumers. On the basis of the findings of these studies, the following hypothesis was derived:

H3: Perceived usefulness has a positive influence on the digital customer experience.

Trust: While building trust in digital banking is crucial, it is also challenging owing to the absence of human interaction, which often leads to anxieties and concerns about security (Shahid et al., 2022). Trust in digital banking has been defined by Koksai (2016) as the subjective belief customers hold regarding the consistency and security of transactions. To provide exceptional customer experience, trust should be prioritised. This means addressing concerns around the protection of private information, financial system failure, and online transaction safety (Iman et al., 2023; Shahid et al., 2022). According to Chauhan et al. (2022), trust refers to a customer's willingness to embark on and be committed to a long-term relationship with a brand based on the belief that the brand will act as expected. A study by Ahmad et al. (2022) found that trust significantly influences customer loyalty. Other research also suggests that trust has a positive and strong influence on DCX within banking (Chauhan et al., 2022; Shahid et al., 2022). A study by Oh and Kim (2022) found security, which is a construct that influences trust, to be the most influential factor in digital banking. However, in contrast, a study by Nguyen et al. (2022) on the effect of digital banking on customer experience found that word-of-mouth and trust have no significant impact on customer experience. Following the results of existing research, the following hypothesis was derived:

H4: Trust has a positive influence on the digital customer experience.

Convenience: Convenience plays a vital role, defined by the effort and time invested by consumers, which can also be impacted by internal factors within firms (Chauhan et al., 2022). Convenience in digital banking forms the basis of user experience. Convenience in this context can be defined as the flexibility of accessing essential financial services through digital platforms such as apps or websites at any time and from any location without the need to visit a physical branch (Shankar et al., 2022). Oh and Kim's (2022) study found that accessibility and the ability to transact at any time are critical features for the adoption of digital banking, as these features contribute to a positive user experience. In contrast, technical issues such as crashes, connection errors, and payment delays can lead to frustration and discourage app usage. Furthermore, the partnership between banks and fintechs has facilitated cost-saving and superior customer experiences through seamless integration and personalisation (Heckel & Waldenberger, 2022). Consequently, convenience emerges as a critical success factor in enhancing consumer experience across mobile banking application platforms, as supported by several studies (Shahid et al., 2022; Oh & Kim, 2022; Mosa, 2022). In light of the above findings, the following hypothesis was derived:

H5: Convenience has a positive influence on the digital customer experience.

Customer support (CS): The increasing popularity of digital banking has led traditional banks to deprioritise face-to-face customer support in favour of implementing new solutions to address customer enquiries, a shift that has necessitated the development of new solutions to handle enquiries related to these digital services (Oh & Kim, 2022). Advancements in technology have led to the emergence of online help desks, live chat support, and human service advisors, all aimed at fulfilling consumer needs (Shahid et al., 2022). A study by Chauhan et al. (2022) found that efficient customer handling significantly influences customer satisfaction and loyalty, while its absence detrimentally impacts the overall customer experience. However, research by Shahid et al. (2022) found the relationship between customer support and customer experience in mobile banking to be insignificant. Conversely, Oh and Kim's (2022) study found customer support to be the most influential variable to affect user experience. Given the contradictory findings regarding the impact of customer support on the user experience in mobile banking, the mixed research findings are acknowledged and a clear hypothesis proposed, based on the assumption that effective customer support can improve customer experience. As a result, the following hypothesis was derived:

H6: Customer support has a positive influence on the digital customer experience.

App/Web attribute: Mobile applications play a pivotal role in shaping customer experience. The applications, which run on smartphones, encompass various interactive features designed to engage users (Shahid et al., 2022). Chauhan et al. (2022) looked at the role of website attributes such as navigation, information availability, and security, which influence customer experience within digital banking. Attributes such as visual aesthetics, interactivity, simplicity, speed, personalisation, and usefulness were found to have a significant impact on customer engagement and user experience (Shahid et al., 2022; Chauhan, 2024). Studies have shown that users derive inherent pleasure from impressive features in mobile apps and websites (Shahid et al., 2022; Chauhan, 2024). From these findings, the following hypothesis was derived:

H7: App/Web attribute has a positive influence on the digital customer experience.

Social influence: According to Windasari et al. (2022), social influence refers to the tendency of individuals to engage in new activities through the influence of others. Individuals can change their feelings, attitudes, and behaviours when faced with social pressure (Kurniawan et al., 2022). Shahid et al. (2022) further suggest that customers are easily influenced by positive experiences shared by others about a brand. The social influence theory proposes that one person's experience can shape the experiences of those around them (Cialdini & Goldstein, 2004). Supporting this notion, the study by Shahid et al. (2022) found that positive customer experiences shared by others significantly influence

an individual's experience with mobile banking services. Windasari et al. (2022) also found social influence to have a significant influence on consumers' intention to use digital banking services. On the basis of this existing research, the following hypothesis was derived:

H8: Social influence has a positive influence on the digital customer experience.

The conceptual framework is presented below.

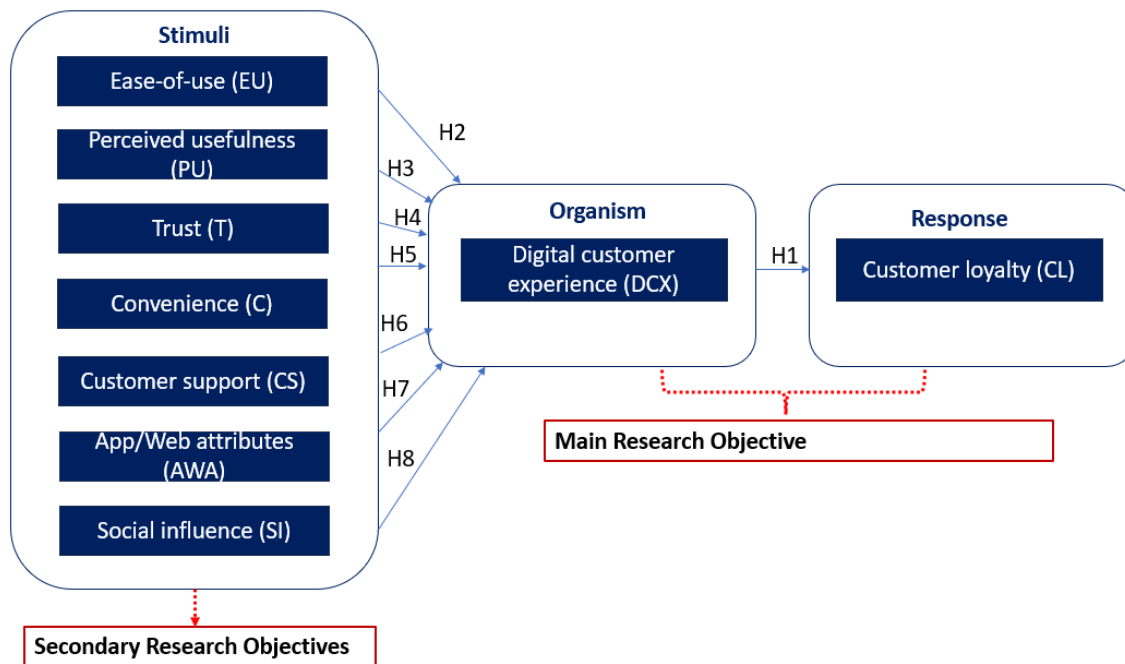


Figure 2.4: Conceptual framework

The proposed conceptual framework set out in Figure 2.4 provides a structured approach to investigating the relationships between various stimulus constructs, the organism construct of DCX, and the response construct of customer loyalty in the context of digital banking. The first group of constructs, under the Stimuli, are: ease of use (H2), perceived usefulness (H3), trust (H4), convenience (H5), customer support (H6), app/web attributes (H7), and social influence (H8). As shown in brackets after each construct, these constructs help to test hypotheses 1 to 7 and also address the Secondary Research Objectives (SRO), in this way enabling the researcher to gain an understanding regarding which construct or variable of digital banking design and service contributes most to a positive DCX. Hypothesis 1 (H1) explores the link between a positive DCX and customer loyalty. The research objective here is to determine whether a good digital experience translates as customers being more likely to stick with the bank and potentially recommend it to others, which is the main objective of this research.

2.5 Conclusion

Chapter 2 examined the determinants of DCX and their influence on customer loyalty within the digital banking landscape. Through the review of relevant existing literature, this chapter identified key constructs that contribute to a positive DCX and provide potential answers to the research objectives. The following hypotheses were derived to address the study's research objectives:

- Hypothesis 1: Digital customer experience has a positive influence on customer loyalty.
- Hypothesis 2: Perceived ease of use has a positive influence on the digital customer experience.
- Hypothesis 3: Perceived usefulness has a positive influence on the digital customer experience.
- Hypothesis 4: Trust has a positive influence on the digital customer experience.
- Hypothesis 5: Convenience has a positive influence on the digital customer experience.
- Hypothesis 6: Customer support has a positive influence on the digital customer experience.
- Hypothesis 7: App/Web attribute has a positive influence on the digital customer experience.
- Hypothesis 8: Social influence has a positive influence on the digital customer experience.

These hypotheses were used to investigate the relationships between the identified constructs and their influence on DCX and, ultimately, customer loyalty.

CHAPTER 3. RESEARCH METHODOLOGY

3.1 Introduction

Selecting the appropriate research methodology is essential for researchers in their quest to uncover truths and insights about their research topic (Bougie & Sekaran, 2019). Mauch and Park (2003) note that factors such as practicality, accessibility, and efficiency should be taken into account by researchers when deciding on a research approach. This chapter provides an overview of the methods employed in the study, following the established research onion model proposed by Saunders et al. (2019). A research onion is a model that researchers utilize to plan and develop an appropriate research strategy (see figure 3). Initially, the chosen research paradigm and methodological approach are examined for their suitability to the study and their use justified. Following this, the research design and techniques are scrutinised, evaluated, and justified. Finally, the chapter addresses the selected data-collection and -analysis procedures and outlines the study's ethical considerations.

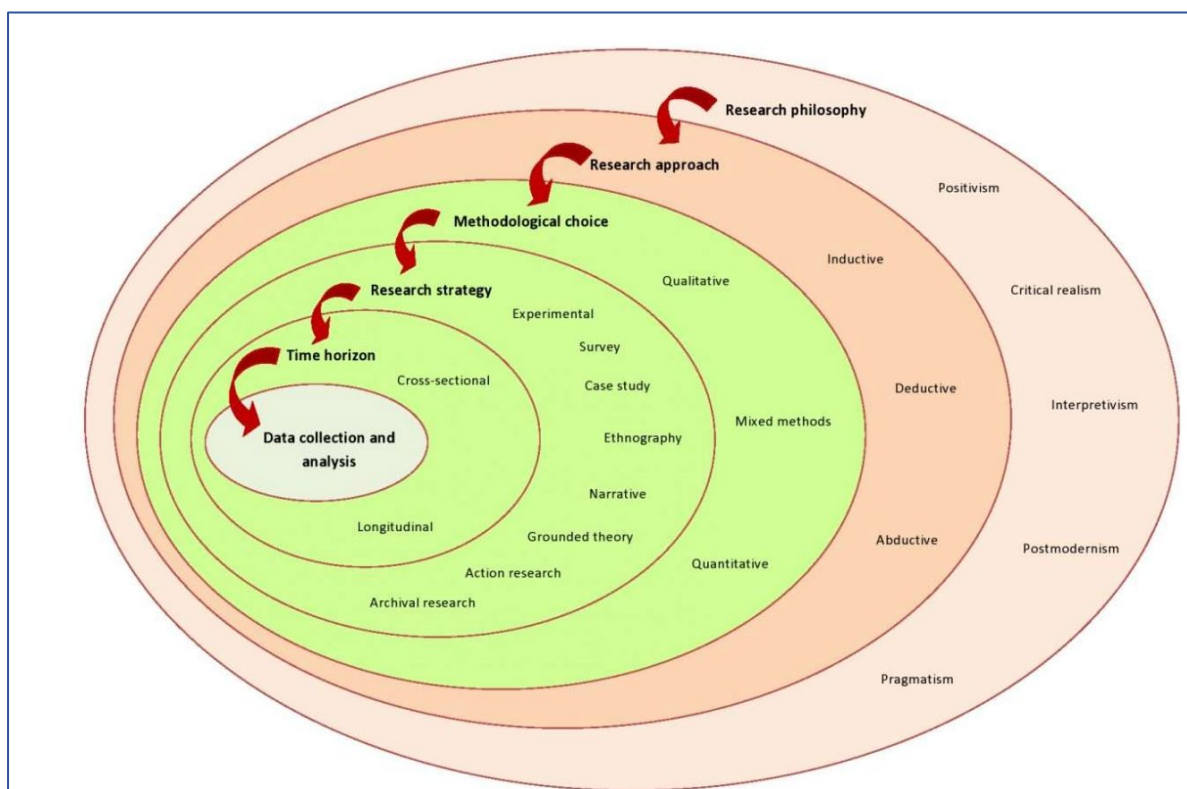


Figure 3: Research onion

3.2 Research Paradigm

A research paradigm plays a critical role in providing guidance on how researchers can approach a particular topic. Schwandt (2001) describes a research paradigm as a collective perspective within a field, embodying its beliefs and principles, and providing direction for problem-solving approaches. Within a research paradigm, (1) ontology refers to the beliefs surrounding the nature of reality; (2) epistemology pertains to how knowledge is gained, encompassing concerns about the validity of knowledge and the methods used; and (3) axiology deals with values and ethics, considering what is good, right, and valuable in the research process. For this study, a positivist ontology was used. According to Cupchik (2001), a positivist ontology prioritises uncovering specific functional relationships between variables and emphasising predictability. In this study, a positivist ontology was used to emphasise the importance of understanding how individuals perceive and interpret their experiences within the context of digital banking.

