The role of organisational culture in adopting digital platforms in South African banks

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ABSTRACT

The advancement and pervasiveness of digital technologies are causing significant disruptions in the banking industry's market definitions, operations, and business models, resulting in a surge in digital transformation in the banking sector in the past decade. This research contributes to the existing literature by evaluating the organisational culture of South African banks and examining how it promotes or hinders the adoption of digital platforms.

This research explored how organisational culture influences the adoption of digital platforms within South African banking institutions. Twelve attributes were used as variables to describe digital organisational culture alongside the technology-organisation-environment (TOE) framework.

The study uses a quantitative approach to validate theory and examine variable interrelations. The study collected responses from 127 South African banking sector employees using non-probability convenience sampling. A Likert scale questionnaire with 17 questions captured respondents' feedback on digital organisational culture and digital platform adoption. Reliability and descriptive statistical analysis, Shapiro-Wilk test Factor analysis, Regression analysis, Correlation analysis (Spearman's Rho), Mann-Whitney U test, and Kruskal-Wallis test were employed to analyse the data.

The study found that digital organisational culture positively influences digital platform adoption in the banking sector. The factors within digital organisational culture that have a significant influence are cross-functional teams, digital skills, and start-up mentality. However, mutual decision-making was found to have a significant negative influence on adoption. The Mann-Whitney U test suggests no significant differences in digital platform adoption between traditional and digital banks. The test also suggests no significant differences in the perceptions of digital culture factors between traditional and digital banks, except for failure culture. The Kruskal-Wallis test results indicate no significant differences in the

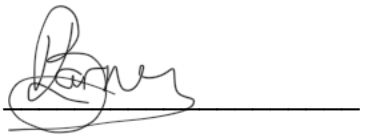
distribution of most variables tested across organisational roles, except for cross-functional teams.

The study underscores the crucial importance of collaborative, agile, and innovative cultures within banking organisations, as observed through the significant roles of cross-functional teams and the positive correlation of start-up mentality. The study also highlights the need for ongoing investment in digital skills development and the strategic repositioning of IT departments to support digital transformation objectives effectively. Moreover, the strong positive correlation between customer integration and digital platform adoption emphasises the crucial role of customer-centric approaches in the digital transformation process.

Keywords: Banking, cross-functional teams, digital culture, digital organisational culture, digital platform adoption, digital transformation, organisational culture, platform business, TOE framework.

DECLARATION

I, LeRoy Curtis Barnes, affirm that the submitted research report results from my efforts, except where attribution has been expressly stated through references and acknowledgements. The tools Grammarly and ChatGPT were utilised solely to enhance grammar, spelling, and the synthesis of information, respectively. This report has been presented to meet the scholarly requisites necessary for the Master of Management specialising in Digital Business at the University of the Witwatersrand, Johannesburg. This work has yet to be presented for any academic award or examination in this institution or elsewhere.

Name: LeRoy Barnes Signature: 

Signed at MIDRAND

On the 30th day of MAY 2024

DEDICATION

This report is dedicated to my late grandparents, George, and Sylvia Jacobs, who raised me and whom I hope I have made proud.

This report is also dedicated to my children Zahra and Dialo Barnes, who I hope are inspired to pursue their postgraduate studies in fields they are passionate about.

ACKNOWLEDGEMENTS

Baruch HaShem.

This report would not have been possible without the undying support of my wife, Michelle Barnes, who sacrificed her time to grant me this opportunity. Thank you, Michelle, and I appreciate all you have done walking this journey with me. It was not easy being a “single wife”. This achievement is yours as much as it is mine.

To my children, Zahra and Dialo, thank you for understanding and giving me the time to complete this project. I hope my actions demonstrated to you that, ‘hard work pays off’.

To my parents, who always encouraged me and spurred me on. Thank you, Jerome, and Cynthia Barnes. Not a day would go by when my dad did not check my progress.

To my mother-in-law, Lynette Bowes, who went back to school in the twilight of her career to realise her dream of becoming a lawyer. Nenny, your return to university to study inspired me to go after my academic dreams.

To my friends and fellow students, especially the MMDB Research Support 2023 WhatsApp group, thank you for lending an ear and encouraging me through the difficulties of my research project.

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LIST OF ACRONYMS

Acronym	Definition
4IR	Fourth industrial revolution
AI	Artificial intelligence
CVP	Competing values framework
DOC	Digital organisational culture
IS	Information systems
IT	Information technology
OC	Organisational culture
TOE	Technology organisation environment
WBS	Wits Business School

CHAPTER 1. INTRODUCTION

1.1 Statement of purpose

This quantitative study investigated how organisational culture influences the adoption of digital platforms in South African banks. Prior research has explored the impact of digital platforms on the banking sector, but the specific influence of organisational culture on digital platform adoption requires further examination. Through a quantitative study, this research identified the factors that influence the adoption of digital platforms and evaluated the impact of organisational culture on adoption. Specifically, this research analysed the current level of adoption, and the organisational factors contributing to successful adoption.

This study provides valuable insights into driving further adoption of digital platforms and navigating the challenges of transitioning to a platform business model. By conducting a quantitative analysis of how organisational culture influences the adoption of digital platforms in South African banks, this research enables banking and financial service organisations to evaluate the impact of organisational culture on digital platform adoption and identify ways to facilitate this transition. The findings of this research also contribute to the existing literature on digital transformation in the banking sector and the role of organisational culture in shaping digital platform adoption patterns.

1.2 Background of the study

The advancement and pervasiveness of digital technologies are causing significant disruptions in the banking industry's market definitions, operations, and business models, resulting in a surge in digital transformation in the banking sector in the past decade (Diamond et al., 2019; von Solms & Langerman, 2022). With the rise of digital-only banks and fintech competitors, banks have focused more on online banking services to stay competitive (von Solms & Langerman, 2022). The competitor is no longer limited to other banks, as digital technologies reshape industry boundaries

(Diamond et al., 2019; Westerman et al., 2014). Camarate and Maritz (2018) observed that the South African banking industry is gradually adopting a 'borderless marketplace' concept influenced by the entry of new digital players. These new players, like telecoms and insurance companies or fintechs, are disrupting the existing norms and driving a surge in innovation within the industry. There is a growing trend worldwide to transform traditional pipeline businesses into platform businesses, and banks are rapidly changing their organisational structures to adapt to the new business landscape (Diamond et al., 2019; Rohn et al., 2021).

Researchers expect many global banks to mature digitally over the next few years as part of their digital investment plans (Diamond et al., 2019; von Solms & Langerman, 2022). According to Diamond et al. (2019), most global banking executives (72%) admit that platform business models are disruptive and driving changes in traditional value chains and their own organisation's business and operating models. There are 79% of the banking executives who say, "the adoption of platform business models yields significant benefits to customers as well as to bank" (Diamond et al., 2019, p. 36). These benefits are understood in the context of profitability, innovation, access to markets, sustainable growth, and risk management (see Figure 1). There are 82% of bank executives who believe that platform models offer benefits that cannot be achieved through traditional banking models. The executives represented a variety of C-suite roles from across the world, including Africa.

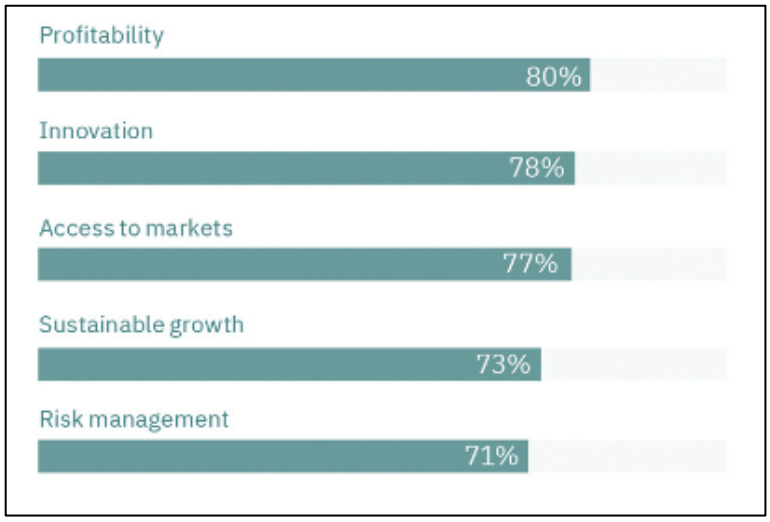


Figure 1: Benefits for banks from embracing platform business models. Source: Diamond et al. (2019)

Digital transformation employs digital technology to create new business models (Serpa et al., 2022) and enables the shift from a pipeline business model to a platform business model. This transition falls within the ambit of digital innovation through the dimension of business model innovation (Müller et al., 2019). In this context, digital transformation refers to integrating digital technology into all business areas. In their seminal article on platform business models, Alstyne et al. (2016) refer to a pipeline business model where goods or services are produced and sold to customers through a linear process. Furthermore, a platform business is one where a company creates value by facilitating exchanges between two or more interdependent groups. The shift from pipeline to platform involves creating an ecosystem where various groups can interact with each other and create value together (Mallon, 2021). This shift requires companies to adopt innovative technologies and business models that enable them to create value in new ways (Lansing et al., 2021). For established organisations, the ability to manage digital transformation is a valuable resource, and the workforce plays a pivotal part in this journey (Van Der Schaft et al., 2022).

Several researchers have noticed the importance of employees and organisational culture in digital transformation. Bonnet and Westerman (2021) developed a digital transformation framework where they measure digital transformation along two

dimensions: leadership and digital capability. Since publishing their 2014 digital transformation framework, Bonnet and Westerman (2021) observed that the leadership capability has remained steady. However, new elements that underpin digital capability have emerged. In the past decade, they learned that the effective integration of employee experience and digital platforms constitutes a pivotal foundation for successful digital transformations (Bonnet & Westerman, 2021). When Harland et al. (2020) analysed the strategic role of product platforms on a company-wide level, they found the importance of collaboration, cross-functional teams, and feedback loops in the successful development of product platforms, which are all elements of a strong and positive organisational culture that values teamwork, communication, and continuous improvement.

Moreover, Rohn et al. (2021) explored the crucial success factors of digital platform-based businesses, and having a start-up culture was listed as one of the six success factors. Müller et al. (2019) note that the study of organisational culture's role in digital innovation is a recent phenomenon. Studies by Lucas Jr and Goh (2009) and Svahn et al. (2017), as cited in Müller et al. (2019) and Pedersen (2022), highlight organisational culture's crucial influence on incumbents like Kodak, Nokia, and Volvo, and their ability to manage and respond to technological advancements in their respective industries. Organisational culture can, therefore, be an inhibitor or enabler in adopting digital platforms.

1.3 Context of the study: South African banking sector

Since 2018, at least three digital banks with lower-cost models have launched in South Africa–Discovery Bank, TymeBank, and Bank Zero (BusinessTech, 2019b). Collectively, they have increased competition and challenged the incumbent big four banks–Absa, FNB, Nedbank, and Standard Bank–who are responding through digital transformation initiatives that focus on customer experience (digital platforms), new ways of work (organisational culture), and operational efficiency (digitisation and automation) (Camarate & Maritz, 2018).

The new entrants' agility and novel business models allow them to vie for market share with the traditional banks, e.g., by June 2022, TymeBank had acquired five million customers since its launch in February 2019 and was at one stage the fastest-growing digital bank in the world (BusinessTech, 2019a; Labuschagne, 2023). Traditional banks can respond to this threat by transforming their pipeline business to a platform business model to generate new ways of value creation (Rohn et al., 2021). This new business model allows incumbents to improve customer intimacy and exploit alternative revenue sources (Choudary et al., 2021). Notable platforms in the financial services industry are HSBC's Serai, which provides apparel industry companies to conduct business in a trusted network; Standard Bank's OneHub, which connects clients with the bank and external partners; and Absa's Absa Access, which provides clients with a secure and comprehensive dashboard for managing multiple financial products and portfolios (Absa, 2023; Choudary et al., 2021).

The existing academic literature has extensively studied platform business models. However, more literature is required on how traditional pipeline banks adopt a platform business model and the role played by organisational culture in this transformation. This research contributes to the existing literature by evaluating the organisational culture of South African banks and examining how the organisational culture promotes or hinders the adoption of a digital platform.

1.4 Research problem

In recent years, digital platforms have become integral to various industries, offering reduced costs, improved delivery rates, and driving digital transformation (Hautala-Kankaanpää, 2022; Rohn et al., 2021). However, the presence of a digital platform does not inherently ensure its success, as the creation, delivery, and value-capture strategies vary significantly across different platforms (Harland et al., 2020). Täuscher and Laudien (2018) emphasise that platforms are not universally identical and underscore the necessity for tailored strategies for platform creation and value capture.

Successful platform creation and launch require a comprehensive approach, including a resource-based view and a focus on value creation. Harland et al. (2020) underline essential factors such as mobilising human resources, coordinating teams and departments, and deploying resource capabilities to create customer value. Rohn et al. (2021) delve deeper into the critical success factors of platform business models in the metal and steel industry, highlighting the importance of start-up culture and work practices distinct from traditional pipeline businesses. These insights underscore the pivotal role of organisational culture and employees in adopting digital platforms, making it a key area of focus for this research.

Despite extensive research on platform creation and value capture, the role of platform businesses in the banking sector, particularly the influence of organisational culture, remains a relatively unexplored territory. This research aims to fill this gap by investigating the impact of organisational culture on adopting digital platforms in South African banks through a quantitative approach. Data was collected via an online questionnaire distributed to bank employees to identify dominant organisational culture elements influencing digital platform adoption. The quantitative data was analysed using statistical software to examine the influence of organisational culture on digital platform adoption, offering a fresh perspective on this crucial issue.

This study contributes to existing literature by providing insights into how organisational culture shapes digital platform adoption patterns in the South African banking sector. The findings offer valuable recommendations for banks navigating the challenges of transitioning to a platform business model.

1.5 Research questions

1. How does organisational culture influence the adoption of digital platforms in South African banks?

2. How do technological factors, such as digital skills, influence the adoption of digital platforms in South African banks?

3. How does collaboration with external entities influence the adoption of digital platforms in South African banks?

1.6 Rationale

Digital technology has transformed the banking industry, with digital platforms becoming increasingly prevalent across various sectors (Atca Gorgun & Wolfs, 2021; Diamond et al., 2019; Dutta, 2020). While digital platforms offer several benefits, including reduced cost, improved delivery rates, and digital transformation, their existence does not guarantee success (Harland et al., 2020). Creating, delivering, and capturing value from digital platforms is a complex and multifaceted process, further complicated by organisational culture's importance in shaping its adoption (Müller et al., 2019; Pedersen, 2022; Resca et al., 2013; Van Der Schaft et al., 2022).

Despite the increasing importance of digital platforms, limited studies have focused on their adoption in South African banks, particularly within the organisational culture context (Harland et al., 2020; Rohn et al., 2021; Täuscher & Laudien, 2018). Recent studies have primarily focused on the changing business models for banks and the impact of platform businesses on value creation (Atca Gorgun & Wolfs, 2021; Diamond et al., 2019; Dutta, 2020; Harland et al., 2020; Rohn et al., 2021; Täuscher & Laudien, 2018). However, most studies occur outside South Africa.

Therefore, this study contributes to the existing literature by exploring the impact of organisational culture on the adoption of digital platforms in South African banks. Specifically, this study uses the technology-organisation-environment (TOE) framework and organisational culture theory to determine which organisational culture factors influence digital platform adoption in South African banks. This research aims to provide guidance for digital leaders and professionals by elucidating the influence of organisational culture on the adoption of digital platforms, with the understanding that platform businesses reduce costs, spur innovation, and offer a superior customer experience, leading to a competitive advantage.