3.3 Research Approach

A quantitative approach was selected as the research methodology for this study. A quantitative approach involves collecting numerical data and analysing it using statistical methods to test hypotheses and make generalisations about a population (Saunders et al., 2019). This approach was considered appropriate for addressing the research objectives because it would allow for the systematic examination of relationships between variables in the context of DCX and its influence on loyalty in the banking industry. By using this approach, customer perceptions, behaviours, and attitudes regarding digital banking services could be quantifiable through hypothesis testing.

The study adopted a deductive approach, in alignment with the chosen positivist philosophy (cf. Saunders et al., 2019). Deduction starts with established theories and uses them to make predictions that can be tested (Ormerod, 2010). In this case, this research leveraged the existing S-O-R and TAM theories to examine the connection between DCX and loyalty. The focus was on testing these relationships through empirical data, not on creating entirely new theories. An inductive approach, which involves drawing general conclusions from specific observations (Ormerod, 2010), would not be ideal here since the aim was not to develop new theory through probability judgements, but rather to test an existing theory. Therefore, deduction aligned better with the research objective.

3.4 Research Design

3.4.1 Research strategies

Choosing the right research strategy is crucial for guiding a study's direction (Wedawatta et al., 2011). The selection depends on the research objectives and questions (Bougie & Sekaran, 2019). For this study, a survey approach was chosen as the research strategy. Surveys involve structured questionnaires distributed via web-based platforms to collect data on the study participants' perceptions, behaviours, and attitudes, in this case concerning digital banking services in South Africa. This strategy is suitable for hypothesis testing. It is also cost effective and convenient for participants.

3.4.2 Research design and time horizon

The research design serves as a framework for integrating various study components, encompassing the collection, measurement, and analysis of data to address the research problem and questions (Creswell, 2021; De Vaus, 2016; Saunders et al., 2019). Researchers can adopt different research designs, such as explanatory, conclusive, exploratory, descriptive, evaluative, or a combination of these (Saunders et al., 2019). Exploratory research delves into different facets of a topic without providing definitive answers, while a conclusive research design aims to yield conclusive knowledge (Changiz et al., 2020). This study employed a conclusive research design to test the study hypotheses and determine the relationship between stimuli variables and DCX, as well as the relationship between DCX and loyalty.

Causal research designs are ideal for testing hypotheses, which was a key objective in this study. This approach allowed the researcher to explore cause-and-effect relationships between the factors potentially influencing DCX and customer loyalty (cf. Saunders et al., 2019). These relationships were examined with the aim of gaining a deeper understanding of how specific variables influence DCX and, ultimately, customer loyalty.

3.5 Population and Sample

An ideal sample accurately reflects the target population (Lohr, 2021). Additionally, it allows researchers to draw conclusions about the broader population (Jawale, 2012). In this study, the variables of interest were the selected stimuli, DCX, and loyalty in South Africa. A sample frame typically involves a list, map, or sample of units from which individuals can be selected using probability sampling techniques (Lohr, 2021; Saunders et al., 2019). However, no sampling frame was available for this study, as it was not feasible to access all banking customers in South Africa that used digital banking services. For this reason, a non-probability sampling technique was employed. While

with this type of sampling technique access to the population is limited, the aim of non-probability sampling is to include enough participants to reach data saturation (Bougie & Sekaran, 2019). Non-probability sampling techniques include convenience sampling, judgement sampling, snowball sampling, and quota sampling (Saunders et al., 2019). For this study, participants were selected using the convenience and snowball sampling methods, whereby the researcher chose participants she knew and could distribute the survey to, and then asked these participants to identify others to complete the survey. These methods aided in effectively reaching participants online.

With the aim of achieving data saturation, a sample size of approximately 300 participants from South Africa was determined in accordance with the study's objectives, the total population size, resources, and requirements. The research questionnaire included screening questions about location and digital banking usage from traditional banks. Participants who did not meet the criteria of using digital banking services from traditional banks and residing in South Africa would be unable to complete the questionnaire. Since no sampling frame was available, the sample size could not be statistically calculated, so a set achievable sample of 300 participants was determined. This sample size was deemed sufficient for conducting an inferential statistical data analysis. Ultimately, a sample size of 334 participants was achieved, but only 281 responses met the necessary criteria for analysis.

3.6 Data Collection

3.6.1 The research instrument

Data was collected using a survey strategy where participants were required to complete structured questionnaires, specifically a web-based questionnaire (derived from Qualtrics) that was distributed via online platforms such as WhatsApp, Facebook, LinkedIn and email. As ideally, a pilot study should be conducted post receiving ethical clearance to test the feasibility of the study, the instrument was pre-tested in a pilot study, as discussed in 3.6.2 below. The model from Shahid et al. (2022) was used to construct questions on trust, convenience, customer support, app/web attributes, social influence, and DCX. Questions on perceived ease of use and perceived usefulness were taken from Zhang et al.'s (2018) study to develop a scale structured questionnaire.

The questions were divided into sections. These sections were labelled Sections A to C. Section A covered participant awareness and consent for the study. Section B consisted of questions around the adopted research constructs, and Section C focused on demographic information. The research method used continuous variables in the form of a 5-point Likert scale for all statements, measuring the construct with scales of "strongly disagree, disagree, neutral, agree, and strongly agree" (1=strongly

disagree to 5=strongly agree). The questionnaire has been attached in the appendix at the end of this report.

3.6.2 Pre-testing (piloting) the instrument

A pilot study was conducted with seven participants in Gauteng, South Africa. The pilot study involved a questionnaire created on Qualtrics a cloud-based software platform used to collect data, which was distributed via a link on WhatsApp. The study revealed no missing responses, as the participants answered all the questions. Feedback was solicited from the respondents at the end of the questionnaire, with the majority providing positive comments, noting that the questionnaire was easy to understand. No changes were made, based on this feedback. The pilot study was also effective in establishing the constructs' reliability.

To assess internal consistency and ensure the study's reliability, a Cronbach's Alpha test was conducted, with a score of above 0.7 considered adequate for reliability (Bougie & Sekaran, 2019). All constructs were examined in the Statistical Package for the Social Sciences (SPSS) Statistics 29 software using a reliability analysis. The results showed that five of the constructs had a Cronbach's Alpha score of above 0.7, with reliability indicated for the constructs of perceived usefulness, trust, customer support, digital customer experience, and customer loyalty (see Table 3.1 below). However, some constructs, such as perceived ease of use, convenience, app and web attributes, and social influence, were found to be unreliable, with a Cronbach's Alpha score of below 0.7. No changes were made to these constructs owing to the very small sample size.

Table 3.1: Results of Cronbach's Alpha test in pilot study

Construct	Cronbach's Alpha
Perceived ease of use	0.616
Perceived usefulness	0.868
Trust	0.813
Convenience	0.655
Customer support	0.841
App/Web attribute	0.170
Social influence	0.235
Digital customer experience	0.733
Customer loyalty	0.929

3.7 Data Analysis Procedure

The initial phase of analysis involved calculating descriptive statistics (averages, standard deviations) for all the variables to provide a basic understanding of the data. Next, correlation analysis was conducted to explore the strength and relationships between the independent variables and the dependent variables. Furthermore, to ensure the quality and trustworthiness of the findings, reliability and validity assessments were conducted. Finally, multiple regression analysis was used to test the specific hypotheses about how these factors directly influence customer experience and, ultimately, customer loyalty.

3.7.1 Multiple linear regression and frequency

Since the study aimed to explore the relationships between stimuli variables and DCX, along with the influence of DCX on customer loyalty, these objectives were addressed through regression analysis, as this type of analysis follows this process (cf. Saunders et al., 2019). Regression analysis was considered useful for providing insights into these relationships. The study selected multiple regression analysis to explore relationships between independent and dependent variables, supported by a 95% confidence interval (cf. Edwards, 1985). This statistical approach, as outlined by Edwards (1985), allows for rigorous hypothesis testing and examination of variable relationships. Additionally, methods such as correlation analysis, t-tests, and ANOVAs are employed to further analyse and interpret the data effectively. Multicollinearity analysis was also selected as useful in analysing the Variance Inflation Factor (VIF) and tolerance. Multicollinearity occurs when two or more independent variables in a regression model are highly correlated (Daoud, 2017).

3.7.2 Data cleansing

For data to have meaning, purpose, and decision-making value, it has to be analysed (Saunders et al., 2019). For this study, Microsoft Excel was used to apply code to the raw data using scales from the questionnaire, i.e., the 5-point Likert scale (1=strongly disagree to 5=strongly agree). Using this process, data was cleaned to check for irregularities and then be exported into the SPSS Statistics 27 software, to perform the statistical analysis.

3.7.3 Reliability and validity measurement

According to Saunders et al. (2019), for a study to be considered reliable it has to pass both reliability and validity measurement instrument tests. As a result, SPSS Statistics 27 was chosen to test the reliability and validity of the study. Reliability relates to the consistency of the study outcomes, while validity concerns the accuracy of the data analysed (Saunders et al., 2019). In this study, all constructs

underwent testing in SPSS to achieve a Cronbach's Alpha coefficient that was above the threshold of 0.70, as recommended by Sharma (2016). Constructs falling below this threshold were further analysed to improve reliability.

Convergent validity was then assessed using Exploratory Factor Analysis (EFA) to ensure that items within each construct measured the same underlying concept. Discriminant analysis followed to examine correlations and establish whether constructs were distinct from one another; a correlation of 0.80 indicates adequate discriminant validity (Saunders et al., 2019).

3.8 Ethical Considerations

In academic research, ethical considerations revolve around respecting the researcher's dignity and ensuring courtesy, permission, and confidentiality for all parties involved (Bougie & Sekaran, 2019). This means that factors such as gender, race, culture, education level, financial status, or disabilities should not influence participants' involvement in a study. For this study, participation was voluntary, and participants were informed about the study's purpose and expected completion time before completing the questionnaire, allowing them to withdraw if desired. Contact details were provided for participants that might need assistance or further discussion about the study. To ensure confidentiality and comfort, sensitive demographic questions included a "prefer not to say" option. Participant feedback was kept anonymous and confidential. Finally, participants were asked to indicate their agreement to participate by ticking a checkbox at the beginning of the questionnaire.

CHAPTER 4. PRESENTATION OF RESULTS

4.1 Introduction

This chapter outlines the results of the analysis of the data collected for this study. It also details the data-collection methodology chosen and the analysis procedures conducted using the SPSS-29 software to gain insights into the relationship between the stimulus construct of digital customer experience and customer loyalty. The data for this study was gathered from 334 participants, but only 281 responses, representing 84%, met the necessary criteria for analysis. A total of 47 responses were either incomplete or left blank. The analysis begins with an examination of the respondents' demographic profile, followed by analyses of central tendency, reliability, and validity. The chapter concludes with the results of the regression analysis, which was performed to investigate the relationships between variables further.

4.2 Demographic Profile of Respondents



Figure 4.1: Summary of demographics

From collecting and analysing the demographic data (see Table 4.1), several key characteristics of the respondents' demographic profile were observed. In terms of gender, the sample was relatively balanced, with a slight majority of females ($n = 146$; 51.8%) compared to males ($n = 126$; 44.7%), while a small percentage (1.1%) chose not to disclose their gender. The age distribution showed that the largest group of respondents fell within the 30–40 year range ($n = 158$; 56%), followed by those

aged 18–29 years (n = 71; 26.2%). A smaller proportion of respondents were aged 41 and above (n = 42; 14.9%), with just 0.7% preferring not to disclose their age.

Regarding education, the sample was found to be highly educated, with 104 respondents (36.9%) holding postgraduate qualifications, and 74 respondents (26.2%) having completed a degree. A smaller percentage held a diploma (15.2%) or had only completed high school (14.9%), while 4.6% did not disclose their education level.

In terms of income, most respondents earned above R60,000 (25.2%), followed by those earning less than R10,000 (15.2%). The middle-income brackets (R10,000 – R55,000) showed lower proportions, with percentages ranging from 6.4% to 12.8%. A significant number of respondents (14.9%) chose not to disclose their income. Overall, the sample was characterised by a higher concentration of well-educated individuals in the 30–40 year age group, with a notable representation of high earners.

Table 4.1: Summary of demographic variables

Variable	Sub-Variable	Frequency	Percentage (%)
Gender	Male	126	44.7
	Female	146	51.8
	Prefer not to say	3	1.1
Age	18–29	71	26.2
	30–40	158	56
	41 and above	42	14.9
	Prefer not to say	2	0.7
Education	High school	42	14.9
	Diploma	43	15.2
	Degree	74	26.2
	Postgraduate (Honours, Masters, Doctorate)	104	36.9
	Prefer not to say	13	4.6
Income	Less than R10,000	43	15.2
	R10,000-R25,000	34	12.1
	R25,001-R40,000	36	12.8
	R40,001-R55,000	32	11.3
	R55,001-R60,000	18	6.4
	Above R60,000	71	25.2
	Prefer not to say	42	14.9

4.3 Central Tendency Measures of the Constructs

The central tendency measures—mean (μ), median, standard deviation (σ), and mode—enable researchers to make observations and conduct a deeper statistical analysis (Mishra et al., 2019). These measures can be calculated using SPSS 29. The study employed a Likert scale to test nine constructs, and trends within the scale were observed through the central tendency measures. The Likert scale ranged from "Strongly Agree" (5) to "Strongly Disagree" (1). Some missing values were identified for certain items within the constructs. The results from the feedback on the constructs are presented in Table 4.2. A mean Likert score of below 2.5 indicates a trend toward respondents disagreeing with the statement, a score of between 2.5 and 3.5 suggests a neutral response, and a score of above 3.5 reflects a trend of agreement with the statement. Further insights can be found in Tables 4.3.1 to 4.3.9, which display the frequency and percentage distributions for the construct items.

Table 4.2: Central Tendency Measures of the Constructs

Constructs	Mean (μ)	Median	Mode	Standard Deviation (σ)
Perceived ease of use	4.49	5	5	0.922
Perceived usefulness	4.66	5	5	0.149
Trust	3.84	3	3	1.068
Convenience	4.61	5	5	0.824
Customer support	4.46	5	5	0.933
App/Web attributes	4.23	5	5	1.004
Social influence	3.79	3	3	1.193
Digital customer experience	4.36	5	5	0.958
Customer loyalty	4.18	5	5	1.053

4.3.1 Perceived ease of use

From Table 4.2, it can be observed that respondents generally agreed with the construct “perceived ease of use” (PEU) ($\mu = 4.49$; $\sigma = 0.922$). This finding is further supported by the frequency and percentage breakdown for each construct item, as shown in Table 4.3.1. For the item PEU1, most responses (77.6%) were in the “strongly agree” category. For PEU2, most respondents selected “strongly agree” ($n = 206$; 74.6%), followed by “neutral” responses ($n = 66$; 23.9%). Similarly, for PEU3 and PEU4, most responses were also in the “strongly agree” category, with PEU3 having 78.3% ($n = 216$) and PEU4 having 72.9% ($n = 199$). Thus, it is evident that the responses were predominantly

aligned with the higher-scale items (4 or 5). These findings suggest that respondents generally perceived the system from traditional banks as easy to use.

Table 4.3.1: Frequency and percentage breakdown of the perceived ease of use construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Perceived ease of use	PEU1	Frequency (n)	4	0	58	0	215
		Valid Percentage (%)	1.4	0	20.9	0	77.6
	PEU2	Frequency (n)	3	0	66	1	206
		Valid Percentage (%)	1.1	0	23.9	0.4	74.6
	PEU3	Frequency (n)	3	0	57	0	216
		Valid Percentage (%)	1.1	0	20.7	0	78.3
	PEU4	Frequency (n)	3	0	71	0	199
		Valid Percentage (%)	1.1	0	26	0	72.9

4.3.2 Perceived usefulness

From Table 4.2, it can be observed that respondents generally agreed with the construct “perceived usefulness” (PU), with an overall mean of $\mu = 4.66$ and standard deviation of $\sigma = 0.149$. This is further supported by the frequency and percentage breakdown for each item, as shown in Table 4.3.2. For the item PU1, most respondents ($n = 245$; 88.4%) selected “strongly agree”, with smaller percentages responding with “neutral” ($n = 31$; 11.2%). A low percentage of respondents selected “strongly disagree” ($n = 1$; 0.4%) and no respondents selected “disagree” (0%).

For PU2, again, most responses fell in the “strongly agree” category, with 81.2% ($n = 225$) selecting this option, while a smaller percentage of respondents chose “neutral” ($n = 51$; 18.4%). The remaining responses ($n = 1$; 0.4%) were in the “strongly disagree” category, and there were no responses in the

“disagree” category. For PU3, the trend was similar, with most responses in the “strongly agree” category (n = 221; 79.8%). The remaining responses were primarily “neutral” (n = 55; 19.9%) and only a small percentage selected “strongly disagree” (n = 1; 0.4%), with no respondents choosing “disagree”. These results suggest that for all three items, a strong positive perception of usefulness was evident, indicating that the system was perceived as effective in facilitating tasks and improving efficiency.

Table 4.3.2: Frequency and percentage breakdown of the perceived usefulness construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Perceived usefulness	PU1	Frequency (n)	1	0	31	0	245
		Valid Percentage (%)	0.4	0	11.2	0	88.4
	PU2	Frequency (n)	1	0	51	0	225
		Valid Percentage (%)	0.4	0	18.4	0	81.2
	PU3	Frequency (n)	1	0	55	0	221
		Valid Percentage (%)	0.4	0	19.9	0	79.8

4.3.3 Trust

As shown in Table 4.2, the overall mean and standard deviation of the construct of trust (T) are $\mu = 3.84$ and $\sigma = 1.068$ respectively, indicating a generally positive perception of the system’s trustworthiness among the respondents. The frequency and percentage breakdown for each item show a tendency toward neutral to slightly positive responses. For T1, 54.2% (n = 150) of respondents selected “neutral”, while 44.4% (n = 123) strongly agreed with the statement, and a small percentage (1.4%, n = 4) strongly disagreed. For T2, again most respondents were neutral (n = 154; 56%) about the item, with 41.5% (n = 114) strongly agreeing and 2.2% (n = 6) strongly disagreeing. T3 showed similar results, with 50.2% (n = 138) showing neutral responses and 48% (n = 132) strongly agreeing, while 1.8% (n = 5) strongly disagreed. Finally, for T4, 54.9% (n = 151) were neutral, while 42.2% (n

= 116) strongly agreed, and 2.9% (n = 8) strongly disagreed. Overall, the results predominantly indicate a neutral to positive sentiment towards system trust, with a significant portion of respondents expressing neutral opinions on trust-related statements.

Table 4.3.3: Frequency and percentage breakdown of the trust construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Trust	T1	Frequency (n)	4	0	150	0	123
		Valid Percentage (%)	1.4	0	54.2	0	44.4
	T2	Frequency (n)	6	0	154	1	114
		Valid Percentage (%)	2.2	0	56	0.4	41.5
	T3	Frequency (n)	5	0	138	0	132
		Valid Percentage (%)	1.8	0	50.2	0	48
	T4	Frequency (n)	8	0	151	0	116
		Valid Percentage (%)	2.9	0	54.9	0	42.2

4.3.4 Convenience

The construct of convenience (C) has an overall mean of $\mu = 4.61$ and a standard deviation of $\sigma = 0.824$, as shown in Table 4.2, indicating a highly positive perception of the traditional bank system's convenience among the respondents. The frequency and percentage breakdown for each item demonstrate a strong tendency toward positive responses. For C1, most respondents (n = 229; 83%) strongly agreed with the statement, while 16.7% (n = 46) selected “neutral”, and a small percentage (0.4%, n = 1) strongly disagreed. For C2, 83% (n = 229) strongly agreed, with 15.9% (n = 44) responding neutrally, and 1.1% (n = 3) strongly disagreeing. C3 followed a similar pattern, with 81.5% (n = 225) strongly agreeing, 17.4% (n = 48) neutral, and 0.7% (n = 2) strongly disagreeing. Lastly, for

C4, 76% (n = 209) strongly agreed, 23.3% (n = 64) were neutral about the statement, and 0.4% (n = 1) strongly disagreed with it. Overall, these results suggest that respondents perceived the system as highly convenient, with a significant proportion strongly agreeing with the convenience-related statements.

Table 4.3.4: Frequency and percentage breakdown of the convenience construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Convenience	C1	Frequency (n)	1	0	46	0	229
		Valid Percentage (%)	0.4	0	16.7	0	83
	C2	Frequency (n)	3	0	44	1	229
		Valid Percentage (%)	1.1	0	15.9	0.4	83
	C3	Frequency (n)	2	0	48	1	225
		Valid Percentage (%)	0.7	0	17.4	0.4	81.5
	C4	Frequency (n)	1	0	64	1	209
		Valid Percentage (%)	0.4	0	23.3	0.4	76

4.3.5 Customer support

The construct of customer support (CS) has an overall mean and standard deviation of $\mu = 4.46$ and $\sigma = 0.933$ respectively (see Table 4.2), indicating a positive perception of the quality of customer support offered by traditional banks for digital services among the respondents. The frequency and percentage breakdown for each item reveals a tendency toward positive responses. For CS1, most respondents (n = 200; 72.2%) strongly agreed with the statement, while 27.4% (n = 76) selected “neutral”, and a small percentage (0.4%, n = 1) strongly disagreed. For CS2, 221 respondents (76.2%) strongly agreed, with 22.7% (n = 63) responding neutrally, and 1.1% (n = 3) strongly disagreeing. For CS3, 201 respondents

(73.1%) strongly agreed, while 25.5% (n = 70) were neutral, and 1.5% (n = 4) strongly disagreed. Overall, these results suggest that respondents generally had a positive view of the customer support provided by traditional banks, with a large portion strongly agreeing with the customer support-related statements, while the neutral responses remained relatively low.

Table 4.3.5: Frequency and percentage breakdown of the customer support construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Customer support	CS1	Frequency (n)	1	0	76	0	200
		Valid Percentage (%)	0.4	0	27.4	0	72.2
	CS2	Frequency (n)	3	0	63	0	221
		Valid Percentage (%)	1.1	0	22.7	0	76.2
	CS3	Frequency (n)	4	0	70	0	201
		Valid Percentage (%)	1.5	0	25.5	0	73.1

4.3.6 App/Web attributes

The App/Web attributes (AWA) construct has an overall mean of $\mu = 4.23$ and standard deviation of $\sigma = 1.004$, as shown in Table 4.2, which indicates a generally positive perception of app/web attributes among the respondents. The frequency and percentage breakdown for each item highlights a trend toward positive responses. For AWA1, 56.7% of the respondents (n = 157) strongly agreed with the statement, while 42.6% (n = 118) selected “neutral”, and a small percentage (0.7%, n = 2) strongly disagreed. For AWA2, 56% (n = 154) strongly agreed, with 43.3% (n = 119) choosing a neutral response, and 0.7% (n = 2) strongly disagreeing. For AWA3, 66.5% of the respondents (n = 183) strongly agreed, while 32.4% (n = 89) were neutral, and 1.1% (n = 3) strongly disagreed. Finally, for AWA4, 70.3% (n = 192) strongly agreed, with 28.6% (n = 78) choosing a neutral response, and 1.1% (n = 3) strongly disagreeing with the statement. The data thus suggests a highly favourable perception of the app/web attributes. A significant majority of respondents strongly agreed with the statements,

followed by a neutral response. Overall, the results reveal a highly positive sentiment towards the App/Web attributes.