From a scholarly standpoint, this research enhances the existing body of work regarding adopting digital platforms and organisational culture, specifically within the South African banking sector context. Additionally, the research provides insights into the TOE framework's practice-oriented utility in understanding organisational culture's impact on digital platform adoption within the South African banking context.

1.7 Delimitations of the study

The following delimitations exist for this study:

1. **Geographical delimitations:** The study focuses solely on the banking sector in South Africa.

2. **Organisational delimitations:** The study only investigates digital platforms in banks and not financial service firms.

3. **Conceptual delimitations:** The research centres on how organisational culture affects the uptake and application of digital platforms while not considering additional factors that might impact digital transformation in the banking sector, like regulatory, legal, and economic influences.

4. **Methodological delimitations:** The study uses the TOE conceptual framework and a survey research instrument to collect data from diverse bank employees.

5. **Time delimitations:** The study only covers data collected between 15 September 2023 and 1 November 2023 to provide a snapshot of digital platform adoption and organisational culture in South African banks.

By establishing these delimitations, the research delivers a concentrated and thorough examination of how organisational culture influences the adoption and implementation of digital platforms, particularly South African banking institutions.

1.8 Definition of terms

The definitions used in the research are provided without elaboration and listed in Table 1.

Table 1: Definitions of terms used

Term	Definition
Business model	"A business model depicts the content, structure, and governance of transactions designed to create value through the exploitation of business opportunities" (Amit & Zott, 2001, p. 494)
Business model innovation	"Business model innovation (BMI) is the need to significantly transform the existing business model, known as the value proposition of the business" (van Tonder et al., 2020, p. 112).
Digital innovation	"Digital innovation is embedding digital components in physical products" (Yoo et al., 2010, p. 731).
Digital technologies	A new wave of technologies that include "IoT platforms, location detection technologies, advanced human-machine interfaces, authentication and fraud detection tools, 3D printing, smart sensors, big data analytics and advanced algorithms, multilevel customer interaction and customer profiling, augmented reality, cloud computing or mobile devices" (Martínez-Caro et al., 2020, p. 1).
Digital transformation	"The use of technology to radically improve performance or reach of enterprises" (Westerman et al., 2014, p. 1).
Organisational culture	"'Taken-for-granted values, underlying assumptions, expectations, collective memories, and definitions present in an organisation. It represents 'how things are around here'. [Organisational culture] reflects the prevailing ideology that people carry inside their heads. It conveys a sense of identity to employees, provides unwritten and often unspoken guidelines for how to get along in the organisation, and it enhances the stability of the social system that they experience" (Cameron & Quinn, 2006, p. 16).

Platform business	“Platform businesses bring together producers and consumers in high-value exchanges. Their chief assets are information and interactions, which are also the source of the value they create and their competitive advantage” (Alstyne et al., 2016, p. 2).
Pipeline business	“A pipeline business model creates value through a linear series of value chain activities – in other words, it transforms inputs into products through manufacturing steps for which customers are willing to pay” (Rohn et al., 2021, p. 2).

1.9 Assumptions

This study assumed that the participants’ responses regarding digital adoption and organisational culture in the South African banking sector reflect real and honest experiences and perspectives. Although the research tried to select knowledgeable and experienced participants, social desirability bias may influence their responses. Anonymised responses and emphasis on honesty helped mitigate this bias.

Another assumption was that the conceptual framework based on previous literature is valid and reliable for the study’s purpose. The conceptual framework assumes that digital platforms provide cost reduction, innovation, and superior customer experiences, leading to a competitive advantage for banks.

Additionally, the study assumed that the identified delimitations (such as the focus on the South African banking sector) provide a suitable scope for the research. The unique challenges and opportunities of the South African banking sector support the reasonableness of this assumption. The research outcome was sensitive to this assumption, and the report acknowledged and discussed any limitations.

1.10 Chapter outlines

Chapter 1 of the research report introduces the study, including the purpose, context, problem, objectives, questions, and significance. This chapter also clarifies the terminology employed in the report and elaborates on the study's assumptions and scope limitations.

Chapter 2 presents the theoretical framework and a review of prior research on platform-based businesses in the banking sector, focusing on the role of organisational culture in platform creation and value capture. The chapter discusses the concepts of platform-based businesses, organisational culture, and the ways of work described by existing literature.

Chapter 3 details the research methodology used in the study, which is a quantitative approach. This chapter covers the research design, including the specific research methods, population and sampling strategy, and data collection instrument. The chapter also discusses the data analysis and interpretation process, the study's limitations, validity and reliability, and ethical considerations.

Chapter 4 presents the statistical analysis of data collected on digital platform adoption within South African banks. It outlines the data preparation steps, data cleaning, and how missing values were handled, followed by descriptive and inferential statistical analyses to explore how organisational culture influences digital platform adoption. Key findings are visualised through charts and tables, summarising the statistical evidence supporting or refuting the study's hypotheses.

Chapter 5 interprets the statistical results from Chapter 4, linking them to the study's research questions and theoretical framework. It discusses the implications of these findings within the context of existing literature on digital platforms and organisational culture in banking. The chapter explores the influence of organisational culture, technological factors, and external collaborations on digital adoption, considering the study's limitations and their impact on the findings. It concludes with the practical implications for stakeholders in the digital banking sector.

Chapter 6 summarises the study's findings and theoretical and practical implications and offers recommendations for enhancing digital platform adoption in banks. It suggests actionable strategies for banks, prioritised by impact and feasibility, and outlines areas for future research to address gaps in the current study. The chapter emphasises the importance of further investigation into digital culture and platform

adoption, proposing a direction for future research to deepen the understanding of digital transformation in banking.

CHAPTER 2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

As observed by numerous scholars, the financial services industry is undergoing significant changes driven by the advent of digital technologies such as the Internet, mobile devices, and the cloud (Diamond et al., 2019; Dutta, 2020; Matsepe & Van der Lingen, 2022; von Solms & Langerman, 2022). These technological advancements have transformed the banking industry and necessitated the emergence of new business models and organisational cultures that support digital transformation (Dutta, 2020; Mallon, 2021; Martínez-Caro et al., 2020; Müller et al., 2019; Pedersen, 2022; Rohn et al., 2021; Ünvan & Ergenç, 2023).

Some researchers emphasise the importance of organisational and digital culture in successfully adopting and implementing these new models (Martínez-Caro et al., 2020; Müller et al., 2019; Pedersen, 2022). However, others (Hautala-Kankaanpää, 2022; Resca et al., 2013; Trushkina et al., 2020) stress the role of digital transformation, platform business models, and digital platform adoption as crucial drivers impacting organisational culture and performance. This literature review thematically explored and critically evaluated these divergent perspectives to understand the interplay between these elements in the context of the evolving banking industry.

2.2 Unpacking organisational culture: importance, characteristics, and implications

Scholars and practitioners have developed various definitions of organisational culture, highlighting its complexity and dynamic nature. Barney (1986) defines organisational culture as amalgamating a company's guiding principles, convictions, and symbols. Deshpande and Webster (1989) depict it as the collective presumptions that inform an organisation's operations. Schein (2010) presents a more evolutionary

perspective, describing it as a matrix of fundamental presumptions formulated, discerned, or refined by a group as it learns to cope with its external milieu and to cohere internally.

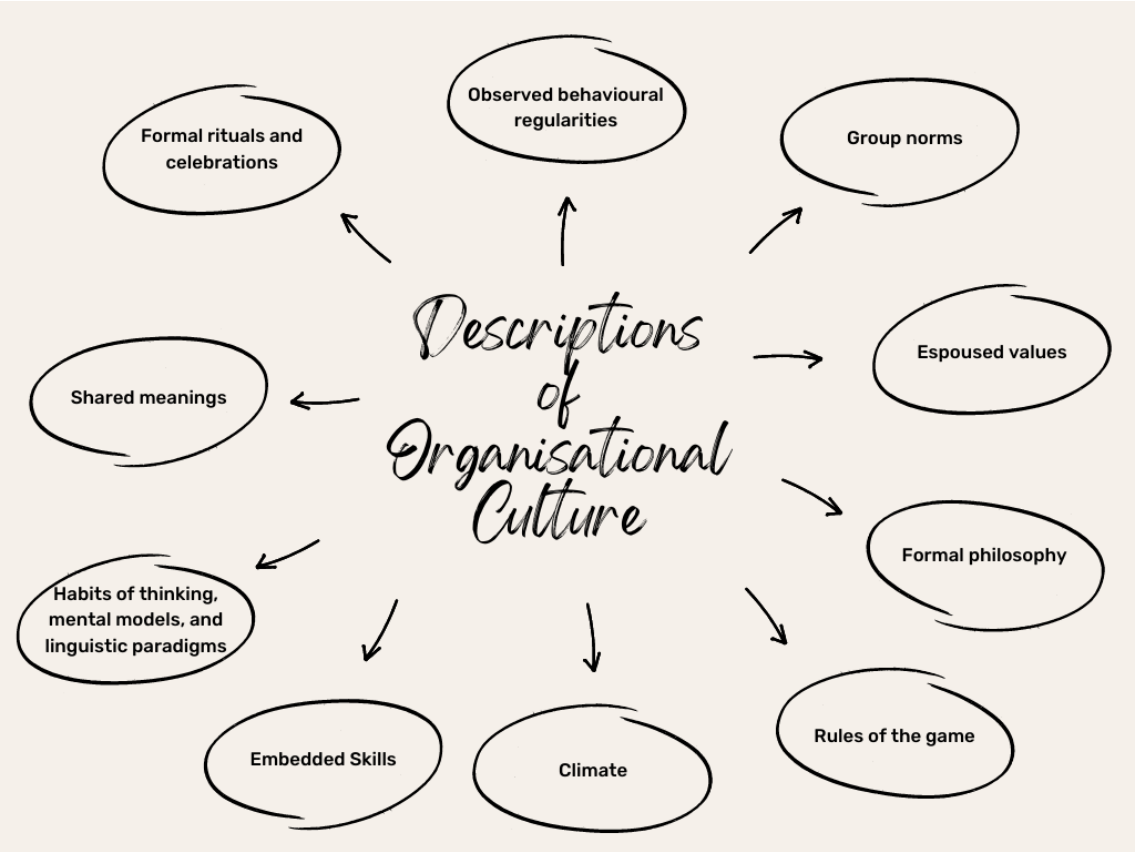


Figure 2: Categories of organisational culture. Adapted from Schein (2010)

In the context of the digital age, some scholars (Trushkina et al., 2020; Martínez-Caro et al., 2020) define organisational culture as shared values, beliefs, assumptions, and practices that shape individual behaviours and attitudes within an organisation. The authors underscore the importance of shared beliefs and values in shaping organisational culture in a digital context and fused the definitions of Barney (1986) and Deshpande and Webster (1989).

While organisational culture is viewed as a source of competitive advantage and profoundly influences behaviours and attitudes within an organisation, the literature also emphasises its potential influence on the adoption of digital platforms. Digital

technologies affect organisational structure and operations and significantly reshape organisational culture, leading to a new digital culture paradigm (Trushkina et al., 2020).

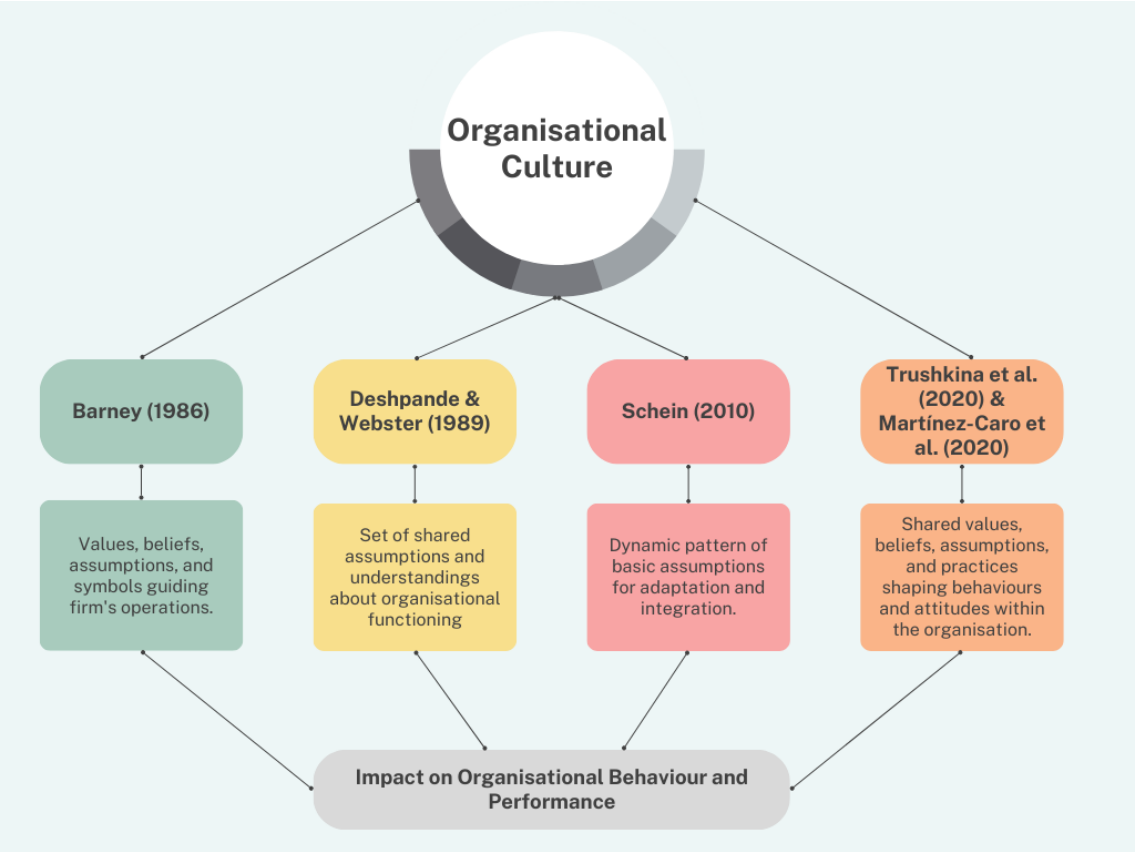


Figure 3: Organisational culture based on various scholarly perspectives

2.3 Organisational culture and digital transformation: interplay and implications

The concept of organisational culture plays a significant role in various management dimensions. These dimensions range from performance, innovation, leadership, knowledge management, job satisfaction, and information technology. A substantial body of literature explores these relationships, establishing the importance of organisational culture within a myriad of organisational contexts (Busco et al., 2023; Duerr et al., 2018; Grover et al., 2022; Müller et al., 2019; Serpa et al., 2022).

More recently, the spotlight has begun to shine on the potential impact of organisational culture on digital innovation and transformation. This nascent research focus underscores the dynamism and evolution of organisational culture in response to emerging business trends and challenges (Müller et al., 2019). Martínez-Caro et al. (2020) emphasise this point, arguing that, just as with other management dimensions, understanding the interplay between organisational culture and digital transformation is crucial.

Organisational culture contributes more than just a unique identity to an organisation. It sets up an invisible but potent system of rules that govern interactions and behaviours. Though these rules may often go unarticulated, they influence the work environment considerably, shaping individual behaviours and the larger organisational context. The resultant effect can have far-reaching impacts on the organisation's overall performance and success (Martínez-Caro et al., 2020; Müller et al., 2019; Trushkina et al., 2020).