Table 4.3.6: Frequency and percentage breakdown of the app/web attributes construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
App/Web attributes	AWA1	Frequency (n)	2	0	118	0	157
		Valid Percentage (%)	0.7	0	42.6	0	56.7
	AWA2	Frequency (n)	2	0	119	0	154
		Valid Percentage (%)	0.7	0	43.3	0	56
	AWA3	Frequency (n)	3	0	89	0	183
		Valid Percentage (%)	1.1	0	32.4	0	66.5
	AWA4	Frequency (n)	3	0	78	1	192
		Valid Percentage (%)	1.1	0	28.6	0.4	70.3

4.3.7 Social influence

As shown in Table 4.2, the construct of social influence (SI) has an overall mean of $\mu = 3.79$ and a standard deviation of $\sigma = 1.193$, which indicate a moderately positive perception of social influence among the respondents. The frequency and percentage breakdown for each item shows a mix of responses with a tendency toward neutral to slightly positive reactions. For SI1, 47.7% of respondents ($n = 132$) selected “neutral”, while 42.6% ($n = 118$) strongly agreed, and 9.7% ($n = 27$) strongly disagreed with the statement. For SI2, the responses were more evenly distributed, with 51.3% ($n = 142$) strongly agreeing, 47.3% ($n = 131$) being neutral, and 1.4% ($n = 4$) strongly disagreeing. SI3 also reflected a similar pattern, with 49.8% ($n = 137$) neutral, 42.5% ($n = 117$) strongly agreeing, and 7.3% ($n = 20$) strongly disagreeing. Overall, these results suggest that social influence was perceived somewhat positively by the respondents, with a substantial portion expressing neutral or strong agreement, while a small percentage strongly disagreed with the statements related to social influence. The higher standard deviation ($\sigma = 1.193$) reflects a greater variation in how respondents perceived

social influence. This may thus suggest that while the system has some social influence, its impact may vary among users.

Table 4.3.7: Frequency and percentage breakdown of the social influence construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Social Influence	SI1	Frequency (n)	27	0	132	0	118
		Valid Percentage (%)	9.7	0	47.7	0	42.6
	SI2	Frequency (n)	4	0	131	0	142
		Valid Percentage (%)	1.4	0	47.3	0	51.3
	SI3	Frequency (n)	20	1	137	0	117
		Valid Percentage (%)	7.3	0.4	49.8	0	42.5

4.3.8 Digital customer experience

The construct of digital customer experience (DCX) has an overall mean of $\mu = 4.36$ and a standard deviation of $\sigma = 0.958$, which indicates a positive perception of the DCX among the respondents. The frequency and percentage breakdown for each item demonstrates a strong tendency toward positive responses. For DCX1, 86.3% ($n = 239$) strongly agreed with the statement, while 13.4% ($n = 37$) were neutral, and a small percentage (0.4%; $n = 1$) strongly disagreed. For DCX2, 68.8% ($n = 187$) strongly agreed, with 29.4% ($n = 80$) providing neutral responses, and 1.5% ($n = 4$) strongly disagreeing. DCX3 followed a similar pattern, with 66.8% ($n = 181$) strongly agreeing, 31.7% ($n = 86$) neutral, and 1.1% ($n = 3$) strongly disagreeing. Finally, for DCX4, 55.7% ($n = 151$) strongly agreed, 40.6% ($n = 110$) were neutral, and 3.3% ($n = 9$) strongly disagreed. Overall, these results suggest that respondents generally perceived the DCX positively, with the majority strongly agreeing with the statements related to the digital experience, while neutral responses were also prevalent. The relatively low standard

deviation ($\sigma = 0.958$) indicates that most responses were clustered around the positive side of the scale, with less variability in perceptions.

Table 4.3.8: Frequency and percentage breakdown of the digital customer experience construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Digital customer experience	DCX1	Frequency (n)	1	0	37	0	239
		Valid Percentage (%)	0.4	0	13.4	0	86.3
	DCX2	Frequency (n)	4	0	80	1	187
		Valid Percentage (%)	1.5	0	29.4	0.4	68.8
	DCX3	Frequency (n)	3	0	86	1	181
		Valid Percentage (%)	1.1	0	31.7	0.4	66.8
	DCX4	Frequency (n)	9	0	110	1	151
		Valid Percentage (%)	3.3	0	40.6	0.4	55.7

4.3.9 Customer loyalty

The construct of customer loyalty (CL) has an overall mean of $\mu = 4.18$ and a standard deviation of $\sigma = 1.053$, which indicates a generally positive perception of customer loyalty towards traditional banks, although with a moderate level of variability. The frequency and percentage breakdown for each item shows a tendency toward positive responses, with a significant proportion of the respondents strongly agreeing with the statements. For CL1, 74.9% ($n = 206$) of the respondents strongly agreed with the statement, while 23.6% ($n = 65$) were neutral, and 1.1% ($n = 3$) strongly disagreed. For CL2, 59.6% ($n = 162$) strongly agreed, 39% ($n = 106$) were neutral, and 1.5% ($n = 4$) strongly disagreed. CL3 showed a similar trend, with 50.7% ($n = 137$) strongly agreeing, 44.1% ($n = 119$) neutral, and 5.2% ($n = 14$) strongly disagreeing. Overall, these results suggest that respondents generally displayed positive

loyalty toward traditional banks, with most strongly agreeing with the loyalty-related statements, while a notable proportion remained neutral. The relatively high standard deviation ($\sigma = 1.053$) indicates some variation in responses, suggesting that while many respondents had a strong sense of loyalty, there was a segment of the sample with more moderate or varied views on customer loyalty.

Table 4.3.9: Frequency and percentage breakdown of the customer loyalty construct

Construct		Frequency and Percentage	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Customer loyalty	CL1	Frequency (n)	3	0	65	1	206
		Valid Percentage (%)	1.1	0	23.6	0.4	74.9
	CL2	Frequency (n)	4	0	106	0	162
		Valid Percentage (%)	1.5	0	39	0	59.6
	CL3	Frequency (n)	14	0	119	0	137
		Valid Percentage (%)	5.2	0	44.1	0	50.7

4.4 Testing for Reliability of Constructs

Reliability is defined as the consistency of a measurement over time (Bougie & Sekaran, 2016). To be considered reliable, a construct should have a Cronbach's Alpha value above 0.7, which indicates good internal consistency (Heale & Twycross, 2015). A reliability analysis was performed in SPSS-29 on the constructs of the study, and the results are summarised in Table 4.4 below.

The analysis of Cronbach's Alpha values for the constructs revealed generally good internal consistency across all scales, with values of above 0.7, such as "Perceived Ease of Use" (0.839), "Trust" (0.835), "Convenience" (0.834), "App/Web Attributes" (0.834) and "Digital Customer Experience" (0.808), indicating that the items within these constructs are highly reliable. "Perceived Usefulness" (0.776), "Social Influence" (0.735), "Customer Loyalty" (0.735) and "Customer Support"

(0.779) show acceptable internal consistency, although there may be room for improvement. Overall, all constructs are reliable.

Table 4.4: Construct reliability

Construct	Cronbach Alpha	No. of Items
Perceived ease of use	0.839	4
Perceived usefulness	0.776	3
Trust	0.835	4
Convenience	0.834	4
Customer support	0.779	3
App/Web attributes	0.834	4
Social influence	0.735	3
Digital customer experience	0.808	4
Customer loyalty	0.735	3

4.5 Validity Test

4.5.1 Convergent validity

Convergent validity is assessed by examining the factor loading value of each indicator in relation to the overall constructs of the model (Sharma, 2016). To evaluate the validity of each construct, an Exploratory Factor Analysis (EFA) was conducted to determine whether the factors loaded appropriately, with a minimum loading threshold of 0.5. Before performing the EFA, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity were conducted to assess the suitability of the data for factor analysis.

4.5.2 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity

The KMO measure assesses the sampling adequacy, indicating whether the data is suitable for factor analysis. A KMO value above 0.6 is considered acceptable, with higher values suggesting that the data is more appropriate for factor analysis. For the study, the KMO Measure of Sampling Adequacy was 0.882, which indicated good sampling adequacy for factor analysis. Additionally, Bartlett's Test of Sphericity produced a significant result ($p = 0.001$), where a value of < 0.05 is significant, confirming that the correlation matrix was not an identity matrix and that there were sufficient correlations among the variables. These results suggest that the data was appropriate for factor analysis (see Table 4.5).

Table 4.5: The Kaiser-Meyer-Olkin (KMO) measure

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,882
Bartlett's Test of Sphericity	Approx. Chi-Square	3946,113
	df	496
	Sig.	0,001

4.5.3 Exploratory Factor Analysis (EFA)

In SPSS 29, an EFA was performed to identify groups of variables that were closely related to each other (cf. Watkins, 2018). A Principal Component Analysis (PCA) with varimax rotation was applied, to examine all 32 items across the nine constructs. The analysis revealed seven factors with Eigenvalues of greater than or equal to 1, in accordance with Kaiser's criterion (see Table 4.6). These seven factors collectively explained 64.036% of the total variance. This is further illustrated in the scree plot, which highlights the six-factor solution (see Figure 4.2).

Table 4.6: Exploratory Factor Analysis (EFA) table

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,223	31,948	31,948	10,223	31,948	31,948	3,8	11,876	11,876
2	2,35	7,344	39,292	2,35	7,344	39,292	3,224	10,076	21,952
3	2,047	6,398	45,69	2,047	6,398	45,69	2,98	9,312	31,264
4	1,701	5,314	51,004	1,701	5,314	51,004	2,978	9,306	40,57
5	1,528	4,776	55,78	1,528	4,776	55,78	2,839	8,873	49,444
6	1,363	4,26	60,04	1,363	4,26	60,04	2,387	7,46	56,903
7	1,279	3,996	64,036	1,279	3,996	64,036	2,283	7,133	64,036
Extraction Method: Principal Component Analysis.									

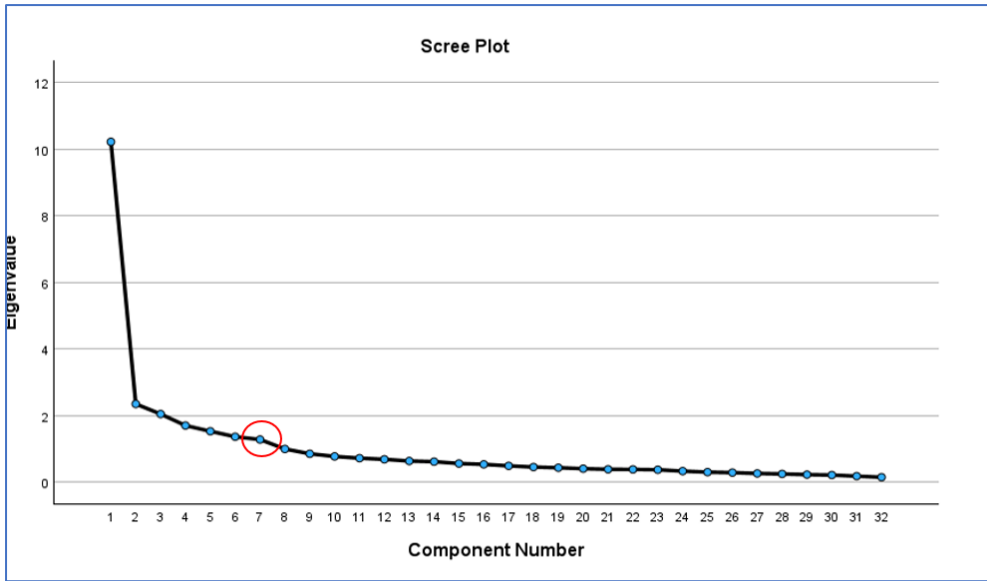


Figure 4.2: Scree plot

The communalities table for extracted components shows the extent to which an item correlates with the other items (Ghosh & Chakraborty, 2020). In general, a communality value of above 0.5 is preferred, although values of above 0.3 are also considered acceptable (Shrestha, 2021). The communalities table, which is presented in Table 4.7, indicates that most of the items had extraction values of above 0.5, which suggests that these items shared a strong correlation with the underlying factors, indicating good communality, apart from item SI2 (0.473), which was lower but still acceptable. As a result, the model was deemed acceptable, and none of the items were excluded.

Table 4.7: Communalities table

Item	Extraction	Item	Extraction
PEU1	0.624	CS2	0.740
PEU2	0.600	CS3	0.685
PEU3	0.792	AWA1	0.635
PEU4	0.655	AWA2	0.641
PU1	0.586	AWA3	0.630
PU2	0.792	AWA4	0.586
PU3	0.682	SI1	0.630
T1	0.571	SI2	0.473
T2	0.687	SI3	0.598
T3	0.637	DCX1	0.531
T4	0.679	DCX2	0.642
C1	0.658	DCX3	0.657
C2	0.696	DCX4	0.531
C3	0.698	CL1	0.608
C4	0.593	CL2	0.636
CS1	0.669	CL3	0.649

4.6 Discriminant Validity

To ensure that the constructs measured in this study were distinct, a discriminant validity analysis was conducted using SPSS 29. As suggested by Saunders et al. (2019), a correlation coefficient of greater than 0.8 between two constructs raises concerns about discriminant validity. However, as shown in Table 4.8, the correlation matrix reveals significant positive relationships among all constructs in the study, with correlations ranging from moderate to strong. For example, Perceived Ease of Use (PEU) is positively correlated with Perceived Usefulness (PU) ($r = 0.330$, $p = 0.001$), Trust (T) ($r = 0.375$, $p = 0.001$), Convenience (C) ($r = 0.440$, $p = 0.001$), and Customer Support (CS) ($r = 0.251$, $p = 0.001$). Similarly, Digital Customer Experience (DCX) and Customer Loyalty (CL) show strong correlations with other variables, such as DCX with AWA ($r = 0.694$, $p = 0.001$) and CL ($r = 0.576$, $p = 0.001$). Overall, all relationships are statistically significant at the 0.01 or 0.05 level, indicating that the constructs are interrelated and support the study's hypothesised relationships. Since no correlation coefficients exceed the critical threshold of 0.8, this confirms that there are no concerns regarding discriminant validity, and the constructs are sufficiently distinct.

Table 4.8: Discriminant validity assessment through inter-construct correlations

		PEU	PU	T	C	CS	AWA	SI	DCX	CL
PEU	r	--								
	p-value									
PU	r	.330**	--							
	p-value	0,001								
T	r	.375**	.315**	--						
	p-value	0,001	0,001							
C	r	.440**	.384**	.362**	--					
	p-value	0,001	0	0,001						
CS	r	.251*	.275**	.274**	.378**	--				
	p-value	0,001	0,001	0,001	0,001					
AWA	r	.420**	.409**	.519**	.511	.433**	--			
	p-value	0,001	0,001	0,001	0,001	0,001				
SI	r	.153*	.265**	.461**	.291**	.332**	.479**	--		
	p-value	0,012	0,001	0,001	0,001	0,001	0,001			
DCX	r	.393**	.458**	.456**	.565**	.386**	.694**	.475**	--	
	p-value	0,001	0,001	0,001	0,001	0,001	0,001	0,001		
CL	r	.392**	.388**	.374**	.450**	.302**	.468**	.446**	.576**	--
	p-value	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

4.7 Testing Hypotheses through Regression Analysis

The conceptual model in this study consists of eight hypotheses, which were tested using multiple regression analysis. The model includes two dependent variables: Digital Customer Experience (DCX) and Customer Loyalty (CL) for traditional banks. These variables are hypothesised to be influenced by seven independent variables: Perceived Ease of Use (PEU), Perceived Usefulness (PU), Trust (T), Convenience (C), Customer Support (CS), App/Web Attributes (AWA), and Social Influence (SI). Given the presence of two dependent variables, the analysis involved two separate regression models.

Before conducting the regression analysis, a multicollinearity check was performed to assess the relationships between the independent variables in each model (Model 1 and Model 2). According to Yap and Zainodin (2013), the multicollinearity assessment requires a VIF of below 10 and a tolerance of above 0.1. During the regression analysis, key aspects such as the proportion of variance explained, statistical significance, and model coefficients were examined, as summarised in Table 4.9. Specifically, the Adjusted R^2 was analysed, which indicates the proportion of variance explained by the model. Typically, an Adjusted R^2 of above 0.3 is considered meaningful and indicative of a viable model (Karch, 2020; Saunders et al., 2019).

4.8 Multicollinearity Assumption

As mentioned in 4.7 above, a multicollinearity analysis is conducted prior to a regression analysis, to analyse the VIF and tolerance. When two or more independent variables in a regression model are highly correlated, multicollinearity occurs (Daoud, 2017). This is problematic since it may result in certain variables having an inflated variance and, therefore, having statistical insignificance, when they should have otherwise (Daoud, 2017; Dupuis & Victoria-Feser, 2013). This means that multicollinearity should be tested and solved before the regression analysis.

The results for both Model 1 and Model 2 are shown in Table 4.9 and indicate that no multicollinearity was found, as the VIF for the variables was below 10 and the tolerance above 0.1. This meant that the variables were not strongly correlated, and the regression analysis could be conducted.

4.9 Regression Analysis

Regression analysis is a statistical technique used to examine the relationship between one dependent variable and one or more independent variables (Young, 2018). It helps to determine the strength and direction of the relationship between the variables and allows for predictions to be made.

Each model summary could be analysed through a regression analysis conducted in the software program SPSS-29. Model 1 was used to investigate the impact of the seven independent variables: Perceived Ease of Use (PEU), Perceived Usefulness (PU), Trust (T), Convenience (C), Customer Support (CS), App/Web Attributes (AWA), and Social Influence (SI) on a single dependent variable (Digital Customer experience – DCX). Model 2 was used to investigate the influence of the independent variable (Digital Customer experience – DCX) on the dependent variable (Customer Loyalty).

Table 4.9: Regression analysis

		Unstandardised Coefficients	Standardised Coefficients		t	Sig.	Collinearity Statistics		
Dependent Variable	Independent Variables	B	Std. Error	Beta			Tolerance	VIF	Results
Model 1: DCX	PEU	-0,007	0,052	-0,007	-0,133	0,895	0,685	1,459	Rejected
	PU	0,207	0,075	0,131	2,748	0,006	0,764	1,309	Accepted
	T	0,041	0,046	0,046	0,886	0,377	0,638	1,567	Rejected
	C	0,251	0,061	0,213	4,094	0,001	0,644	1,553	Accepted
	CS	0,026	0,063	0,020	0,418	0,676	0,762	1,312	Rejected
	AWA	0,389	0,053	0,422	7,284	0,001	0,52	1,921	Accepted
	SI	0,174	0,053	0,166	3,286	0,001	0,682	1,467	Accepted
	ANOVA P value				0,001				
	ANOVA F value				47,121				
	Adjusted R Squared				0,564				
Model 2: CL		Unstandardised Coefficients	Standardised Coefficients		t	Sig.	Collinearity Statistics		
	Independent Variables	B	Std. Error	Beta					Results
	DCX	0,486	0,043	0,576	11,363	0,001	1,000	1,000	Accepted
	ANOVA P value				0,001				
	ANOVA F value				129,116				
	Adjusted R Squared				0,329				

4.9.1 Model 1: Digital Customer Experience (DCX)

Table 4.9 shows the regression analysis for Digital Customer Experience (DCX) with seven independent variables (Perceived Ease of Use, Perceived Usefulness, Trust, Convenience, Customer Support, App/Web Attributes, and Social Influence). The results indicate that Perceived Usefulness (p-value = 0.006), Convenience (p-value = 0.001), App/Web Attributes (p-value = 0.001), and Social Influence (p-value = 0.001) were significant predictors of Digital Customer Experience (DCX), with p-values of less than 0.05. However, Perceived Ease of Use (p-value = 0.895), Trust (p-value = 0.377),

and Customer Support (p -value = 0.676) were not significant, with p -values of greater than 0.05, thus leading to the rejection of these hypotheses. The Adjusted R^2 of 0.564 indicates that the model explains approximately 56.4% of the variance in DCX. The ANOVA p -value of 0.001 and F -value of 47.121 suggest that the model is statistically significant, demonstrating a strong relationship between the predictors and DCX.

4.9.2 Detailed interpretation of Model 1

H2: Perceived Ease of Use (PEU): Perceived Ease of Use (PEU) was found not to have a significant impact on Digital Customer Experience (DCX) in this model. The p -value for PEU is 0.895, which is well above the typical significance threshold of 0.05. This indicates that PEU is not a statistically significant predictor of DCX in this study. The negative sign of the unstandardised coefficient (-0.007) suggests that if there were any effect, it would be in the opposite direction, but this effect is not strong enough to be considered significant. This outcome may suggest that, while ease of use is generally a factor in technology adoption, it may not be the primary driver of DCX in this context, where other factors such as convenience and perceived usefulness could outweigh it. Additionally, the collinearity statistics show no significant issues, as the VIF (1.459) and tolerance (0.685) values are within acceptable ranges, which indicates that multicollinearity is not a concern. It is thus concluded that the null hypothesis cannot be rejected. Hence, the alternative hypothesis that perceived ease of use positively influences the digital customer experience is rejected.

H3: Perceived Usefulness (PU): Perceived Usefulness (PU) was found to be a significant predictor of Digital Customer Experience (DCX), with a p -value of 0.006, which is below the 0.05 threshold for statistical significance. The positive unstandardised coefficient ($B = 0.207$) and the standardised coefficient (Beta = 0.131) suggest that as the perceived usefulness of digital banking platforms increases, the overall customer experience also improves. This finding supports the hypothesis that the perceived benefits of digital banking, such as increased efficiency, time savings, and better functionality, are important contributors to a positive customer experience. The collinearity statistics show that there is no multicollinearity problem (VIF = 1.309 and tolerance = 0.764), which confirms the reliability of this result. The null hypothesis is therefore rejected and the alternative hypothesis that perceived usefulness influences the digital customer experience is accepted.

H4: Trust (T): The findings regarding Trust (T) showed that it did not have a significant effect on Digital Customer Experience (DCX) in this study. The p -value of 0.377 is well above the 0.05 threshold, meaning that trust is not a statistically significant predictor of DCX. While trust is widely recognised as a key factor in customer loyalty and adoption of digital platforms, this result suggests

that, in the context of this study, other variables such as perceived usefulness, convenience, and app/web attributes play a more prominent role in shaping the digital experience. The coefficient for trust is small ($B = 0.041$) and not significant, which suggests that, although trust is important in customer relationships, it may not be the driving force behind the customer experience in this case. The collinearity statistics ($VIF = 1.567$ and $\text{tolerance} = 0.638$) do not indicate any significant multicollinearity issues. Considering the above findings, it can be concluded that the null hypothesis cannot be rejected, and the alternative hypothesis that trust influences the digital customer experience is therefore rejected.

H5: Convenience (C): Convenience (C) was found to be a highly significant predictor of Digital Customer Experience (DCX), with a p-value of 0.001, which is well below the 0.05 significance threshold. The positive unstandardised coefficient ($B = 0.251$) and the standardised coefficient ($\text{Beta} = 0.213$) suggest that as the convenience of using digital banking platforms increases, so does the satisfaction of the overall customer experience. This finding highlights the importance of convenience in digital banking, where factors such as accessibility, speed, and ease of use contribute significantly to customer satisfaction. The high t-value (4.094) and the low p-value further confirm the strength of this relationship. The VIF (1.553) and tolerance (0.644) values indicate that there are no issues with multicollinearity. On the basis of these findings, the null hypothesis is rejected, and the alternative hypothesis that convenience influences the digital customer experience is accepted.

H6: Customer Support (CS): Customer Support (CS) was not found to be a significant predictor of DCX in this model. The p-value of 0.676 is much higher than the 0.05 threshold, which indicates that customer support is not a significant predictor of DCX. This result suggests that, although customer support is important in addressing issues and queries, it may not play a central role in shaping the overall digital customer experience in this context. The small unstandardised coefficient ($B = 0.026$) and the insignificant t-value (0.418) further confirm that customer support does not have a strong impact in this study. The collinearity statistics indicate no issues with multicollinearity ($VIF = 1.312$). Following these findings, it can be concluded that the null hypothesis cannot be rejected, and the alternative hypothesis that customer support influences the digital customer experience is rejected.

H7: App/Web Attributes (AWA): App/Web Attributes (AWA) was found to be a highly significant predictor of Digital Customer Experience (DCX), with a p-value of 0.001, which is well below the significance threshold of 0.05. The positive unstandardised coefficient ($B = 0.389$) and the standardised coefficient ($\text{Beta} = 0.422$) suggest that the quality of mobile applications and websites has a strong impact on customers' digital experiences. This includes factors such as ease of navigation, user

interface (UI) design, speed, and personalisation. A well-designed and user-friendly app or website can greatly enhance customer experience. The high t-value (7.284) and low p-value reinforce the strength of this relationship. The VIF of 1.921 suggests no multicollinearity issues, although the tolerance (0.520) is lower than ideal, which indicates that caution should be taken when interpreting the results. On the basis of the above findings, the null hypothesis is rejected, and the alternative hypothesis that app/web attributes influence the digital customer experience is accepted.