Furthermore, organisational culture is not a static element. Instead, it is dynamic and capable of evolution and adaptation. This notion suggests that cultures can evolve as organisations grow and incorporate technological advancements. The present study seeks to delve deeper into this fascinating interplay, focusing specifically on the role of organisational culture in adopting digital technologies in the banking sector.

An comprehensive understanding of organisational culture could provide pivotal insights for businesses' digitalisation journey. However, despite its potential significance, literature still reveals a notable gap in understanding the role of organisational culture in the context of digital transformations, especially within specific industries such as banking. This study aims to address this gap, exploring how organisational culture can facilitate or inhibit the adoption of digital platforms.

As the literature indicates, organisational culture is a complex, shared, and dynamic construct that significantly influences organisational behaviours and attitudes. Moreover, organisational culture could serve as a source of competitive advantage. Given this backdrop and considering organisational culture's role in shaping employee

engagement and its success, the influence of organisational culture on adopting digital platforms, particularly in South Africa, could be significant. Further research, however, is necessary to uncover the depth and nuances of this organisational culture influence.

2.3.1 Role of organisational culture in the context of digital transformation

Organisational culture stands as a crucial determinant in the success of a firm's digital transformation. Various studies have shed light on organisational culture's complexities and crucial role in enabling or inhibiting digital transformation. (Pedersen, 2022) advances the idea that culture is a guiding system within the organisation that can either facilitate or impede the digital transformation process, highlighting the need for adaptability, resilience, and openness to change.

Through examining Kodak, Nokia, and Blockbuster, Müller et al. (2019) provide concrete examples of how a rigid culture can lead to strategic missteps and failure to adapt to technological advancements. This phenomenon underscores the destructive potential of a misaligned organisational culture and the need for a cultural shift towards adaptability and innovation in response to digital changes.

Furthermore, Trushkina et al. (2020) advance a proactive approach, suggesting that the conscious cultivation of an adaptive organisational culture is essential in driving and managing successful digital transformation. They argue that culture is not just about responding to change; it must be a proactive transformation driver, encouraging innovation, collaboration, and continuous learning.

Synthesising these perspectives highlights the multifaceted role of organisational culture in digital transformation, emphasising that it is not a passive element but rather an active catalyst for change. Organisational culture's importance lies in shaping employees' attitudes and responses to changes, influencing their readiness to embrace modern technologies and methods. Conversely, a resistant or hostile organisational culture can serve as a barrier to change, hindering the digital

transformation process. Hence, organisations must proactively understand and effectively manage their organisational culture to thrive in the digital era.

2.4 From organisational culture to digital organisational culture

As proposed, organisational culture is pivotal in achieving sustainable growth and success in today's dynamic business environment. According to Wokurka et al. (2017), clashes with existing organisational culture have caused some organisations to miss significant business benefits from digital transformations. Wokurka et al. (2017) also highlight that the evolution of culture can be challenging. This perspective sheds light on the complexities and potential obstacles within the transformation process, as the wrong culture could result in unsuccessful digital transformation efforts.

Pedersen (2022) posits that a deep understanding of culture is a central navigational compass and a crucial hinge on which successful digital transformation pivots. This viewpoint aligns with Martínez-Caro et al. (2020), who contend that digital transformation necessitates a distinct organisational culture – a digital culture – that can adapt and thrive amidst digital changes. Hence, the advent of digital technologies has affected the organisational structure and operations and significantly impacted and reshaped organisational culture, leading to a new digital culture paradigm (Trushkina et al., 2020).

These varied perspectives highlight the fluid and evolving nature of organisational culture, its crucial role in digital transformation, and the necessity of its alignment with digital strategies for successful transformation. Hautala-Kankaanpää (2022), Fitzgerald et al. (2014), and Hartl and Hess (2017) have identified digital culture as one factor that prevents an organisation from successfully achieving digital transformation. Martínez-Caro et al. (2020, p. 2) define 'digital organisational culture' as "a set of shared assumptions and understanding about organisation functioning in a digital context". Furthermore, for Trushkina et al. (2020), digital culture refers to values, beliefs, and practices specific to using digital technologies in business operations. In other words, digital culture refers to the attitudes and behaviours of

individuals within an organisation towards digital technologies and their integration into the business processes (Trushkina et al., 2020).

Martínez-Caro et al. (2020) suggest that organisations can leverage their existing culture and strengths to drive necessary changes by identifying and reinforcing behaviours that align with a new digital approach. Pedersen (2022, p. 2) emphasises the importance of striking a balance between continuity (of existing culture) and change during digital transformation efforts, arguing that “change without continuity can result in chaos, while continuity without change can lead to conservatism”.

Fostering a digital culture necessitates promoting teamwork, creativity, and innovation via a digital strategy shared among management and all staff members (Claver et al., 1998; Kane et al., 2015, as cited in Martínez-Caro et al. (2020). Hautala-Kankaanpää (2022) suggests that a supportive digital culture can positively impact the use of digital platforms and improve operational performance. Therefore, digital culture is essential to organisational culture and the adoption of digital technologies.

The literature insightfully unpacks the concept of digital culture as an offshoot of organisational culture, setting a theoretical foundation for understanding the crucial role of organisational culture in digital transformation. The literature from various academic sources underscores the significance of understanding the existing organisational culture, digital strategies, and their interaction to fuel a successful digital transformation.

The literature also defines and emphasises digital culture. Martínez-Caro et al. (2020) and Trushkina et al. (2020) offer thoughtful definitions highlighting the relationship between digital technologies and business operations. Pedersen's (2022) perspective also provides a balanced view of the necessity for continuity and change during digital transformation efforts.

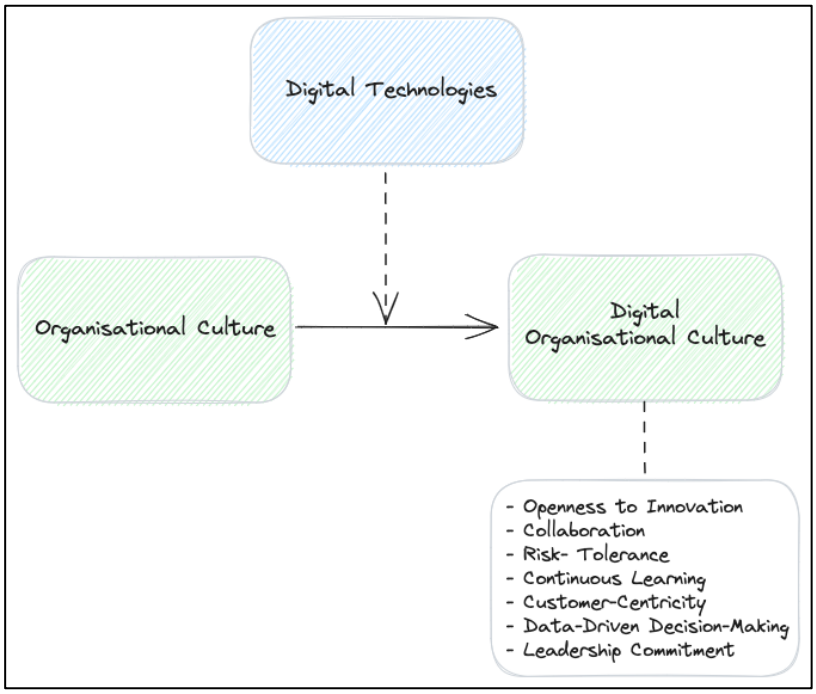


Figure 4: Progression from organisational culture to digital organisational culture

2.4.1 Understanding digital organisational culture

A study by Duerr et al. (2018) leans on Schein's (2010) framework to explain the interplay between artefacts, beliefs, values, and underlying assumptions of organisational culture in the digital age. This foundational understanding is crucial for comprehending the emerging perspectives and gaps in studying digital culture.

A key emergent theme in the literature is the significant role of leadership in facilitating digital culture (Busco et al., 2023; Serpa et al., 2022; Trushkina et al., 2020). However, the variance in defining ‘leadership' across these studies is worth noting, ranging from a traditional top-down approach to a more modern, inclusive leadership style embracing collaboration and encouraging participation. While both the traditional and modern styles can potentially shape the digital culture, the difference signifies a gap in establishing a comprehensive understanding of digital leadership and its various operational forms.

Digital skills acquisition is universally acknowledged as essential (Busco et al., 2023; Duerr et al., 2018; Serpa et al., 2022), and researchers often discuss it in conjunction with the need for ongoing training (Kavanaugh, 2020; Trushkina et al., 2020). The intersection of digital skills and training suggests a symbiotic relationship. However, the literature overlooks the potential tension that could emerge between ensuring employees' digital literacy and maintaining productivity during the learning process. This paradox necessitates further exploration.

The role of collaboration, risk-taking, and continuous improvement in defining digital culture is another commonality across studies (Duerr et al., 2018; Hautala-Kankaanpää, 2022; Martínez-Caro et al., 2020; Trushkina et al., 2020). However, such traits are not unique to digital culture and are frequently associated with start-up culture. This commonality suggests an overlap between digital and start-up cultures and raises the question of whether adopting a start-up mentality could facilitate digital transformation within traditional organisational settings.

Interestingly, the literature underscores the existence of paradoxical barriers that can both support and obstruct digital culture transformation. For instance, while leadership can catalyse digital culture, it can also be an obstacle when leaders resist change out of fear or lack of understanding (Kavanaugh, 2020; Serpa et al., 2022; Trushkina et al., 2020). This ambiguity implies the need for a nuanced approach when interpreting and implementing leadership and digital culture findings.

The culture of embracing failure and agility, repeatedly highlighted by various authors (Busco et al., 2023; Duerr et al., 2018; Serpa et al., 2022; Trushkina et al., 2020), suggests that resilience is inherent in digital culture. However, an organisation-wide acceptance of failure could clash with the business's commercial realities, demonstrating another area for further investigation.

In conclusion, examining digital organisational culture reveals key themes—leadership, collaboration, digital skills, failure acceptance, agility, and a start-up mentality—interspersed with paradoxes and potential contradictions. This discovery highlights the inherent complexity and the dynamic nature of digital organisational

culture, warranting continuous exploration and a multi-dimensional approach to comprehend its intricacies fully.

2.5 Role of digital platforms in digital transformation in banking

Digital culture and technologies are interdependent. A robust digital culture plays a pivotal role in facilitating the adoption and successful implementation of digital platforms within an organisation (Busco et al., 2023). This relationship becomes particularly noteworthy when we consider the crucial role that digital platforms are now playing in reshaping industries. Building on Martínez-Caro et al.'s (2020) argument, it is understood that the successful adoption of digital technologies, specifically digital platforms, hinges on an organisation's digital culture. As Diamond et al. (2019) suggest, the banking sector, which is experiencing rapid evolution due to digital technologies, must embrace platform business models to maintain competitiveness. This external change necessitates a comprehensive understanding of digital platforms and their interplay with the banking sector. How digital platforms redefine the dynamics of the banking sector and how a conducive digital culture can act as a catalyst in this transformation becomes significant, is discussed below.

2.5.1 Digital platforms and their relation to the banking sector

Mallon (2021) highlights that while research on platforms and business models is extensive, digital platforms have received various types of attention. Mallon (2021, p. 4) argues that the rise of digital technology and the “increasing importance, availability, and usability of data” have disrupted traditional business models. Tiwana et al. (2010) define digital platforms as extensible codebases of software-based systems, providing core functionality through interoperable modules and interfaces. Digital platforms, which form part of the broader family of digital technologies, are software systems that facilitate the integration of applications and processes and enable the interaction and exchange of data among various user groups (Hautala-Kankaanpää, 2022; Resca et al., 2013). In the contemporary business environment, the terms are often used interchangeably, as the concept of a 'platform' encapsulates both the technological

infrastructure (digital platform) and the business model built upon it (platform business model). This paper adopts the term digital platform to include the business model.

Digital platforms enable users to interact with each other and businesses. These platforms can include social media sites like Facebook and Twitter, e-commerce sites like Amazon and Alibaba, and sharing economy platforms like Uber and Airbnb. Digital platforms allow organisations to invert their value chains, creating a platform business model (Alstyne et al., 2016). Digital platforms coordinate and mediate between heterogeneous actors around a product, a resource, a service, or a technology based on direct or indirect network effects (Mallon, 2021). This construct differs from traditional business models that typically involve a linear value chain with clear boundaries between suppliers, producers, distributors, and customers (Alstyne et al., 2016; Mallon, 2021). The rise of digital platforms has disrupted numerous industries and shifted traditional market intermediation. As a result, it is vital to explore the reasons behind these changes in the banking sector.

2.5.2 Motivation for change

The financial services landscape is experiencing a dramatic shift, which is compelled by digital technology advancements and competitive dynamics (Diamond et al., 2019; Ünvan & Ergenç, 2023). These changes disrupt traditional market definitions, operations, and business models, marking a transformative moment for the sector (Memic et al., 2022).

New entrants, from agile fintech start-ups to formidable businesses across various sectors, are redefining competition in the financial services industry (Diamond et al., 2019; Dutta, 2020; Ünvan & Ergenç, 2023). These players' swift and efficient innovation and pressure on banks to modernise have led to significant disruptions in the traditional banking value chain. Consequently, regulatory bodies are spurred to facilitate technological innovation (Atca Gorgun & Wolfs, 2021; Memic et al., 2022).

In addition to these external forces, internal challenges within banks significantly influence the pace and extent of digital platform adoption within the banking sector.

Firstly, leadership vision is crucial, as the transition often requires substantial long-term investments, making leadership commitment vital (Memic et al., 2022). Secondly, digital transformation requires a considerable reskilling effort among employees, with resistance potentially hindering platform adoption (Memic et al., 2022). Thirdly, modernising legacy IT systems presents a significant challenge for traditional banks. Still, this hurdle can create opportunities for less-regulated, tech-enabled, non-banking institutions to deliver services more efficiently (Atca Gorgun & Wolfs, 2021). Lastly, organisational readiness, including investment in resources to foster digital skills and capabilities, is crucial to a thriving digital transition (Memic et al., 2022).

New digital competitors exert pressure by exploiting advantages such as data, technological sophistication, innovation capability, and agility. These pressures further push banks to re-evaluate and adjust their existing business models and operational strategies (Atca Gorgun & Wolfs, 2021). Adopting digital technologies and platforms is a response to disruptions and a strategic move towards operational efficiency, improved customer experience, and cost reduction (Dutta, 2020; von Solms & Langerman, 2022). Interestingly, the competition extends beyond digital fintech start-ups, with powerful businesses from other sectors also disrupting the traditional banking value chain, a trend actively encouraged by regulatory bodies (Atca Gorgun & Wolfs, 2021; Diamond et al., 2019).

Digital platforms are disruptive for the banking industry, with 70% of executives surveyed saying they are driving changes in traditional value chains across the industry (Diamond et al., 2019). Given these motivations and disruptions, examining the adoption of digital platforms within the banking industry is imperative (Dutta, 2020). While digital platforms are causing significant shifts in traditional value chains within the banking industry, it is also crucial to acknowledge the variability of this adoption across various organisational departments (Diamond et al., 2019; von Solms & Langerman, 2022). Therefore, studying digital platform adoption in the banking sector becomes not just an intellectual pursuit but a necessity to comprehend the evolving dynamics of this crucial industry.

2.5.3 Adoption of digital platforms in banking

Von Solms and Langerman (2022) argue that adopting digital technology in a bank's Treasury can significantly improve its efficiency and streamline its operations, enabling it to meet its broader strategic mandate. The authors contend that a digital maturity assessment, a tool for evaluating a company's readiness and effectiveness in adopting digital technology, can be used to evaluate the effectiveness of digital technology adoption and identify areas for improvement. Ünvan and Ergenç (2023) identify organisational culture as one of the four main research factors in digital transformation in the banking sector. The authors suggest that further research is required to understand how organisational culture affects the adoption of digital platforms.

Rohn et al. (2021) identify a start-up culture as a central success factor for digital platform-based business models in the metal and steel industry. This trait suggests that organisations with a culture of innovation, risk-taking, and agility may be more likely to adopt digital platforms. Matsepe and Van der Lingen (2022) provide a South African banking perspective. Their study found that factors such as organisational leadership significantly impact technology adoption in the financial sector. This finding could imply that while a start-up culture might facilitate digital adoption, leadership's role in promoting and navigating the transformation could be crucial within the specific context of South African banks.

Thus, while the principles from Rohn et al. (2021) may be applicable, the specific characteristics and challenges of the South African banking sector could introduce additional factors or complexities in adopting digital platforms. Therefore, more research investigating these aspects within the South African banking industry is warranted.

Despite these insights, the authors do not directly address the research question of the role of organisational culture in adopting digital platforms. This omission provides a clear segue into identifying research context and gaps. They do, however, provide insights into the importance of digital technology adoption in banking, suggesting that organisational culture may play a role in facilitating or hindering the adoption of digital

platforms, as it can impact the willingness of employees to embrace innovative technologies and change their work processes.

Matsepe and Van der Lingen (2022), on the other hand, found that combining individual and organisational factors affects technology adoption behaviour in the South African financial sector. The authors propose a new model to understand individuals' technology adoption behaviours in personal and work settings. They identified several factors influencing technology adoption, including organisational leadership, which affects organisational culture. While von Solms and Langerman (2022) discuss the adoption of digital technology in banking, they do not address the role of organisational culture. This overlooked phenomenon presents a research gap that warrants further exploration.

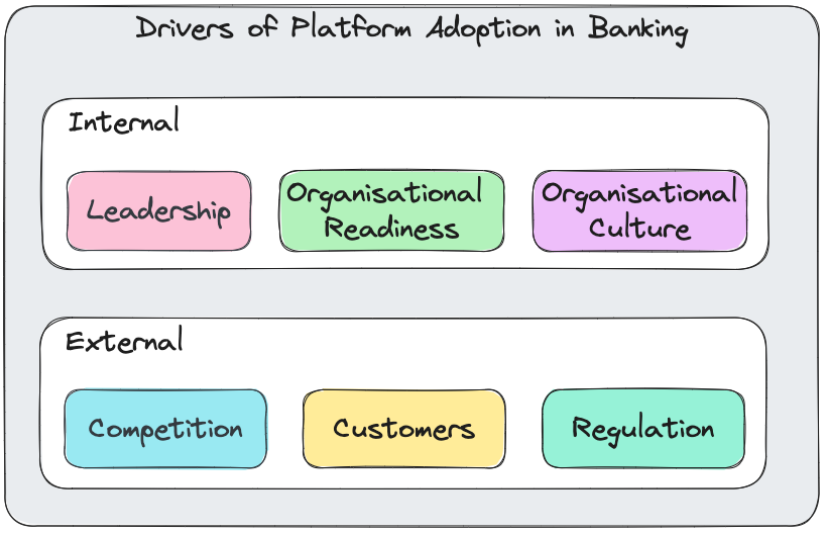


Figure 5: Factors driving digital platform adoption

2.6 Digital Platforms and Organisational Culture in the South African Banking Sector

The South African banking sector is experiencing a dynamic shift towards digitalisation, driven by technological advancements and changing consumer

expectations (Matsepe & Van der Lingen, 2022; Telukdarie & Kayser, 2022). Digital platforms, defined as extensible codebases that enable the interaction and integration of applications and processes, are central to this transformation (Tiwana et al., 2010). These platforms are not just technological infrastructures but integral to new business models that foster innovation and competitiveness (Mallon, 2021).

Digital platforms in banking include online banking systems, mobile apps, and integrated customer relationship management systems that enhance service delivery and operational efficiency (Dutta, 2020). These platforms allow banks to offer seamless, personalised services, crucial for maintaining a competitive edge in a rapidly evolving market (Diamond et al., 2019). In South Africa, banks are increasingly adopting these platforms to meet the growing demand for digital services and to improve customer engagement (von Solms & Langerman, 2022). The prevailing organisational culture heavily influences the successful integration of digital platforms within banks. A culture promoting innovation, flexibility, and continuous learning is more conducive to effective digital transformation (Ünvan & Ergenç, 2023). Conversely, rigid and hierarchical cultures may hinder the adoption of new technologies.

The successful adoption of digital platforms in South African banks hinges on several interrelated factors. Nqala (2021) underscores the vital role of middle management in executing digital transformation strategies, necessitating competencies like effective communication and digital savviness. Misalignment between middle management and digital transformation initiatives can impede progress, making aligning their roles with overall digital transformation objectives crucial. Magnus-Eweka (2023) addresses broader challenges, such as outdated strategies and the need for robust digital infrastructure, emphasising the importance of strategic interventions to leverage technology for competitive advantage. Seerpath (2020) identifies critical success factors for software development projects, such as understanding project requirements and promoting skills development.

These factors highlight the importance of a supportive organisational culture that fosters innovation, flexibility, and continuous learning. Together, these insights

demonstrate the complex interplay between organisational culture, leadership, and digital transformation in the South African banking sector, providing a comprehensive understanding of the factors influencing digital platform adoption.

2.7 Research context and gaps

As established businesses operating in a regulated space, the consequence for banks is that they can be bureaucratic. This operating feature contrasts with the start-up mentality required in digital organisational culture. More research is required to explore the role of digital transformation in the banking sector. Ünvan and Ergenç (2023) suggest a need for more empirical studies on digital transformation in the banking sector, particularly those examining organisational culture's impact on adopting digital platforms. Some studies have investigated the role of digital platforms in banking and their disruptive implications but have not directly addressed the part of organisational culture in adopting digital platforms (Diamond et al., 2019; Dutta, 2020). The literature review suggests that while digital transformation and related disciplines have received attention from researchers since 2014, research in the financial services industry is underrepresented, and most of the context has been in Europe and the United States of America (Vaska et al., 2021) (see Figures 6 and 7 for a detailed dissection of the analysis).

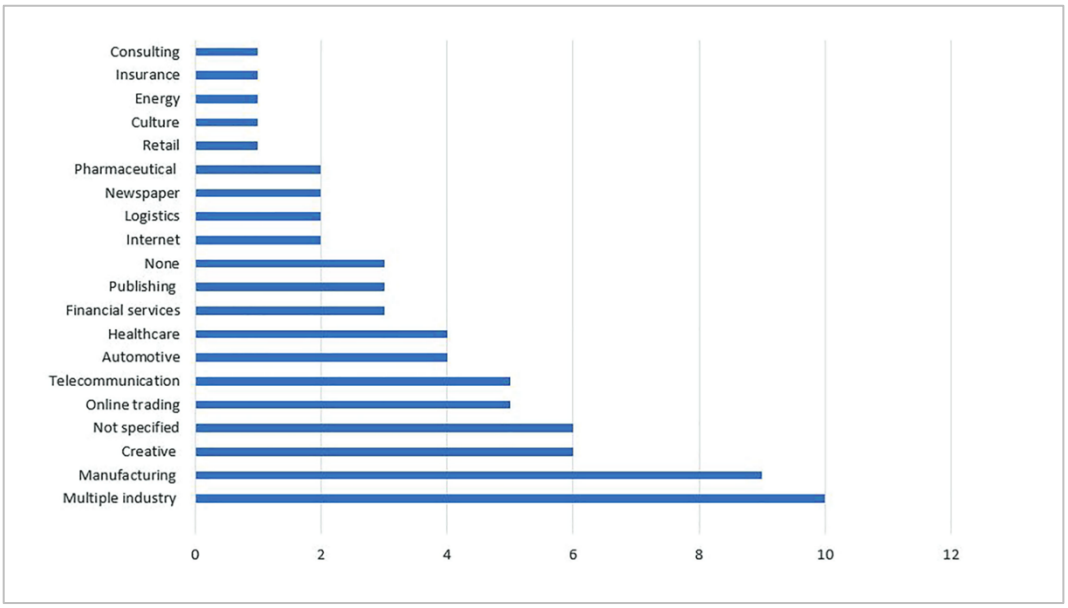


Figure 6: Digital transformation research per industry (Vaska et al., 2021)

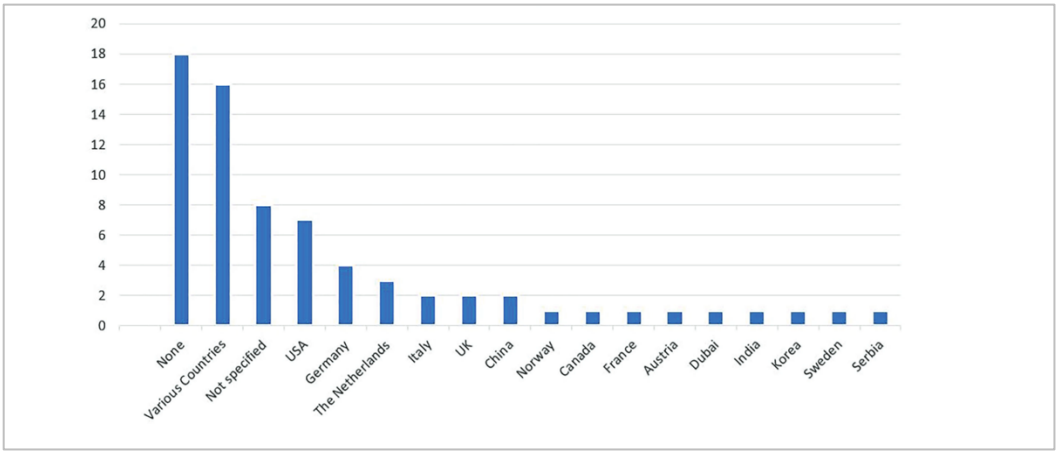


Figure 7: Digital transformation research per country (Vaska et al., 2021)

In addition to the research presented by Vaska et al. (2021), the context of the study referenced in the literature review regarding organisational culture, including digital culture, is set in industries outside of financial services and South Africa (Busco et al., 2023; Grover et al., 2022; Hautala-Kankaanpää, 2022; Martínez-Caro et al., 2020; Trushkina et al., 2020). Moreover, the studies concentrated on banking (Atca Gorgun & Wolfs, 2021; Diamond et al., 2019; Dutta, 2020; Ünvan & Ergenç, 2023; von Solms & Langerman, 2022) or banking in South Africa (Matsepe & Van der Lingen, 2022;

Telukdarie & Kayser, 2022; von Solms & Langerman, 2022), do not consider the role of digital platform adoption and the role organisational culture plays in adoption.

2.8 Theoretical frameworks

The study evaluated the role of organisational culture in adopting digital platforms in the South African banking sector. The literature review provided insight into organisational culture, digital organisational culture, and digital platforms.

2.8.1 Technology, organisation, and environment (TOE) framework

Studying the adoption of digital platforms within organisational culture necessitates a robust theoretical framework that can account for various factors. Depietro et al. (1990) developed a framework for adopting and implementing technological innovations and found three influencing contexts – technology, organisation, and environment. With its comprehensive approach, the TOE framework is ideal for understanding technology adoption at the organisational level (Liu et al., 2008). Researchers have recommended using TOE when focusing on technology adoption at an organisational level (Awa et al., 2017; Tongsuksai et al., 2023).

The TOE framework incorporates technological, organisational, and environmental variables, offering a holistic view of technology adoption. This perspective is particularly beneficial when studying the adoption of digital platforms, as it allows for a nuanced understanding of the several factors that influence this process (Alamgir Hossain & Quaddus, 2011; Zhu et al., 2004).

The technological context of the TOE framework comprises variables like system integration, complexity, perceived benefits, and standardisation that affect innovation adoption (Alamgir Hossain & Quaddus, 2011; Musawa & Wahab, 2012). This view is crucial when studying digital platform adoption, as these variables can significantly impact the likelihood and success of adoption.

The TOE framework's organisational context refers to specific organisational characteristics, such as size, scope, and managerial principles (Intan et al., 2009). This context is particularly relevant to the current study, as the organisational culture, specifically the digital culture defined by Duerr et al. (2018), plays a significant role in adopting digital platforms.

The environmental context of the TOE framework includes factors such as competitive pressure, external pressure, internal pressure, and vendor support, among others (Alamgir Hossain & Quaddus, 2011; Musawa & Wahab, 2012). These factors can significantly influence the decision to adopt digital platforms and the success of such adoption.

While the TOE framework has its limitations, such as its lack of primary constructs in a model and variables in all contexts (Low et al., 2011), it is still more comprehensive than other models, such as the technology acceptance model (TAM) and the unified theory of acceptance and use of technology (UTAUT). For instance, while extensively used, TAM is limited in predicting actual behaviour and has a limited explanatory and predictive capacity (Garača, 2011; Wu, 2011). UTAUT, on the other hand, while robust, is primarily designed for predicting technology adoption at the individual level and has been less studied at the organisational level (Liu et al., 2008; Williams et al., 2009).

In contrast, the TOE framework, with its emphasis on the organisational level and its comprehensive approach, provides a more suitable theoretical basis for studying the adoption of digital platforms within the context of organisational culture. However, since the study of an organisation is through its employees, behavioural models like TAM and UTAUT are better suited to address individual biases that may skew results since various employees may hold different assessments of the same organisation. Li (2020) found that the results would be similar despite the various theoretical bases, individual vs organisational. Therefore, despite its limitations, the TOE framework is chosen for this study.

With its comprehensive approach and focus on the organisational level, the TOE framework provides a robust theoretical basis for studying the adoption of digital platforms within the context of organisational culture. Its capability to incorporate various technological, organisational, and environmental variables makes TOE an ideal choice for this study.

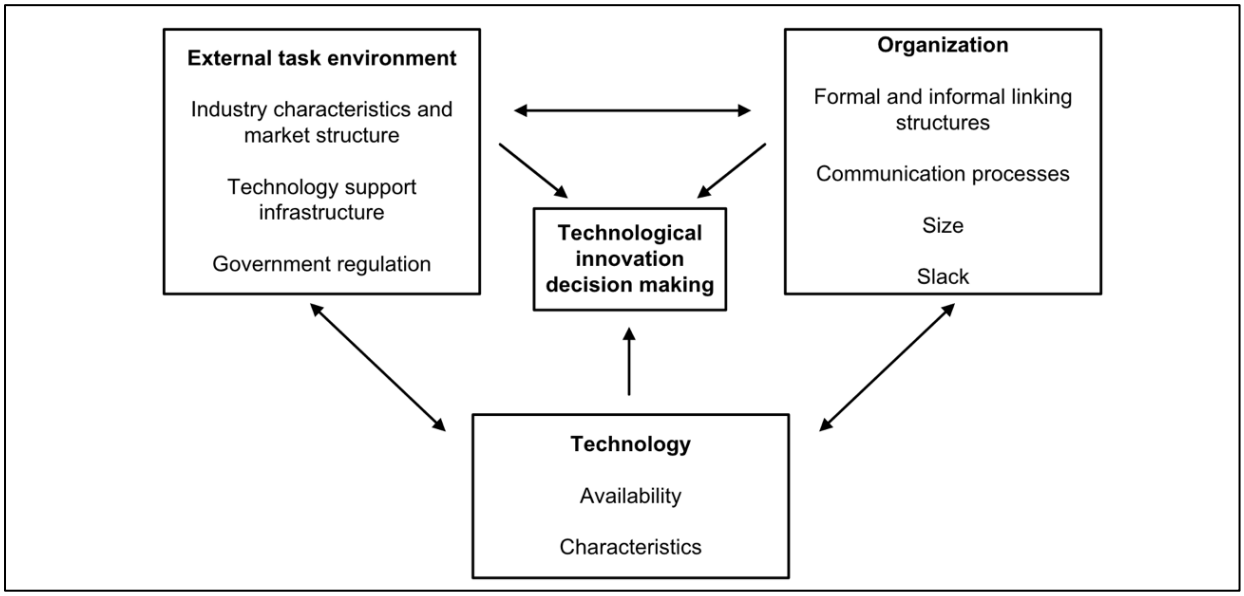


Figure 8: Technology, organisation, and environment framework. Source: Oliveira & Martins (2011)

2.8.2 Organisational culture

Through many studies, researchers have established organisational culture as having an outsized impact on the effectiveness of an organisation. These studies have examined the role of organisational culture concerning multiple management disciplines (Martínez-Caro et al., 2020).