H8: Social Influence (SI): Social Influence (SI) was found to be a significant predictor of Digital Customer Experience (DCX), with a p-value of 0.001, which indicates a strong relationship. The positive unstandardised coefficient ($B = 0.174$) and the standardised coefficient ($Beta = 0.166$) suggest that customers who are influenced by their social circles through recommendations, reviews, or word-of-mouth are more likely to have a positive digital experience. This finding emphasises the role of social interactions in shaping customer attitudes toward digital banking platforms. The t-value (3.286) and p-value (0.001) strongly support this relationship, and the VIF (1.467) and tolerance (0.682) statistics show that there are no concerns about multicollinearity. The null hypothesis is thus rejected, and the alternative hypothesis that social influence influences the digital customer experience is accepted.

4.9.3 Model 2: H1: Customer Loyalty (DCX)

The regression analysis for Customer Loyalty (CL), with Digital Customer Experience (DCX) as the independent variable, revealed that DCX is a significant predictor of CL. The unstandardised coefficient for DCX is 0.486, which indicates that a one-unit increase in DCX leads to a 0.486 increase in CL. The standardised coefficient (Beta) of 0.576 highlights that DCX is a moderately strong predictor of CL. With a p-value of 0.001, the relationship between DCX and CL is statistically significant. The Adjusted R^2 value of 0.329 suggests that DCX explains approximately 33% of the variance in CL. The ANOVA p-value of 0.001 confirms that the overall model is statistically significant. On the basis of these results, Hypothesis 1 is accepted, supporting the conclusion that digital customer experience positively influences customer loyalty.

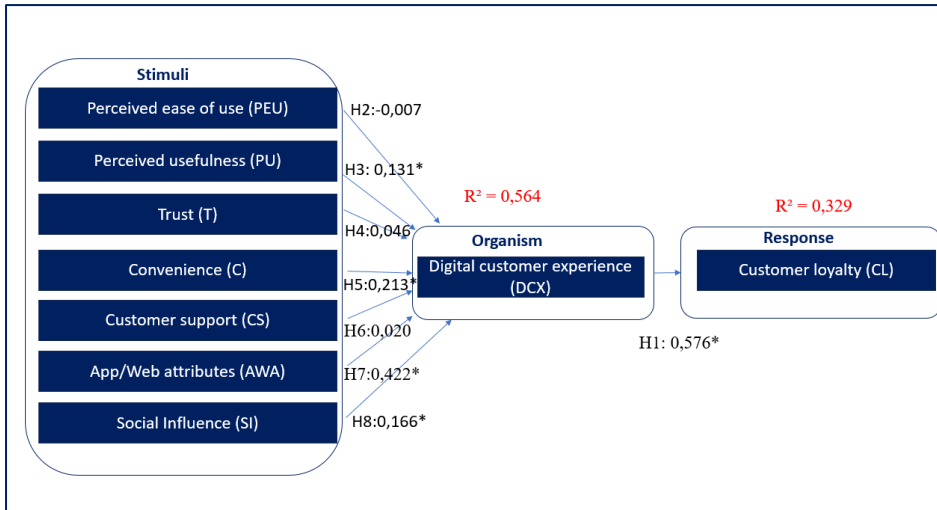


Figure 4.3: Conceptual model for this study with the statistical results integrated.

4.10 Conclusion

This chapter provided a comprehensive presentation of the results derived from the study. The analysis included a series of tests to assess the reliability and validity of the constructs used in the research, and the results confirmed that all constructs demonstrated acceptable levels of reliability and validity. Additionally, the demographic profile of the respondents was examined, and descriptive statistics were used to explore the central tendency measures of key variables, providing a clear picture of the sample's characteristics.

In terms of the core hypotheses, the results were generally consistent with the proposed model, and five out of the eight alternative hypotheses were found to be supported by the data. Specifically, Perceived Usefulness (PU), Convenience (C), App/Web Attributes (AWA), and Social Influence (SI) were confirmed as significant predictors of Digital Customer Experience (DCX), while Digital Customer Experience (DCX) was a significant predictor of Customer Loyalty (CL). However, three alternative hypotheses were rejected as Perceived Ease of Use (PEU), Trust (T), and Customer Support (CS) were not found to predict DCX significantly. These findings indicate that while certain factors play a crucial role in shaping customers' digital experiences and loyalty, others may require further examination or may not be as influential in the context of traditional banking services.

The regression analyses revealed significant relationships between the predictors and the dependent variables, with Adjusted R² values indicating moderate to strong explanatory power. The results also showed that multicollinearity did not present a problem, confirming the robustness of the model. These findings highlight the importance of focusing on factors such as app/web attributes and social influence in improving the DCX, which, in turn, can lead to increased customer loyalty.

In conclusion, this chapter has successfully outlined the results of the study, providing a solid foundation for the discussion and interpretation of the results. The next chapter delves more deeply into the implications of these results.

CHAPTER 5. DISCUSSION OF RESULTS

5.1 Introduction

Chapter 5 provides a comprehensive interpretation of the key findings from the results presented in Chapter 4. Building on the conceptual framework and objectives set out in earlier chapters, this chapter discusses the regression analysis results from the two primary models created for the study. The first model assesses the influence of the seven independent variables Perceived Ease of Use, Perceived Usefulness, Trust, Convenience, Customer Support, App/Web Attributes, and Social Influence on the dependent variable DCX. The second model investigates the relationship between DCX and Customer Loyalty. The findings from these analyses provide a deeper understanding of the drivers of digital customer experiences, as well as their role in fostering customer loyalty, offering valuable insights into the dynamics of digital banking.

5.2 Discussion of Hypothesised Results

The regression analysis, described in Chapter 4, yielded insightful results for both models examined. In Model 1, significant predictors were identified. Specifically, Perceived Usefulness, Convenience, App/Web Attributes, and Social Influence emerged as significant drivers of DCX, confirming the importance of these factors in shaping customers' digital experiences. In contrast, Perceived Ease of Use, Trust, and Customer Support were not found to be significant predictors of DCX, leading to the rejection of the hypotheses that these factors had an influence on DCX. The overall model showed a strong explanatory power, with an Adjusted R^2 value of 0.564, which indicates that approximately 56.4% of the variance in DCX could be explained by the independent variables.

Model 2 explored the relationship between Digital Customer Experience (DCX) and Customer Loyalty (CL), and the results indicate that DCX is a significant predictor of CL, with a standardised coefficient (Beta) of 0.576. This suggests that improvements in digital customer experience can lead to a substantial increase in customer loyalty, making DCX a critical factor in driving customer retention. The model also showed no issues with multicollinearity and a strong model fit, with an Adjusted R^2 value of 0.329. The results confirmed that Hypothesis 1, which proposed that DCX significantly influences CL, was supported by the data.

5.3 Hypothesis Results

5.3.1 Hypothesis 1: *Digital Customer Experience (DCX) has a positive influence on Customer Loyalty (CL).*

The Digital Customer Experience (DCX) construct was hypothesised on the basis of existing literature that underlines the critical role that digital experiences play in shaping customer loyalty in the banking sector. Prior studies have shown that a positive and significant relationship exists between DCX and customer loyalty (Shahid et al., 2022; Chauhan et al., 2022; Ahmad et al., 2022; Heckel & Waldenberger, 2022). Digital customer experiences that are seamless, engaging, and convenient lead to increased customer satisfaction, which, in turn, fosters loyalty (Heckel & Waldenberger, 2022). Heckel and Waldenberger (2022) highlight how effective digital experiences contribute to customer retention and the likelihood of repeat interactions, with the potential to transform customers into brand advocates. Banks and service providers are now placing greater emphasis on optimising their digital interfaces to enhance customer experiences, in the knowledge that such efforts can lead to stronger loyalty and advocacy (Shahid et al., 2022).

Building on existing research, the first hypothesis (H1): Digital Customer Experience has a positive influence on Customer Loyalty was established to test whether the same relationship holds in the context of the current study. This study found the relationship between DCX and CL to be statistically significant, with a p-value of 0.001, thus supporting the hypothesis that a positive DCX significantly influences customer loyalty. The results confirm that enhancing the digital experience is key to fostering long-term customer loyalty in the competitive digital banking landscape.

5.3.2 Hypothesis 2: *Perceived Ease of Use (PEU) has a positive influence on the Digital Customer Experience (DCX).*

The second hypothesis in this study focused on the influence of Perceived Ease of Use (PEU) on Digital Customer Experience (DCX). Existing literature highlights the importance of ease of use in shaping the overall digital banking experience. Ease of use has been defined as the degree to which users perceive the technology as simple and easy to understand, which significantly contributes to the adoption and positive reception of digital platforms (Davis, 1989). Mutambik (2023) emphasises the importance of user-friendly interfaces in fostering positive emotions and enhancing user control. While ease of use is crucial for all users, it is particularly important for those who are less tech-savvy (Martínez-Navalón et al., 2023). Previous research (Chauhan et al., 2022; Nguyen et al., 2022; Martínez-Navalón et al., 2023) has also shown that ease of use in digital banking is closely linked to factors such as ease of access, fast loading times, intuitive navigation, and the user's ability to

comprehend the platform's functionalities. These factors have been shown to have a positive influence on the overall DCX.

In accordance with these findings, the second hypothesis (H2): Perceived Ease of Use has a positive influence on the Digital Customer Experience was proposed. However, the regression analysis results did not support this hypothesis. The p-value for PEU was 0.895, which is greater than the significance level of 0.05. This indicates that PEU was not a significant predictor of DCX in this study. This result indicates that in the context of this study, PEU did not have the expected positive impact on DCX. This finding suggests that, although ease of use is a key element in digital banking, it may not be the most critical factor driving digital customer experiences in this particular context. This could be the result of various factors, such as the increasing sophistication of digital banking platforms, which may have reduced the perceived complexity of using these services.

5.3.3 Hypothesis 3: Perceived Usefulness (PU) has a positive influence on the Digital Customer Experience (DCX).

Given the established link between perceived usefulness and user satisfaction (Davis, 1989), this study hypothesised that perceived usefulness would positively influence DCX. Research by Ghani et al. (2022) suggests that perceived usefulness is associated with the perceived benefits and advantages of using a technology. In the context of digital banking, this includes factors such as time savings, improved efficiency, and an enhanced overall banking experience (Sainy & Singh, 2023). These perceptions are often shaped by prior experiences, which influence how customers evaluate and adopt digital technologies (Iman et al., 2023).

Considering these findings, the third hypothesis (H3): Perceived Usefulness has a positive influence on the Digital Customer Experience was proposed. The results of this study showed a p-value of 0.006, which is less than the conventional threshold of 0.05, meaning that the relationship between perceived usefulness and DCX is statistically significant. This suggests that the perceived benefits and advantages that customers believe they gain from using digital banking platforms positively contribute to their overall experience. Consequently, this supports the notion that enhancing the perceived usefulness of digital banking platforms can significantly improve customer satisfaction and engagement.

5.3.4 Hypothesis 4: Trust (T) has a positive influence on the Digital Customer Experience (DCX).

Given the importance of trust in digital banking, particularly in the absence of physical interactions (Shahid et al., 2022), this study hypothesised that trust would positively influence the DCX. Trust has been defined as the belief that customers have in the security and consistency of digital transactions

(Koksal, 2016). Trust plays a vital role in improving the customer experience in digital banking, as customers must feel confident that their personal information and financial transactions are secure (Iman et al., 2023). Previous research supports the view that trust is crucial to fostering customer loyalty and engagement, with studies by Chauhan et al. (2022) and Shahid et al. (2022) indicating a significant relationship between trust and DCX.

In this study, it was hypothesised that trust would positively influence DCX. However, the regression analysis revealed a p-value of 0.377, which indicates that trust does not have a statistically significant impact on DCX in this context. This result suggests that, despite the critical role trust plays in customer loyalty (Ahmad et al., 2022), it may not be as influential in shaping the DCX within the specific parameters of this study. This non-significant result could be attributed to various factors, such as the respondents' existing confidence in the security measures of the digital banking platform, or the possibility that other factors, such as perceived usefulness, overshadowed the role of trust in the customer experience.