Organisational culture concerns the ideas, customs, and social behaviour of people in organisations – culture. The study of culture has its roots in sociology and anthropology (Crawford et al., 2015) and, since the early 1980s, has been applied to organisational research (Barney, 1986; Deshpande & Webster, 1989; Schein, 2010). Culture is a complex and multifaceted concept, explained through various theories and

frameworks (Jackson & Philip, 2005). The theory most widely used in the study of organisational culture is that of Schein (2010), especially within information technology and information systems literature (Duerr et al., 2018; Jackson & Philip, 2005; Leidner & Kayworth, 2006; Müller et al., 2019; Serpa et al., 2022).

Schein (2010) presents a functionalist perspective, characterising culture as a collection of basic assumptions that a particular group conceives, uncovers, or cultivates as it navigates the challenges of external adjustment and internal unification. If these assumptions prove effective, they are perceived as valid and passed on to newcomers as the appropriate method to comprehend, contemplate, and respond to such challenges. Schein (2010) proposes that organisational culture analysis occurs across multiple levels, specifying three in his work. Each “level” in this context signifies how much an observer can discern a cultural element. The three levels in cultural analysis model are artefacts, values, and underlying assumptions.

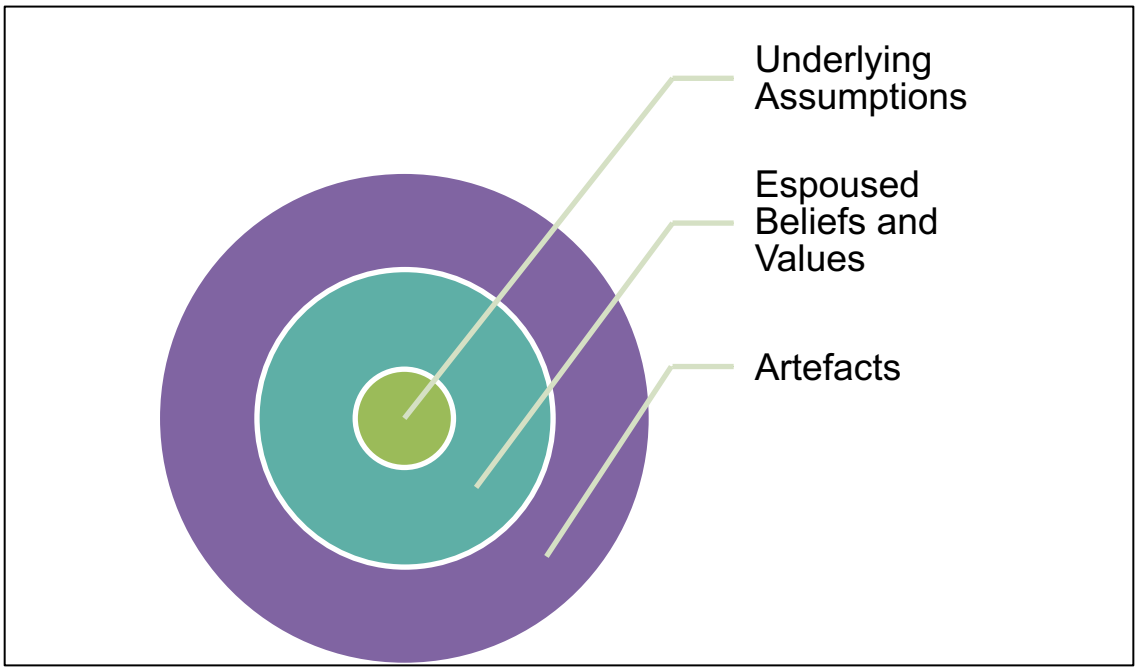


Figure 9: Levels of organisational culture. Adapted from Schein (2010)

Artefacts

This level of organisational culture is the most visible to an observer as it comprises elements that observers can see, hear, and feel when encountering an unfamiliar culture. Artefacts include an organisation's physical surroundings, language, technologies, products, creative output, and behavioural norms, to list a few. An organisation's processes, ways of work, and structure are various representations of artefacts. While this level of culture is easy to identify, it is much harder to interpret. For example, it is impossible to infer from an organisation's structure what type of culture it has, as personal bias may skew the analysis.

Schein (2010) advises observers to delve into the espoused values, norms, and rules that serve as standard operational guidelines, directing the conduct of an organisation's employees. This examination helps to understand the cultural meanings behind the artefacts quickly. It signifies a deeper level of cultural exploration, the next level of cultural analysis.

Espoused beliefs and values

The level of espoused beliefs and values in an organisation represents a more profound layer of culture. According to Schein (2010), these encompass the shared principles and standards initially derived from the founders' or leaders' convictions. Such beliefs and values guide the organisation's members' conduct and reflect in their daily operations. At first, these beliefs and values are proposed solutions to new tasks or problems and carry the leaders' wishes.

When these solutions are collectively acted upon and produce successful outcomes, they become shared beliefs and assumptions. Such assumptions solidify, reflecting what group members perceive as correct and effective. Researchers usually measure beliefs and values through surveys and questionnaires.

It is essential to note that not all proposed values undergo this transformation. Only empirically tested values that consistently solve the organisation's problems get embedded as shared assumptions. Moreover, some values, especially those related

to less controllable aspects of the environment or aesthetic or moral matters, may not be testable but can still achieve consensus through shared social experiences within the group .

Schein (2010) also cautions about discrepancies between espoused values and actual behaviour. Therefore, in analysing an organisation's culture, one must discern enough to distinguish between values congruent with the underlying assumptions and values that are simply rationalisations or aspirations. Achieving this depth of understanding allows for a more accurate prediction of future behaviour and a more nuanced interpretation of the organisation's culture.

Basic underlying assumptions

According to Schein (2010), the level of basic underlying assumptions in organisational culture represent the core beliefs and unconscious thought processes that guide organisational behaviour. These assumptions are typically invisible to the observer and are deeply ingrained within the culture, often taken for granted by the organisation's members. These assumptions underpin the organisation's actions, decisions, and interpretations of situations, forming the most fundamental layer of culture.

Unlike artefacts, these assumptions are not readily discernible through observation alone, but they influence all aspects of organisational life, from individual behaviour to organisational strategy. The assumptions encompass deeply held beliefs about the organisation's purpose, the nature of its work, and how its members should interact with each other and the external environment.

Schein (2010) emphasises that understanding these basic underlying assumptions is essential for comprehensively analysing an organisation's culture. He suggests that observers should uncover these hidden assumptions by carefully observing behaviour patterns, conversations, and reactions to new situations or challenges. This deeper exploration represents the most profound level of cultural analysis, revealing the foundational beliefs and values that truly define the organisation's culture.

As the catalyst of digital transformation, digital technologies have intensely reshaped organisational structures and procedures, influencing how individuals interact and reshaping the organisational culture (Grover et al., 2022; Müller et al., 2019). This impact extends to organisational structures, processes, ways of work, and culture, with organisational culture often cited as why digital transformations fail (Cameron & Quinn, 2006; Kiron et al., 2016). Emergent from this setting is the construct of digital organisational culture, a specific facet of organisational culture that zeroes in on digital transformation and the use of digital technologies (Duerr et al., 2018; Grover et al., 2022; Martínez-Caro et al., 2020; Trushkina et al., 2020).

2.8.3 Competing values framework

The competing values framework (CVF) is a ubiquitous framework for understanding organisational culture and provides another lens through which to study organisational culture. Field Cameron and Quinn (2006) developed the CVF as a two-dimensional framework that distinguishes between flexibility versus control and internal versus external orientation. The basic idea of the framework is that organisations have various values and priorities, classified into four quadrants: clan, adhocracy, market, and hierarchy.

The clan quadrant represents a culture that values collaboration, teamwork, and employee empowerment. The adhocracy quadrant represents a culture that values innovation, creativity, and risk-taking. The market quadrant represents a culture that values competition, achievement, and results. Finally, the hierarchy quadrant represents a culture that values stability, control, and efficiency (Cameron & Quinn, 2006).

Figure 10: Competing values framework. Adapted from Cameron and Quinn (2006)

Numerous studies have validated the CVF in various contexts, and it has been used to investigate the relationship between organisational culture and various outcomes such as performance, innovation, and change management (Grover et al., 2022; Müller et al., 2019). The framework provides a comprehensive and flexible approach to understanding the organisational culture that applies to many organisations and industries (Müller et al., 2019).

2.8.4 Digital organisational culture

The theory supporting digital organisational culture is less mature than organisational culture theory. However, researchers have used and extended existing organisational culture theory to examine and explain digital organisational culture (Duerr et al., 2018; Grover et al., 2022; Müller et al., 2019; Serpa et al., 2022). Duerr et al. (2018) and Serpa et al. (2022) used Schein's (2010) organisational model to understand digital organisational culture through the levels of artefacts, espoused beliefs and values, and

basic underlying assumptions, and explain how the elements shape organisational culture. On the other hand, scholars Grover et al. (2022) and Müller et al. (2019) leveraged Cameron and Quinn's CVF as a foundation for their exploration into digital organisational culture. Müller et al. (2019) employed this framework to evaluate the dominant culture within an organisation. Meanwhile, Grover et al. (2022) harnessed the CVF as a theoretical lens, enhancing their comprehension of digital culture and its values.

Through their research, Duerr et al. (2018) observed that innovative methods of collaboration within the organisation (artefacts) are foundational in the era of digitalisation. This collaboration includes the use of cross-functional teams, both physical and virtual cooperative efforts, and dual structures. Collaboration outside the organisation consists of alliances with start-ups, platforms involving competitors and partners, and the integration of customers. For the second level of organisational culture, espoused beliefs and values, firms actively participating in digitalisation commonly exhibit a start-up mentality, a tolerance for failure, and employees equipped with digital skills, an equitable power distribution among employees and across hierarchical levels, a strong propensity towards collective decision-making, and changes in the perceptions of IT as a business creator. For the third level of organisational culture, basic underlying assumptions are much harder to determine. Duerr et al. (2018) abstracted the central issues from the previous levels – artefacts, and beliefs and values. Based on the abstraction, the underlying assumptions they identified were the "perceived need for digital skills", "increasingly demanding digital customers", the "need for increased agility", and "buoyant integration of IT into innovating".

Figure 8 encapsulates the findings from Duerr et al.'s (2018) study, meticulously demonstrating the interconnection between artefacts, values and beliefs, and underlying assumptions. The authors have skilfully connected the underlying assumptions to the observed artefacts, values and beliefs, showing how these cultural resources are intertwined. The diagram serves as a comprehensive summary of the cultural resources identified at each level of culture in their research.

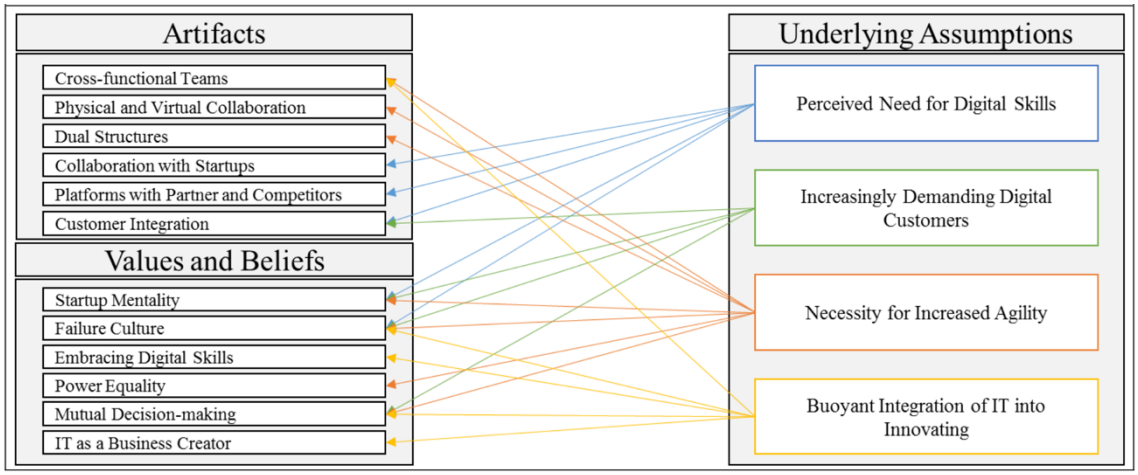


Figure 11: Digital organisational culture as illustrated by Duerr et al. (2018)

Duerr et al.'s (2018) framework for digital organisational culture and the CVF complement each other in studying and understanding an organisation's digital cultural transition. Duerr et al.'s (2018) model, grounded in Schein's (2010) levels of organisational culture, provides in-depth insights into the digital cultural transformation process, highlighting the role of artefacts, espoused beliefs and values, and basic underlying assumptions in shaping a firm's digital cultural setting. CVF deciphers the complex facets of digital culture, identifying the pivotal cultural resources at each level germane to the digital era.

On the other hand, the CVF offers a broader perspective, classifying organisational cultures into four distinct types: clan, adhocracy, market, and hierarchy. By linking Duerr et al.'s (2018) findings with the CVF, the distinct cultural types can be seen to correspond to various digital organisational cultures. For instance, the innovative methods of collaboration and start-up mentality espoused in Duerr et al.'s (2018) model resonate with the adhocracy quadrant of the CVF. Equally, the emphasis on customer orientation and the perception of IT as a business creator align with the market quadrant of the CVF.

In conclusion, Duerr et al.'s (2018) framework is a robust and comprehensive tool for exploring and understanding digital organisational culture. It delves deep into the cultural elements associated explicitly with digitalisation, shedding light on the intricate

interplay between artefacts, espoused beliefs and values, and basic underlying assumptions in a digital context. Although the CVF broadly categorises cultures based on strategic orientations, its applicability may be limited in a broad, cross-organisational study. In contrast, the agility of Duerr et al.'s (2018) model accommodates investigating organisational culture across multiple organisations, making it a suitable choice for this research. The framework of Duerr et al. (2018) proves more than adequate as it addresses the complex and multifaceted nature of digital organisational culture.

2.9 Conceptual framework

This study's conceptual framework is rooted in the theoretical model of TOE. This framework offers an integrated view, exploring the technological, organisational, and environmental variables impacting the adoption of digital platforms in organisations. However, the variables for each context are adapted to align with the findings of the literature review on platform adoption and Duerr et al.'s (2018) framework for understanding digital culture.

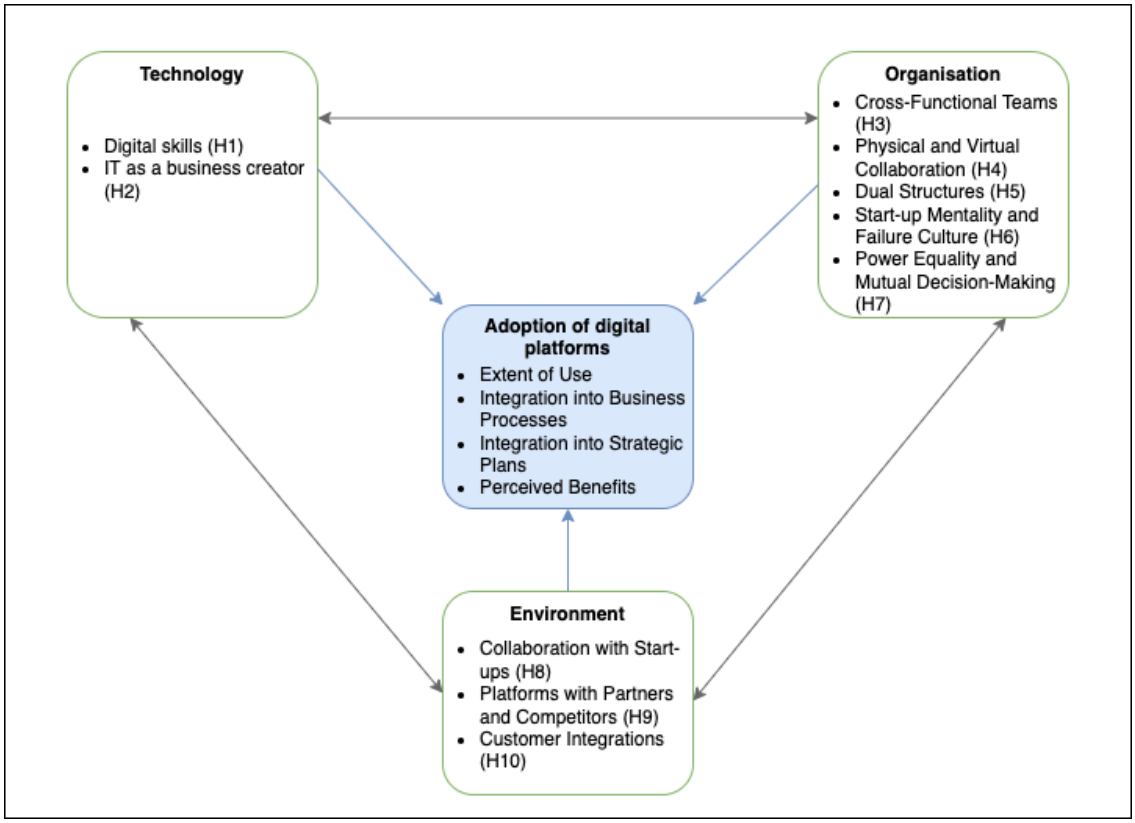


Figure 12: Conceptual framework

2.9.1 Technology

The digital culture factors identified by Duerr et al. (2018) that align with the technology context are embracing digital skills and IT as a business creator.

Embracing digital skills (H_1): Proficiency in digital skills among employees can significantly enhance the successful adoption of digital platforms. Employees with an open mindset towards digital technology and the ability to leverage these technologies for problem-solving reflect an organisation's technological readiness (Serpa et al., 2022; Trushkina et al., 2020).

IT as a business creator (H_2): The evolution of IT from a support function to a business co-creator has significant implications for adopting digital platforms. As a driver of digital initiatives, IT is no longer just an order taker or back-office support function but an essential and equal partner in the organisation.

2.9.2 Organisation

The organisational context of the framework focuses on various organisational characteristics influencing the adoption of digital platforms. These features are shaped by the organisation's culture, leadership, structure, decision-making processes, and communication channels (Jere & Ngidi, 2020). From Duerr et al.'s (2018) model, cross-functional teams, physical and virtual collaboration, dual structures, start-up mentality, failure culture, power equality, and mutual decision-making fit within the organisational context.

Cross-functional teams (H_3): Organisations adopting a structure that encourages cross-functional teams comprising various operational functions can foster a conducive environment for adopting digital platforms.

Physical and virtual collaboration (H_4): Hybrid work environments that facilitate physical and virtual collaboration promote flexibility and adaptability. This configuration allows organisations to remove physical boundaries and bring various parts of the organisation together. Furthermore, it enables the organisation to attract and retain top talent (Kavanaugh, 2020) without, e.g. the geographic limits placed by the physical world.

Dual structures (H_5): The presence of dual structures, including traditional business and a separate digital innovation unit, helps maintain a balance within the organisation. This ambidextrous or bimodal strategy is an enabling factor and can further smooth the transition towards digital platform adoption (Şimşek et al., 2022).

Start-up mentality and failure culture (H_6): An organisational mentality that encourages innovation, adapts to change, focuses on customer needs, and accepts a flat hierarchy, along with a culture that treats failure as a learning opportunity, can positively influence the adoption of digital platforms (Rohn et al., 2021; Şimşek et al., 2022).

Power equality and mutual decision-making (H_7): Organisations that promote power equality across various units, supporting digital innovation and fostering mutual

decision-making at all levels exhibit digital culture traits, increasing the success of adopting digital technologies (Martínez-Caro et al., 2020; Müller et al., 2019; Pedersen, 2022).

2.9.3 Environment

The environment context of the TOE framework considers external factors like industry landscape, competition, and service providers. Organisations with a digital culture that promotes digital innovation possess an ecosystem orientation (Serpa et al., 2022). Additionally, organisational cultures that support digital transformation focus on customer collaboration to provide quality digital services (Trushkina et al., 2020). Collaboration with start-ups, partners and competitors and integrating customers are the factors from Duerr et al.'s (2018) model that fit within the environmental context.

Collaboration with start-ups (H_8): Collaborating with start-ups can bring fresh perspectives, increase market boundaries, and support the innovative use of digital platforms.

Platforms with partners and competitors (H_9): By collaborating with partners and competitors on shared platforms, organisations can leverage a more extensive knowledge base and stimulate innovation.

Customer integration (H_{10}): Incorporating customers into the innovation chain can ensure that digital platform adoption aligns with customer needs and expectations.

2.10 Hypotheses development

The unique aspect of this research lies in the integration of the Technology, Organisation, and Environment (TOE) framework and Duerr et al.'s (2018) digital culture framework. This integration provides a comprehensive understanding of the multifaceted factors influencing the adoption of digital platforms in the banking sector. It specifically highlights the critical role of technological readiness, organisational dynamics, and environmental pressures, while also offering a nuanced understanding

of how digital cultural elements manifest within organisational settings. These insights underscore the importance of a supportive digital culture in facilitating successful digital transformation.

The comprehensive review of the literature and theoretical frameworks presented in the previous sections underscores the intricate relationship between organisational culture and the adoption of digital platforms in the banking sector. Drawing on the Technology, Organisation, and Environment (TOE) framework and insights from studies on digital organisational culture, this study aims to explore specific dimensions of these relationships. The TOE framework offers a holistic lens to understand how technological readiness, organisational dynamics, and environmental pressures influence the successful implementation of digital platforms. Additionally, Duerr et al.'s (2018) framework provides a nuanced understanding of how digital culture elements manifest in organisational settings. By integrating these perspectives, a series of hypotheses are derived. These hypotheses, which are based on sound theoretical foundations, guide the subsequent empirical analysis, ensuring the scientific rigour of the study.

2.10.1 Hypothesis A: Organisational culture and digital platform adoption

- HA0: Null Hypothesis – There is no significant influence of the various elements of digital organisational culture on the successful adoption of digital platforms in South African banks.
- HA1: Alternate Hypothesis – There is a significant influence of the various elements of digital organisational culture on the successful adoption of digital platforms in South African banks.
    - Sub-hypothesis H_1: Digital skills positively influence the adoption of digital platforms in organisations.

- Sub-hypothesis H_2: The transformation of IT from a support function to a business creator positively impacts the adoption of digital platforms in organisations.
- Sub-hypothesis H_3: The presence of cross-functional teams in an organisation promotes the adoption of digital platforms.
- Sub-hypothesis H_4: A hybrid work environment that supports physical and virtual collaboration positively impacts the adoption of digital platforms in organisations.

2.10.2 Hypothesis B: Platform adoption in banks and influencing factors

- HB0: Null Hypothesis – There is no significant influence of internal and external factors on the successful adoption of digital platforms in the banking sector.
- HB1: Alternative Hypothesis – There is a significant influence of internal and external factors on the successful adoption of digital platforms in the banking sector.
    - Sub-hypothesis H_5: The presence of dual structures in an organisation facilitates the adoption of digital platforms.
    - Sub-hypothesis H_6: An organisational mentality resembling a start-up and a culture that embraces failure positively influence the adoption of digital platforms.
    - Sub-hypothesis H_7: Power equality and mutual decision-making at all levels of the organisation promote the adoption of digital platforms.
    - Sub-hypothesis H_8: Collaboration with start-ups positively influences the adoption of digital platforms in organisations.
    - Sub-hypothesis H_9: Collaborating with partners and competitors on shared platforms promotes the adoption of digital platforms.

- Sub-hypothesis H10: Integrating customers into the innovation chain positively impacts the adoption of digital platforms in organisations.

2.11 Conclusion of literature review

In conclusion, this comprehensive literature review has presented an intricate examination of the interplay between organisational culture, digital transformation, and the adoption of digital platforms in the banking industry.

Section 2.1 of the review established the context, emphasising the significant shifts in the banking sector induced by advancements in digital technology. Scholars underscore the emergence of new business models and organisational cultures that support digital transformation. However, scholars highlight differing perspectives regarding the key drivers of these changes, necessitating further exploration.

Section 2.2 unpacked the complex and dynamic concept of organisational culture and how it influences and is influenced by adopting digital platforms. The section also discussed transforming organisational culture into a digital organisational culture paradigm due to digital technologies.

Section 2.3 thoroughly examined the interplay between organisational culture and digital transformation, arguing that a culture promoting adaptability, innovation, and ongoing learning is crucial for successful digital transformation. The section also highlighted the potential contradictions inherent in digital organisational culture, further accentuating the need for nuanced understanding and research.

Section 2.4 centred on examining the impact of digital platforms on the digital transformation processes within the banking industry. The literature shows that the successful implementation of these platforms and an organisation's digital culture is closely tied. Additionally, the pressure to adopt digital platforms was linked to external competitors and internal challenges, suggesting a complex interplay of factors determining the speed and extent of digital transformation within banking institutions.

The review identified significant research gaps in Section 2.5, particularly concerning the role of digital transformation and the influence of organisational culture in adopting digital platforms within the banking sector, specifically within the South African context.

Finally, the review proposed an analytical framework based on the TOE model and the concept of digital organisational culture, yielding ten hypotheses that provide a roadmap for further exploration and empirical testing. These hypotheses encompass factors related to technology, organisation, and the environment and their potential influence on adopting digital platforms in organisations.

Overall, the literature review underscores the dynamic and complex nature of digital transformation within the banking sector. The review brings to light the significant role of organisational culture in this transformation process, specifically regarding the adoption of digital platforms. While the review illuminates several aspects of this intricate process, it also highlights numerous areas for further research, especially within the South African context, offering a fertile ground for future inquiry.

CHAPTER 3. RESEARCH METHODOLOGY

This chapter details the methodology employed to examine the influence of organisational culture on digital platform adoption within the South African banking sector. It covers research design, data collection and analysis, and steps to ensure research quality and ethical standards. The intent is to provide a clear account of methodological choices, fostering an understanding of the research process and allowing evaluation of its validity and reliability.

3.1 Research approach

The research adopts a quantitative methodology to examine variable interrelations pertinent to this study's nature. Quantitative research validates theoretical propositions by quantifying variables and applying statistical techniques for data evaluation (Creswell & Creswell, 2017). This method is apt for exploring digital culture's impact on adopting platform business models, allowing tests and generalisation of results from earlier primarily qualitative studies.

3.2 Research design

The study adopts a non-experimental quantitative or survey research design underpinning a post-positivist worldview and psychology (Creswell & Creswell, 2017). This design examines how organisational factors influence the adoption of platform business adoption by exploring cause-effect scenarios.

Survey research offers several advantages, including increased statistical power through large sample sizes, time efficiency, standardisation of questions, and adaptability to various formats (Rahman, 2016). These attributes are essential to understanding the complex phenomenon in the South African banking sector and ensuring the reliability and validity of the results.

Nevertheless, survey research may present limitations, such as failing to capture the full complexity of individual experiences, potential response bias, nonresponse bias,

and misunderstanding of questions (Rahman, 2016). These issues could affect data richness, result validity, sample representativeness, and result reliability.

The researcher chose an online survey design for this study to overcome these potential limitations. The design facilitates large-scale data collection on all variables and enables the exploration of variable influence through statistical analysis. The careful survey construction, preliminary pilot testing, and stringent data analysis methods address these limitations. This approach ensures alignment with the research aims and lays a robust foundation for addressing the research inquiries.

3.3 Data collection methods

Data was collected via an electronic survey, effectively gathering the quantitative data essential for the study's positivist approach and objectives (Bryman, 2016). The survey targets WBS students in the MBA and Digital Business programme, employed in banking, and other banking sector employees from the researcher's LinkedIn network. A cross-section of employees, from senior and middle management to non-management staff, provide diverse perspectives on cultural experiences and adoption at varying organisational levels.

The electronic questionnaire, designed for statistical analysis, was distributed via email, with responses collected over a fixed period. This method ensures efficient, cost-effective data collection for large samples (Bryman, 2016).

The questionnaire comprises closed-ended questions for easy analysis, aimed at capturing respondents' perceptions and experiences of the platform business model and understanding its benefits, challenges, and impact on organisational culture and operations. Electronic questionnaires allow streamlined data collection and analysis, directly imported into data analysis software to mitigate data entry errors (Bryman, 2016).

Regarding ethics, the researcher briefed participants on the study's purpose, role, and confidentiality. The researcher sought informed consent before survey participation.

The chosen data collection method is consistent with the study's positivist paradigm, emphasising quantitative data and statistical analysis. It should yield a comprehensive dataset for drawing solid conclusions about the platform business model's implementation and impact in banking.

The electronic questionnaire is justified by its alignment with the research paradigm, efficiency, cost-effectiveness, and capability to accumulate substantial relevant quantitative data.

3.4 Population and sample

3.4.1 Population

The targeted demographic for the research encompassed professionals within the banking industry of South Africa. Chosen for their professional standing, experience, and diversity, this population in South Africa offers a contextually relevant group for the study (Bryman, 2016).

3.4.2 Sample and sampling method.

Given access challenges and limited resources, the researcher applied a non-probability convenience sampling design (Creswell & Creswell, 2017).

With 12 independent variables in the conceptual framework, a customary practice of ten to 15 observations per variable, as per Field (2017), suggests a sample size of 120 to 180. This sample size offers sufficient population representation and boosts the statistical power of results (Bryman, 2016; Rahman, 2016). Moreover, the suggested sample size mitigates the potential impact of nonresponses or dropouts, ensuring sufficient data for analysis (Bryman, 2016).