5.3.5 Hypothesis 5: Convenience (C) has a positive influence on the Digital Customer Experience (DCX).

Given the importance of convenience in modern digital banking, this study hypothesised that convenience would positively influence DCX. Convenience, as defined by Chauhan et al. (2022), refers to the ease and efficiency of accessing and using digital banking services. This includes factors such as accessibility, speed, and the ability to conduct transactions anytime, anywhere (Shankar et al., 2022; Oh & Kim, 2022). Recent advancements in technology have led to innovative features in mobile banking that enhance user convenience. These include the ability to make cash withdrawals without a card and the introduction of QR codes (Frans et al., 2024).

The regression analysis results support the hypothesis that convenience has a positive influence on DCX. The p-value for convenience was found to be 0.001, which is statistically significant below the p-value of 0.05. This indicates that convenience is a significant predictor of DCX. This finding aligns with previous research that emphasises the role of convenience in enhancing user satisfaction and loyalty (Shahid et al., 2022; Oh & Kim, 2022; Mosa, 2022). The positive result for convenience suggests that digital banking platforms that provide seamless access, quick transaction processing, and user-friendly interfaces are more likely to enhance the customer experience. Thus, convenience becomes a competitive advantage in the digital banking space, as it directly correlates with higher customer satisfaction and better overall user experiences.

5.3.6 Hypothesis 6: Customer Support (CS) has a positive influence on the Digital Customer Experience (DCX).

The sixth hypothesis of this study focused on the influence of Customer Support (CS) on Digital Customer Experience (DCX). Existing literature has consistently highlighted the role of customer support in shaping customer satisfaction and loyalty, particularly in the context of digital banking, where face-to-face interactions are often replaced by online service solutions (Shahid et al., 2022). Customer support in digital banking typically encompasses tools such as live chat, help desks, AI-driven solutions, and dedicated service teams, all aimed at addressing customer enquiries and resolving issues (Oh & Kim, 2022). According to Felix and Rembulan (2023), the responsiveness of customer support plays a pivotal role in cultivating a positive customer experience. This is supported by research by Chauhan et al. (2022), who found that efficient customer support has a significant influence on customer satisfaction and loyalty. A study by Sheth et al. (2023) highlights the expanded role of customer support services, emphasising its impact throughout the entire customer journey. The study stresses the importance of viewing customer support as a strategic business function and explores its additional roles in providing information, facilitating decision-making, building relationships, and offering value-added services, all aimed at enhancing the overall customer experience. In contrast, Shahid et al. (2022) found no significant relationship between customer support and DCX in mobile banking, which points to a gap in the literature on this topic.

In line with these studies, the sixth hypothesis (H6): Customer Support has a positive influence on Digital Customer Experience was proposed. However, the regression analysis results for customer support showed a p-value of 0.676, which is much higher than the typical significance threshold of 0.05. This result indicates that customer support was not a significant predictor of DCX in this study. This finding suggests that, in the context of this study, customer support did not have the expected positive impact on DCX, despite its recognised importance in previous research.

This outcome aligns with Shahid et al.'s (2022) study, which also found that customer support did not significantly influence the DCX in mobile banking. A possible explanation for this finding could be the increasing reliance on self-service options, such as frequently asked questions (FAQs), chatbots, and automated responses, which may reduce the need for direct human interaction. With users becoming more accustomed to digital tools that allow them to solve issues independently, the direct influence of human customer support may have diminished, particularly for tech-savvy users who prefer efficient, self-guided solutions over traditional support channels (Oh & Kim, 2022). As digital banking platforms continue to evolve with advanced technology, the emphasis may be shifting toward providing seamless, intuitive experiences that require less reliance on customer support.

5.3.7 Hypothesis 7: App/Web Attributes (AWA) has a positive influence on the Digital Customer Experience (DCX).

The seventh hypothesis of this study examined the influence of App/Web Attributes on Digital Customer Experience (DCX). Mobile applications and websites have become essential components of digital banking platforms, providing customers with easy access to financial services and features that improve their overall experience (Shahid et al., 2022). Research has shown that attributes such as visual aesthetics, interactivity, simplicity, speed, personalisation, and usefulness significantly impact user engagement and satisfaction (Shahid et al., 2022; Chauhan, 2024). For example, well-designed mobile apps that prioritise user-friendly interfaces and seamless navigation contribute to higher levels of customer engagement and improved digital customer experiences (Chauhan et al., 2022). Frans et al. (2024) also support the above by stating that the success of any mobile banking platform largely depends on its UI and user experience (UX). To improve the UX, developers should prioritise simplifying navigation, expanding transaction options, and modernising the UI.

In line with these findings, the seventh hypothesis (H7): App/Web Attributes have a positive influence on Digital Customer Experience was proposed. The results strongly support this hypothesis, with a p-value of 0.001, which is well below the 0.05 significance level, indicating that app/web attributes are a significant predictor of DCX. This result suggests that the quality of mobile applications and websites directly influences how customers perceive and interact with digital banking platforms, which confirms the importance of well-designed, user-centric interfaces in driving positive customer experiences.

5.3.8 Hypothesis 8: Social Influence (SI) has a positive influence on the Digital Customer Experience (DCX).

The last hypothesis of this study focused on the influence of Social Influence on Digital Customer Experience (DCX). According to Windasari et al. (2022), individuals often engage in new behaviours or adopt new technologies, such as digital banking, because of the influence of their social circle. Positive recommendations, word-of-mouth, and shared experiences can play an important role in shaping an individual's attitude towards a product or service. Shahid et al. (2022) further reinforce this idea by suggesting that customers are heavily influenced by the experiences shared by others, particularly when they perceive those experiences as positive. In the context of digital banking, social influence can manifest as peer recommendations or positive reviews that encourage individuals to adopt or continue using digital banking platforms. For instance, Windasari et al. (2022) found that social influence significantly affects consumers' intention to use digital banking services. This highlights the powerful role that social interactions and shared experiences play in shaping customer

behaviour in the digital realm. Hailat et al.'s (2023) research found that social influence has a significant impact on an individual's decision to use technology. Chen et al. (2023), who investigated the factors that drive the adoption of contactless financial services, also highlight the significant role of social influence in shaping individuals' intentions to use digital services.

On the basis of this prior research, the eighth hypothesis (H8): Social Influence has a positive influence on the Digital Customer Experience was proposed. The results strongly support this hypothesis. The p-value for social influence was found to be 0.001, which is statistically significant at the 0.05 level. This indicates that social influence is a significant predictor of DCX. These findings align with previous research that has shown how positive word-of-mouth and social recommendations from friends, family, or online reviews can significantly enhance a customer's perception of a digital platform and encourage its adoption (Shahid et al., 2022; Windasari et al., 2022).

5.4 Conclusion

In conclusion, Chapter 5 discusses the key findings of this study, highlighting the significant factors that influence the Digital Customer Experience (DCX) and, in turn, the influence of DCX on Customer Loyalty (CL) in digital banking. The results show Convenience, App/Web Attributes, and Social Influence to be crucial drivers of DCX, while Perceived Ease of Use, Perceived Usefulness, Trust, and Customer Support were not significant predictors. The study also confirmed that a positive DCX strongly enhances Customer Loyalty, which suggests the importance of optimising digital experiences for customer retention. These findings offer valuable insights for digital banking providers that aim to improve customer satisfaction and loyalty.

CHAPTER 6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter provides comprehensive conclusions to the study, drawing conclusions about both the main and secondary research objectives. It confirms a significant positive relationship between digital customer experience (DCX) and customer loyalty, highlighting the importance of focusing on DCX in the banking sector. The chapter also identifies key factors that influence DCX in the South African context. Additionally, it discusses the study's contributions to the existing literature, offering unique insights into DCX in developing markets and making recommendations for South African banks regarding digital banking platforms. The chapter concludes by acknowledging the study's limitations and suggesting future research directions for exploring the evolving digital banking landscape.

6.2 Conclusions Pertaining to Research Objectives

6.2.1 Conclusion on main research objective: The influence of digital customer experience on loyalty

The study's main research objective was to investigate the influence of DCX on customer loyalty within the traditional banking sector in South Africa. The results of the study confirmed a significant positive relationship between DCX and customer loyalty. This finding aligns with previous research and points to the importance of prioritising DCX in the banking sector, with a particular focus on creating exceptional digital experiences in this sector. When customers have a seamless and satisfying digital experience, it is likely to strengthen their loyalty, resulting in improved customer retention and advocacy. The findings concerning the main research objective emphasise that banks should prioritise enhancing digital interfaces and services to foster long-term customer loyalty.

6.2.2 Conclusion on secondary research objectives

The secondary research objectives sought to investigate the effect of the factors of perceived ease of use, perceived usefulness, trust, convenience, customer support, app/web attributes, and social influence on DCX. Perceived ease of use was anticipated to play a critical role in shaping the digital experience, as intuitive and easy-to-navigate platforms are often linked with positive user experiences. However, in this study, perceived ease of use did not significantly influence the overall digital experience, suggesting that customers may prioritise other factors over simple usability in digital banking environments.

Perceived usefulness of digital platforms emerged as a significant factor. Customers who perceived greater benefits from using digital banking platforms, such as increased efficiency or improved services, generally reported higher levels of positive DCX. This reinforces the idea that digital platforms in banking need to provide valuable features that meet customer expectations and needs. Enhancing the perceived usefulness of these platforms can significantly boost customer satisfaction and engagement.

While trust is a fundamental aspect of customer relationships, especially in digital banking, the study did not find a significant influence of trust on digital customer experience. This suggests that while trust is crucial for long-term loyalty and retention, it may not be the immediate factor that shapes customers' perceptions of digital platforms. Factors such as convenience and perceived usefulness might outweigh trust in influencing the user experience at the point of interaction. Convenience proved to be a key factor in shaping the DCX. Platforms that are easily accessible, fast, and provide a seamless experience are essential for customer satisfaction. As digital banking continues to evolve, offering services that prioritise convenience can become a critical competitive advantage.

Customer support did not significantly influence the DCX in this study. This finding suggests that, while customer support is still important, its direct impact may be diminishing as customers increasingly rely on self-service tools such as FAQs, chatbots, and automated responses for their immediate needs.

App/web attributes, such as UI design, speed, and interactivity, were found to influence the DCX significantly. A well-designed and functional digital platform plays a crucial role in engaging customers and increasing their satisfaction. The study supports the importance of investing in attractive and user-friendly digital platforms to ensure a positive experience.

Finally, social influence was identified as a significant determinant of the DCX. Peer recommendations and online reviews can significantly shape customers' attitudes and behaviours towards digital platforms. This emphasises the importance of leveraging social influence in digital banking, as positive word-of-mouth can enhance customer trust and influence new user adoption.

It can be concluded that DCX is significantly shaped by factors such as perceived usefulness, convenience, app/web attributes, and social influence. While perceived ease of use, trust, and customer support remain relevant, their direct impact on the immediate digital experience appears to be less important in this context. This suggests that banks should focus on enhancing the practical benefits of their digital platforms, ensuring convenience, and fostering positive social influence to improve overall customer satisfaction and loyalty.

6.3 Contributions

6.3.1 Empirical contributions

As highlighted in the background and rationale for the study (see Chapter 1) regarding the gap between research focused on developed countries and that focused on developing countries, literature that explores factors that influence DCX and loyalty within the South African context is limited. While much of the existing research focuses on developed markets (Shahid et al., 2022; Chauhan et al., 2022), this study provides new insights into how stimulus factors affect DCX in South Africa, a developing country with a significantly different digital banking penetration rate and user behaviour from more technologically advanced nations. This research is crucial, as digital banking adoption in South Africa was reported as sitting at 36.6% penetration in March 2024 (Statista, 2024) and still lags when compared to countries such as the USA, which had a 78% penetration rate in 2023 (Statista, 2024). By extending the DCX framework to this unique context, the study enhances the understanding of how digital banking platforms can better meet the needs of South African consumers, who face different challenges in their digital banking experiences compared to users in more developed countries.

Given the substantial gap in digital banking adoption between developed and developing countries, it is crucial to understand the factors that persuade consumers to participate in digital banking. Previous studies have demonstrated the importance of various factors such as convenience, ease of use, and trust in shaping DCX (Shahid et al., 2022; Heckel & Waldenberger, 2022), but their applicability to markets with lower penetration, such as South Africa, has been underexplored. This study empirically validates that convenience and app/web attributes significantly influence DCX in a South African context, confirming that when digital banking platforms are easy to use, efficient, and convenient, they lead to higher customer satisfaction and loyalty. These findings help bridge the gap between theoretical models developed in more digitally mature environments and the actual experiences of users in regions where access to digital banking is still developing. For this reason, this research contributes to a deeper understanding of the unique dynamics that drive DCX in countries with emerging digital economies.