The careful selection of the study's population and sampling method ensures representative, robust data for answering the research questions. The researcher adopted these methods to accommodate the research context (Bryman, 2016).

3.5 Research instrument

The research instrument, structured on the seminal TOE framework, commences with a specific screening question intended to filter and ensure that only respondents employed within the banking sector are eligible to participate.

The researcher designated Section 1 of the instrument for gathering pertinent demographic information. This data collection is crucial as it creates a rich backdrop to comprehend multifarious respondent experiences across various organisational levels.

Section 2 embarked on an exploration of the complex aspects of organisational culture. This section corresponds directly to the ‘Organisation’ component of the TOE framework, reflecting the deep-seated intent of the research to unravel how organisational culture influences the adoption of digital platforms.

In Section 3, the instrument broadens its scope to encapsulate a probe into the influential technological factors. This focus coherently aligns with the ‘Technology’ facet of the TOE framework, highlighting the importance of technology’s role in the adoption process.

Section 4 of the questionnaire focused on external collaboration, exploring the environmental context, and aligning with the 'Environment' component of the TOE framework. This section aligns with the study’s objective of understanding external influences on platform adoption.

Finally, in Section 5, the instrument was designed to solicit responses that generate data on the dependent variable: the adoption of digital platforms within the banking sector.

Complementing the questionnaire, a comprehensive cover letter (see Appendix A) explained the research’s purpose, the respondents’ rights, and the proposed utilisation of the collected data. This addition was integral to maintaining transparency and ensuring respondents were well-informed about voluntary participation.

The meticulously designed research instrument, informed by the TOE framework, aligns coherently with the study's objectives and research questions. It ensured a robust and structured approach to data collection, with the potential to illuminate the multifaceted influences on the adoption of digital platforms in the banking sector.

3.6 Data collection procedure

Data was gathered for this research through a meticulous and methodical process, adhering to the highest standards of survey research methodologies. This procedure initiated a pilot study involving approximately 20 professionals, closely resembling the primary target group, to validate the survey instrument's effectiveness.

Primary data collection proceeded after the pilot. The study first employed nonprobability convenience sampling, targeting banking professionals. The researcher made an email request for survey distribution to participants studying at WBS and part of their LinkedIn network, thus ensuring reach to a relevant and broad population. The researcher also engaged banking professionals with their LinkedIn network to further participate and distribute the survey.

The sample size for the primary study followed Field's (2017) guideline of ten to 15 observations per variable. Given the study's 12 independent and one dependent variable, the target sample size ranges between 120 and 180 participants, ensuring adequate statistical power.

The questionnaire was disseminated via an online survey platform, with an embedded link in the email or direct message, enhancing distribution efficiency and participant convenience.

This data collection procedure aimed to garner reliable and valid data through a validated questionnaire, appropriate sampling strategy, and practical data collection method, effectively addressing the study's objectives.

3.7 Data analysis strategies and interpretation

To conduct data analysis and interpretation more concisely, the researcher used descriptive statistics, reliability analysis, correlation analysis, and regression analysis with the survey data.

Descriptive statistics delivers an elementary summary of the data and measures, including central tendency (mean, median, mode) and dispersion (range, standard deviation) indices (Creswell & Creswell, 2017).

Reliability analysis assesses the internal consistency of survey scales using Cronbach's alpha (Creswell & Creswell, 2017). Correlation analysis discloses relationships between variables, indicating related variables and the strength and direction of these relationships (Field, 2017).

Finally, regression analysis tests hypotheses by examining relationships between the independent and dependent variables while controlling for the effects of other independent variables (Field, 2017).

These strategies were chosen for their comprehensive approach to data analysis, which facilitated a deep understanding of the research problem and alignment with the research questions.

3.8 Examination of study constraints and obstacles

This research has potential limitations and challenges:

- **Sampling bias**: The sample may not fully represent the South African banking sector due to non-probability convenience sampling.
- **Response bias**: Survey design may encourage specific responses, and those who respond may inherently differ from non-responders.
- **Sample size**: While adequate for statistical analysis, the sample size does not encompass the South African banking sector's full diversity.

- **Resource constraints**: Time and resources limit sample size, follow-ups, or exploration of additional variables.
- **Self-reported data**: The survey data, being self-reported, is vulnerable to social desirability bias.
- **Generalisability**: The focus on the South African banking sector may limit the generalisability of the findings.
- **Cultural factors**: Measuring complex constructs like organisational culture via a survey limits data richness.
- **Static snapshot**: The data represents a specific point in time, limiting understanding of changes over time.

The researcher implemented strategies to mitigate these constraints, such as neutral questionnaire construction and piloting, and communicated limitations transparently in this report.

3.9 Quality assurance

The quality of this research is assured by focusing on reliability, validity, and credibility.

3.9.1 External validity OR transferability

External validity measures whether the research tool accurately measures what it intends to. This study utilised established scales for validity, and pilot testing further ensured accurate measurement. Emphasis was on construct validity, assessing if the scores provide valuable and practical consequences (Creswell & Creswell, 2017).

3.9.2 Internal validity OR credibility

Credibility refers to the trustworthiness of the results. A pilot test ensured content validity and internal consistency and refined the survey's format and questions. Transparency in research and data analysis methods is crucial for upholding credibility (Creswell & Creswell, 2017).

3.9.3 Reliability OR dependability

Reliability assesses the consistency of measurements. Established scales ensure reliability, supported by Cronbach's alpha analysis. Consistency is maintained with an optimal Cronbach's alpha value between .6 and .9 (Hair et al., 2019). Data collection protocols were standardised to minimise further variability (Creswell & Creswell, 2017).

3.10 Ethical considerations

The research meticulously upheld ethical standards in this study through:

- **No harm**: The survey was non-intrusive and anonymised to protect participants from potential harm resulting from identity or response disclosure.
- **Informed consent**: Participants received a consent form detailing the study's purpose, their participation role, any potential risks or benefits, and their right to withdraw without consequences.
- **Privacy, anonymity, confidentiality**: Participants' privacy was respected, with their anonymised responses stored securely and exclusively used for this research.
- **Institutional approval**: Research approval was sought from the university's Ethics Committee before commencement, ensuring adherence to ethical guidelines.
- **Deception**: Transparency about the research's aim and participant involvement was maintained.

The study ensured respect for participants' rights and welfare by adhering to these principles.

CHAPTER 4. PRESENTATION OF RESULTS

4.1 Introduction

The information in this chapter is derived from a survey published and shared through email, LinkedIn, and WhatsApp. The survey targeted employees of banking institutions. The study's findings are segmented into three distinct sections: initially, an analysis of demographic data; after that, an evaluation of reliability measures and descriptive statistics; and concluding with a presentation of inferential statistical outcomes. The sample demographic data shows the composition and representativeness of the sample. The inferential statistics consist of factor and regression analysis to understand the role of digital culture in adopting digital platforms.

4.2 Data preparation

The survey data was reviewed for completeness and correctness before statistical analysis commenced. What emerged was that the values for variables 39 to 43, which measure adoption, were on a different scale and were re-coded to fit the rest of the survey. Excluded from the dataset are responses that contain missing values. The reactions from open-ended question options were re-coded to bring specificity and clarity to the data analysis process.

4.2.1 Categorising type of bank

‘Type of Bank’ was one of two questions that contained ‘Other’ as an option. The results show that three respondents selected this option, with two selecting it but leaving it blank. Blank responses were re-coded to ‘Not Specified’. The third option was answered as ‘International bank’ and re-coded to ‘Traditional bank.’

4.2.2 Categorising departments

The second question containing the 'Other' option is Departments. This question contained eight department values, including 'Other'. Respondents provided thirteen values for 'Other', which, after analysis, were categorised into meaningful groups to facilitate analysis. Table 2 illustrates how the values were categorised and re-coded.

Table 2: Value categorisation and re-coding

Original department	Re-coded department
Client Relationship	Client Relationship
Sales	Sales
Operations	Operations
Technology	Technology
Product	Product
Digital	Digital and Design
Design	Digital and Design
Other: And Digital	Digital and Design
Other: And Technology	Technology
Other: Audit	Risk and Compliance
Other: Business Change	Strategy
Other: Communications	Marketing and Communication
Other: Compliance	Risk and Compliance
Other: Credit	Credit
Other: Data Science	Digital and Design
Other: Finance	Finance
Other: HR	HR
Other: Legal/Compliance	Risk and Compliance
Other: Marketing	Marketing and Communication
Other: Risk	Risk and Compliance
Blank	Not specified

4.3 Demographic analysis

Anonymous respondents (228) attempted the survey, of which three (1.3%) did not consent. The data collection method involved a screening question, which ensured that only banking industry employees participated in the survey. The number of banking industry respondents account for 61.8% or 139 participants. The survey had a 91.4% completion rate amongst the banking industry participants, resulting in a usable sample of 127, representing 55.7% of the total respondents. Tables 3 to 6 present the demographic statistics regarding the useable sample's role, experience, department, and type of bank employer (N=127).

4.3.1 Role

The role held within the organisation is essential for the study as it enables the examination of how perceptions, experiences, and attitudes towards adopting digital platforms differ across various levels of authority and responsibility. This attribute may highlight unique challenges and opportunities for promoting digital transformation within various organisational strata. There were 127 respondents (N=127) who provided Role data. Using SPSS, the answers to the questions are coded, as shown in Table 3.

Table 3: Respondent's role in the organisation

Role	Code	Count	%
Executive	1	11	8,7%
Senior Management	2	55	43,3%
Middle Management	3	44	34,6%
Non-management staff	4	17	13,4%
Total		127	100%

Figure 13 shows a varied distribution across various organisations: Executives (8.7%), Senior Management (43.3%), Middle Management (34.6%), and Non-management staff (13.4%). This distribution is significant as it represents a broad spectrum of perspectives within the banking sector.

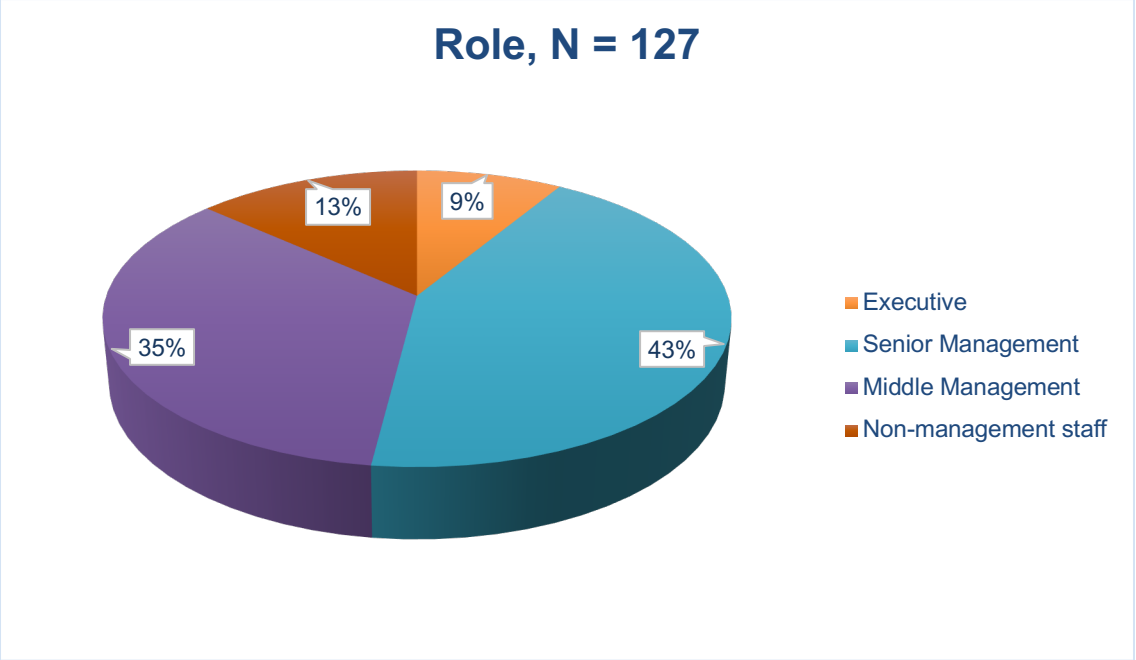


Figure 13: Role

The predominance of Senior Management (43.3%) suggests that the views and experiences of higher-level decision-makers heavily influenced the findings. Senior roles often play a pivotal role in decision-making processes related to digital platform adoption (Andriani et al., 2020). Their insights can provide valuable information on strategic and operational aspects of digital transformation.

4.3.2 Experience

Having years of experience in the industry is an essential factor to consider while studying the impact of digital banking practices. Years of experience help understand how exposure to traditional and digital banking practices affects people's attitudes and willingness to adopt digital platforms. Experience can also reveal generational shifts and experience-based perspectives towards embracing technological changes. There were 127 respondents (N = 127) who completed the Experience data. The answers to this question were coded as follows.

Table 4: Respondent's years of experience in the banking industry

Experience	Code	Count	%
Less than 1 year	1	1	0,8%
1-5 years	2	8	6,3%
6-10 years	3	29	22,8%
More than 10 years	4	89	70,1%
Total		127	100%

Figure 14 illustrates that 70.1% of respondents have more than ten years of experience, 22.8% have six to ten years of experience, and a minority (7.1%, N=9) have five years or less of work experience.

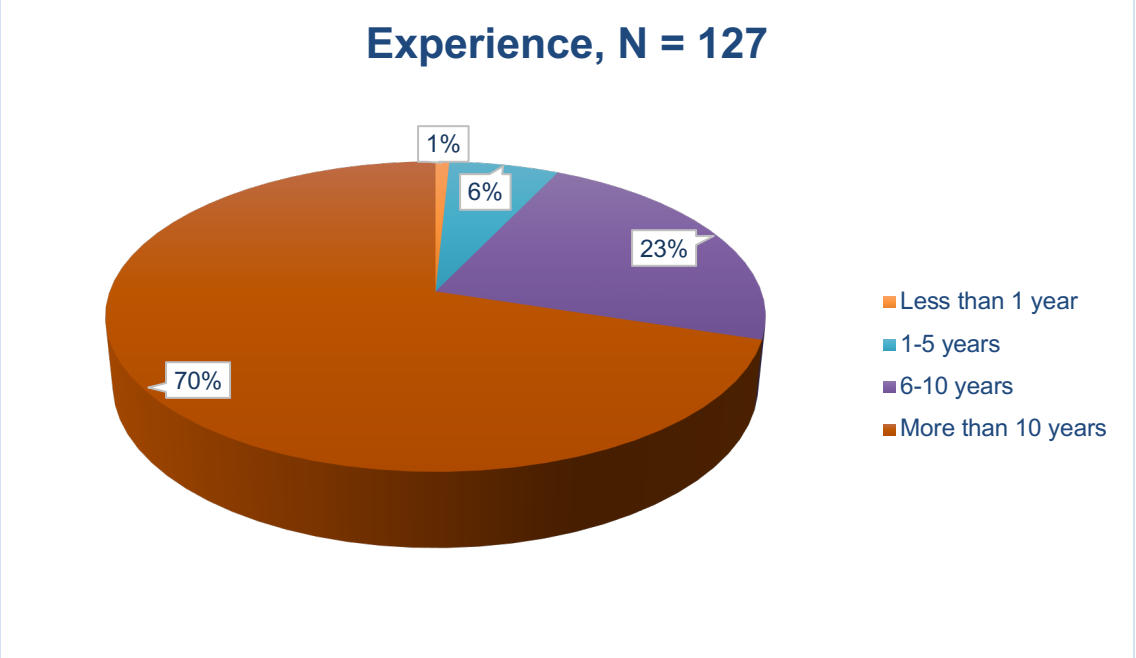


Figure 14: Experience

Most respondents (70.1%) have more than ten years of experience. This phenomenon suggests that the data predominantly reflect the views of highly experienced banking professionals. Their long tenure could mean a deep understanding of the banking sector's evolution, including its adoption of digital platforms. Respondents with six to ten years of experience represent a sizeable portion (22.8%). This group has likely

witnessed substantial changes in banking technology and could provide a balanced perspective between traditional banking practices and modern digital approaches.