Another critical contribution of this study lies in the role of social influence in shaping customer experiences in the context of digital banking. In markets such as South Africa, where word-of-mouth and social networks are strong drivers of behaviour (Windasari et al., 2022), this study adds valuable insights into how shared customer experiences and recommendations play a significant role in DCX. Previous research, particularly in developed markets, suggests that social influence has a considerable impact on customers' decision-making (Shahid et al., 2022; Windasari et al., 2022). However, its role in DCX within South African digital banking was previously under-explored. The study confirms that

social influence positively affects customers' perceptions of digital banking platforms, which highlights the power of peer recommendations, online reviews, and community feedback in encouraging the adoption and engagement of digital banking services. This aligns with the broader notion that social networks can serve as critical tools in boosting customer trust and loyalty, especially in markets where digital banking adoption is still catching up.

As digital banking platforms continue to evolve, the quality of mobile applications and websites has become a key driver of DCX. This study reinforces findings from previous literature (Shahid et al., 2022; Chauhan et al., 2022) by confirming that app/web attributes, such as visual aesthetics, usability, speed, and personalisation, are significant predictors of DCX. Given the growing importance of digital platforms in delivering convenient financial services (Mujinga, 2022), this study demonstrates that improving app/web attributes can lead to more engaging and satisfying customer experiences, particularly in South Africa's developing digital banking landscape. By emphasising the need for user-centric design, this research adds depth to the theoretical discussion around the crucial role of usability in enhancing DCX and customer loyalty.

6.4 Recommendations

As digital banking platforms continue to evolve in South Africa, it is essential to understand the key factors that drive a positive DCX and how these factors can be leveraged to enhance customer satisfaction, loyalty, and growth. The following recommendations focus on enhancing user experience, streamlining services, and building customer trust, all of which play a crucial role in shaping the success of digital banking platforms.

Invest in User-Centric Designs: Given the importance of app/web attributes in shaping DCX, digital banking platforms in South Africa should focus on user-centric design principles. This includes improving the usability and navigation of mobile apps and websites, enhancing visual appeal, and prioritising personalisation to create more engaging and satisfying customer experiences. Banks should continuously improve on the design and functionality of their platforms to ensure that they meet the needs of a diverse user base, with varying levels of digital literacy.

Leveraging Social Influence for Customer Advocacy: Banks can use social influence as a tool to drive adoption, customer acquisition, and loyalty by encouraging positive word-of-mouth and user-generated content. For example, providing platforms for customers to share positive experiences through ratings, reviews, or testimonials can significantly increase credibility and foster trust. Managers should also consider strategic partnerships with influencers or create community-based

marketing campaigns to encourage adoption, especially in markets where social proof plays a major role in influencing consumer decisions.

Improving Convenience: Since convenience was identified as a critical driver of DCX, digital banking platforms should continue to streamline services to ensure easy access, speed, and availability. Offering uninterrupted services that allow users to manage their finances without the need to visit physical branches should be a priority. This includes implementing strategies that prioritise quick and easy access to banking services.

Addressing Digital Trust and Support Needs: While customer support did not emerge as a significant predictor of DCX in this study, it is an essential component of customer retention. Banks should continue to provide effective customer support through digital channels such as live chat, chatbots, and help desks, ensuring that users can easily access help when needed. However, given the shift toward self-service and automation in customer support, banks should explore how AI-powered solutions and automation can reduce dependency on human support while still maintaining high levels of customer satisfaction.

6.5 Limitations

The findings of this study are specific to the South African market, which presents unique challenges in digital banking. These challenges include lower levels of internet penetration and infrastructure issues (Mujinga, 2022), which can affect how customers engage with and perceive digital banking services. As a result, the findings may not be directly applicable to regions with higher digital banking adoption or different market conditions. Additionally, the study utilised a cross-sectional research design, which limits its ability to assess how DCX evolves over time in response to ongoing changes in digital banking services.

Another limitation of this study is its reliance on self-reported data. While self-report surveys are commonly used in research, they are susceptible to response bias, including social desirability bias, where respondents may answer in a way that they believe is socially acceptable or expected. This can affect the accuracy and reliability of the findings.

6.6 Future Research Directions

Given the unique context of South Africa and the evolving nature of digital banking, future research could further explore several areas to build upon the findings of this study. One potential avenue for future research is to conduct comparative studies across different developing countries to assess how digital banking adoption and customer experience differ across regions with similar infrastructure and

socio-economic challenges. Understanding these differences can help identify commonalities and region-specific factors that influence customer loyalty and digital banking behaviour, in this way contributing to the development of a more globally relevant framework for DCX.

Moreover, longitudinal studies are needed to assess how DCX evolves over time as digital banking services continue to develop and adapt to customer needs. This would allow for a deeper understanding of how changes in app/web attributes, customer support, and convenience influence long-term customer satisfaction and loyalty. A longitudinal approach could also reveal insights into the sustained impact of social influence, as customer networks and perceptions about digital banking platforms mature with increased user engagement and peer feedback over time.

Additionally, while this study relied on self-reported data, future research could incorporate more objective measures, such as transaction data, behavioural analytics, or real-time usage patterns, to provide a more accurate and comprehensive picture of customer engagement. By integrating these objective data sources with self-reported measures, researchers can overcome limitations such as response bias or social desirability bias, which may distort the true nature of DCX. Objective data could also provide more granular insights into how different customer segments use digital banking services and which specific features of the platforms are most valued.

Lastly, future research could explore the impact of emerging technologies such as AI, blockchain, and the Internet of Things on digital customer experiences, examining how these innovations enhance or disrupt customer interactions with digital banking platforms. Additionally, investigating the role of cybersecurity is crucial to understanding how ensuring customer safety online can foster trust and loyalty in digital banking services.

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APPENDIX

Information Sheet

Dear Participant

My name is Zama, a Master of Management student in digital business currently studying at the University of Witwatersrand, in the Wits Business School. I am conducting a study on the influence of digital customer experience on loyalty to traditional banks in South Africa, under the supervision of Dr Manessah Alagbaoso. The findings will be used for academic purposes as well as to provide business researchers with more insight into digital customer experience.

I kindly request you to share your experiences and perspectives by completing the survey below. The survey consists of three choice-based sections: two mandatory sections and a non-mandatory section, which will only be used to categorize the findings. The survey will take approximately 7 minutes to complete. To participate in the survey, respondents must be over 18 years old, have a bank account with a South African traditional bank, and reside in South Africa.

This is a fully voluntary, private, and confidential survey with no direct benefits but also no known risks. You may withdraw from the survey at any time. There are no personal costs for participation, and there will be no consequences if you decide to stop. The information you provide will be securely stored on a password-protected computer, accessible only to the supervisor and researchers. If the findings are used in subsequent studies, the same level of privacy and anonymity will be maintained. Your participation will contribute to a better understanding of the digital banking experience. Your honest opinions are greatly appreciated.

The details are as follows should you have any queries or feedback that you wish to share:

Researcher:	Zama Mthethwa: 1144752@wits.students.ac.za
Supervisor:	Dr Manessah Alagbaoso: Manessah.alagbaoso@standardbank.co.za

Thank you in advance for your participation!

Section A: Consent Form

The influence of digital customer experience on loyalty to traditional banks in South Africa

Researcher: Zama Rose Mthethwa

(Select appropriate box)

I consent to participate in this study, and I have read and understand that my answers can be included in the research.

YES	NO
-----	----

I agree that my participation will remain anonymous.

YES	NO
-----	----

I agree that the information I have provided may be used for academic purposes by other researchers, in an anonymous format; subject to their own ethics clearance being obtained.

YES	NO
-----	----

Please contact the researchers if you have any further questions or complaints regarding the study.

Some screening questions.

Are you over 18 years old?

YES	NO
-----	----

Do you have a bank account with any traditional bank in South Africa(Standard Bank, FNB, ABSA, Nedbank, or Capitec)?

YES	NO
-----	----

Are you living in South Africa?

YES	NO
-----	----

NOTE: If you answered **NO** to any of these questions then this survey will not be applicable to you.

Section B: Questionnaire

The independent variable scales						
To what extent do you agree with the following statements?						
Perceived ease of use		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>
PEU1	Learning how to use digital banking services is easy for me.	1	2	3	4	5

PEU2	My interaction with digital banking services is clear and understandable.	1	2	3	4	5
PEU3	I find it easy to use digital banking services	1	2	3	4	5
PEU4	It is easy for me to become skilful at using digital banking services	1	2	3	4	5
To what extent do you agree with the following statements?						
Perceived usefulness		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>
PU1	Digital banking services are useful	1	2	3	4	5
PU2	Digital banking services would improve the quality of my banking services.	1	2	3	4	5
PU3	Digital banking services increase the efficiency of my banking services	1	2	3	4	5
To what extent do you agree with the following statements?						
Trust		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>

T1	Digital banking services are trustworthy	1	2	3	4	5
T2	Digital banking services are secure	1	2	3	4	5
T3	Digital banking services are dependable	1	2	3	4	5
T4	I felt safe to provide my personal and private data to digital banking services.	1	2	3	4	5
To what extent do you agree with the following statements?						
Convenience		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>
C1	I find it easy to complete transactions using digital banking services.	1	2	3	4	5
C2	I am able to access services quickly using digital banking services	1	2	3	4	5
C3	I can access banking services using digital banking services anytime I want.	1	2	3	4	5

C4	I can access banking services using digital banking services wherever I am.	1	2	3	4	5
To what extent do you agree with the following statements?						
Customer support		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>
CS1	It would be beneficial if the digital banking platform enables instant (live) communication	1	2	3	4	5
CS2	It would be advantageous if the digital banking platform allows for interactive feedback.	1	2	3	4	5
CS3	It will be useful to receive advice while navigating the digital banking platform.	1	2	3	4	5
To what extent do you agree with the following statements?						
App/Web attributes		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>

AWA1	The overall look and feel of the digital banking platform is visually appealing.	1	2	3	4	5
AWA2	The screen design (i.e., colours, boxes, menus, etc.) of the digital banking platform is attractive.	1	2	3	4	5
AWA3	The digital banking platform helps me to be more effective in completing tasks.	1	2	3	4	5
AWA4	The payment page interface of the digital banking platform is easy to navigate.	1	2	3	4	5
To what extent do you agree with the following statements?						
Social Influence		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>
SI1	People influence me to use digital banking platforms.	1	2	3	4	5

SI2	My family and friends value the use of digital banking platforms.	1	2	3	4	5
SI3	Using digital banking platforms gives me professional status	1	2	3	4	5

Table 3. 1

Independent and Dependent Variable Scale						
To what extent do you agree with the following statements?						
Digital customer experience		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>
DCX1	I found digital banking services useful	1	2	3	4	5
DCX2	Using digital banking platforms is a pleasant experience.	1	2	3	4	5
DCX3	Digital banking services/platforms meet my needs and cover my expectations.	1	2	3	4	5
DCX4	In my opinion, the bank really cares about keeping me as a customer	1	2	3	4	5

	while using digital banking platforms.					
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Table 3. 2

Dependent variable scale						
To what extent do you agree with the following statements?						
Customer loyalty		<i>Strongly Disagree (1)</i>	<i>Disagree (2)</i>	<i>Neutral (3)</i>	<i>Agree (4)</i>	<i>Strongly Agree (5)</i>
CL1	I will consider digital banking platforms as my first choice for banking services.	1	2	3	4	5
CL2	I will consider digital banking platforms of traditional banks even if other platforms provide the same quality of services	1	2	3	4	5
CL3	I will first consider digital banking platforms even if their services are slightly costlier than other financial service providers	1	2	3	4	5

Section C: Demographic Information *[for statistical purposes only]*

(Please select the appropriate box)

D1. What is your gender?

Male	Female	Prefer not to say
1	2	3

D2. What is your age group?

18-29	30-40	40 and above	Prefer not to say
1	2	3	4

D3. What is your highest education level *(only indicate the highest)*?

None	Primary school	High school	Diploma	Degree	Postgraduate (Honours, Masters, Doctorate)	Prefer not to say
1	2	3	4	5	6	7

D4. What is your household income?

Less than R10 000	R10 000- R25 000	R25 001- R40 000	R40 001- R55 000	R55 001- R60 000	Above R60 000	Prefer not to say
1	2	3	4	5	6	7