4.3.3 Department

The Department variable is essential to the study as it enables an analysis of how digital platform adoption and attitudes towards digital transformation vary across functional areas within a bank, shedding light on department-specific challenges, opportunities, and needs in the context of digital integration. There were 127 respondents (N=127) who completed Department data. Table 5 presents the analysis codes for this question.

Table 5: Respondent's departments

Department	Code	Count	%
Client Relationship	1	9	7,1%
Sales	2	7	5,5%
Operations	3	7	5,5%
Technology	4	43	33,9%
Product	5	22	17,3%
Digital and Design	6	18	14,2%
Risk and Compliance	7	5	3,9%
Marketing and Communication	8	3	2,4%
Credit	9	2	1,6%
Finance	10	1	0,8%
Human Resources	11	1	0,8%
Strategy	12	1	0,8%
Not Specified	13	8	6,3%
Total		127	100%

Figure 15 shows a wide range of departments represented in the study, with 'Technology' forming a third (33.9%) of the responses, followed by 'Product' (17.3%) and Digital (14.2%).

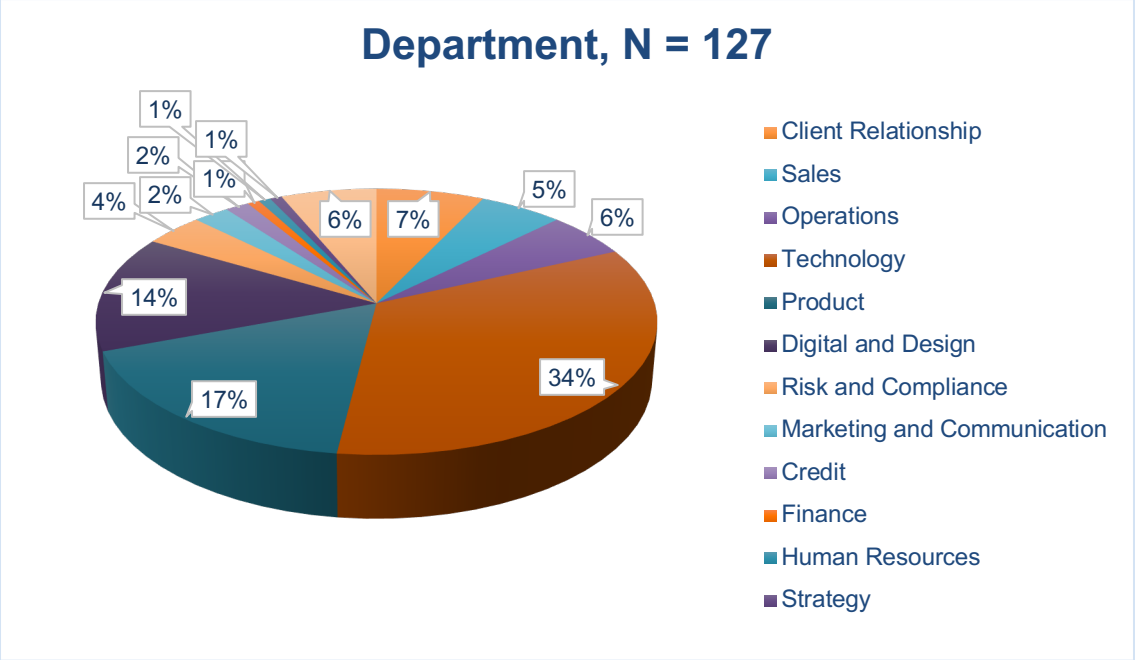


Figure 15: Department

The high representation of respondents from the 'Technology' department (33.9%) is significant, as these individuals are likely directly involved in developing and managing digital platforms. The Product department and Digital and Design department also have a notable representation. These departments are likely to be actively involved with digital platform implementation and user experience. Departments like Client Relationship, Sales, and Operations, while having a smaller representation, provide essential insights into how their organisations use digital platforms in customer-facing and operational roles.

4.3.4 Type of bank

It is essential to consider whether the type of bank is a traditional/legacy bank or a neo bank/digital-only bank. This differentiation allows for examining how institutional history, legacy systems, and foundational business models impact the approach, implementation, and attitudes towards digital platform adoption. Moreover, the differentiation between a traditional/legacy bank or a neo bank/digital-only bank highlights the fundamental differences between these banking paradigms in digital

readiness and innovation strategies. There were 127 respondents (N=127) who provided 'Type of Bank' data. The analysis codes for this question are presented as follows.

Table 6: The type of banks respondents work for

Type of Bank	N	Count	%
Traditional/Legacy	1	118	92,9%
Neo bank/Digital-only bank	2	7	5,5%
Not specified	3	2	1,6%
Total		127	100%

In Figure 16, most respondents work in 'Traditional/Legacy' banks (92.9%). Respondents working for 'Neo bank/Digital-only banks' form a minority (5.5%) of the participants.

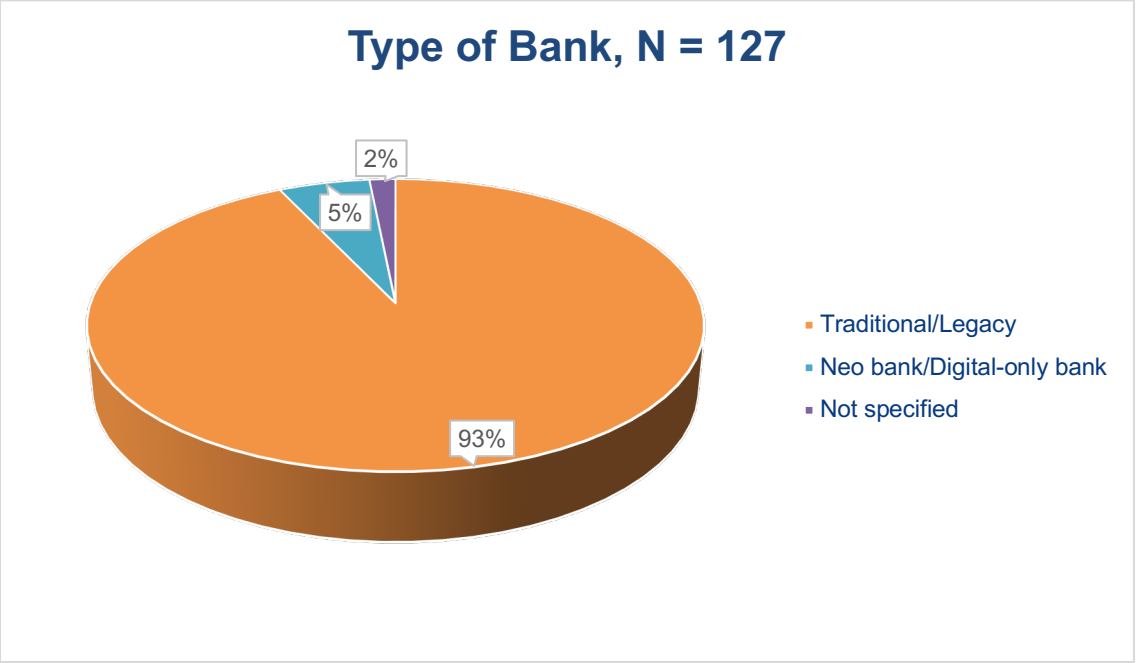


Figure 16: Type of bank

The overwhelming majority of respondents are from traditional/legacy banks. This outcome indicates that the findings predominantly reflect the digital adoption perspectives within more established banking institutions, which may have different

challenges and approaches to digital platform adoption compared to newer, digital-first banks. The representation of neo/digital-only banks, though small, is crucial. These entities are typically more agile and innovative in their approach to digital banking (Atca Gorgun & Wolfs, 2021). Respondents from neo/digital-only banks have insights that can contrast the traditional banking model and highlight different strategies and challenges in the role of organisational culture in adopting digital platforms.

The sample for this study, which encompasses 127 respondents from various roles, departments, and types of banks, offers a reasonably representative cross-section of the banking industry. The preponderance of senior management and highly experienced professionals indicates a robust understanding of strategic and operational aspects of digital platform adoption. However, the over-representation of the Technology department and traditional/legacy banks could introduce some bias, potentially amplifying the perspectives of these groups. Despite these limitations, the sample yields valuable insights into the role of organisational culture in adopting digital platforms within the South African banking sector. Despite these limits, these insights contribute significantly to understanding digital platform adoption in the banking industry.

4.4 Descriptive and reliability statistical analysis

The survey measures components of digital organisational culture as conceptualised by Duerr et al. (2018). The components were mapped to the corresponding construct in the TOE framework (technology, organisation and environment). The questions for this survey section relied on a 5-point Likert scale to collect responses. The scale ranged from 1 = “Strongly Disagree” and 5 = “Strongly Agree”,.

The reliability of each component is analysed using the standard measure of scale reliability – Cronbach’s alpha (Field, 2017). Cronbach’s alpha values for each component were: ‘Technology’ = .665, ‘Organisation’ = .716, ‘Environment’ = .709, and ‘Adoption’ = .779, indicating varying levels of internal consistency, with

‘Organisation’ and ‘Adoption’ components displaying good reliability. Table 6 summarises Cronbach’s alpha levels of consistency (Hair et al., 2019).

Table 7: Cronbach’s alpha consistency measure

Cronbach’s alpha	**Internal consistency**
α ≥ 0.9	Excellent
0.7 >α ≥0.9	Very Good
0.7 >α ≥0.9	Good
0.6 >α ≥0.7	Moderate
α<0.6	Poor

The descriptive statistics for each component and the underlying variables are analysed. Each component of the survey is covered separately in this section.

4.4.1 Technology

Table 8 shows the mean, standard deviation, skewness, and kurtosis represented under the technology component.

Table 8: Descriptive statistics – Technology

	N	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic	Std. error
Technology	127	4.04	.716	-.782	.215	.709	.427
Digital Skills	127	4.08	.813	-1.228	.215	2.168	.427
IT as a Business Creator	127	4.01	.840	-.830	.215	.446	.427
Valid N (listwise)	127						

The ‘Technology’ component, encompassing ‘Digital Skills’ and ‘IT as a Business Creator’, reflects a strong confidence among the 127 respondents in the technological capabilities and strategic role of IT. The overall ‘Technology’ score has a mean of 4.04 with a standard deviation of 0.716, indicating a generally positive view of the technological environment with moderate response variability. The negative skewness

(-0.782) and kurtosis of 0.709 suggest a slight tendency for higher ratings, with a distribution shape close to normal.

'Digital Skills' scored slightly higher, with a mean of 4.08 and a standard deviation of 0.813. The more pronounced negative skewness (-1.228) and higher kurtosis (2.168) indicate a strong inclination among respondents to rate employees' digital skills favourably, though with a distribution more peaked than normal. This result suggests that while most respondents feel confident in employees' digital skills, a segment perceives their skills as less adequate.

'IT as a Business Creator' received a mean score of 4.01, with a standard deviation of 0.840, showing a slightly more diverse range of opinions. The skewness (-0.830) and kurtosis (0.446) indicate a slight leftward skew but a distribution close to normal, reflecting a general agreement on the significant role of IT in driving business innovation, albeit with some differing perspectives.

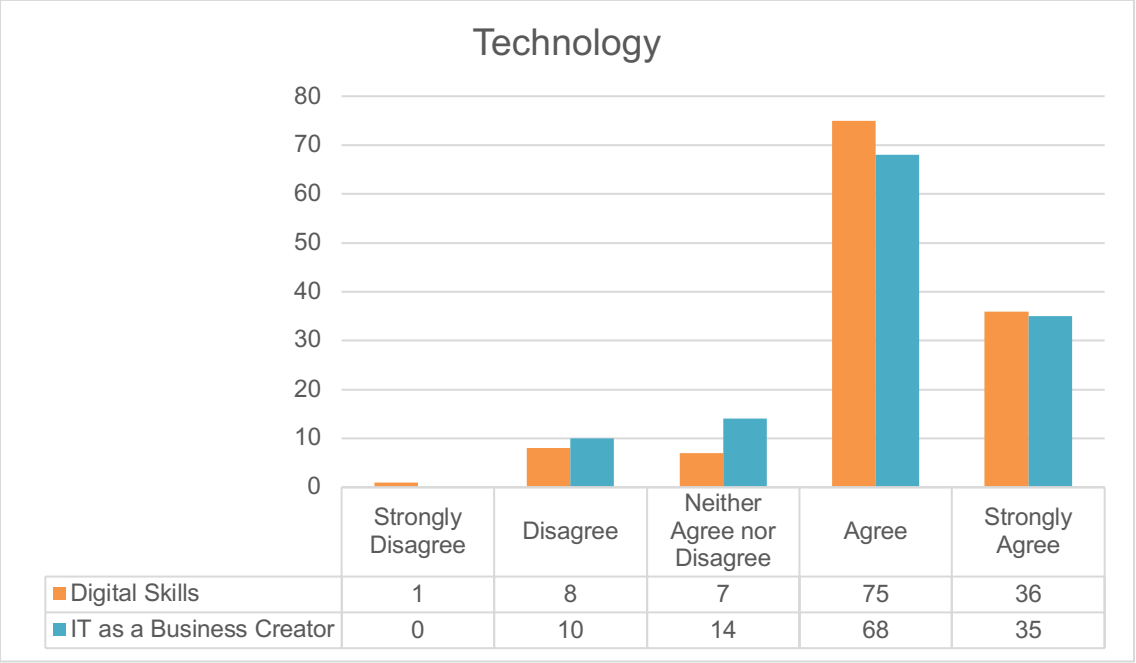


Figure 17: Technology

Figure 17 compares the Likert scale responses regarding 'Digital Skills' and 'IT as a Business Creator'.

Table 9: Reliability statistics – Technology

Cronbach's alpha	Cronbach's alpha-based standardised items	N of Items
.665	.666	2

The 'Technology' component exhibited a Cronbach's alpha of .665, suggesting moderate internal consistency. While this is slightly below the commonly accepted threshold of .7, it is acceptable, particularly given the potential diversity in respondents' interpretations of technological items.

4.4.2 Organisation

Table 10 shows the mean, standard deviation, skewness, and kurtosis represented under the organisation component.

Table 10: Descriptive statistics – Organisation

	N	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic	Std. error
Organisation	127	3.60	.595	-.399	.215	-.316	.427
Cross-Functional Teams	127	3.77	1.001	-1.019	.215	.611	.427
Physical and Virtual Collaboration	127	4.19	.794	-1.608	.215	4.677	.427
Dual Structures	127	3.80	.873	-1.130	.215	1.294	.427
Start-up Mentality	127	3.30	1.086	-.358	.215	-.685	.427
Failure Culture	127	3.35	1.012	-.341	.215	-.598	.427
Power Equality	127	3.45	1.006	-.429	.215	-.575	.427
Mutual Decision-Making	127	3.34	1.041	-.376	.215	-.981	.427
Valid N (listwise)	127						

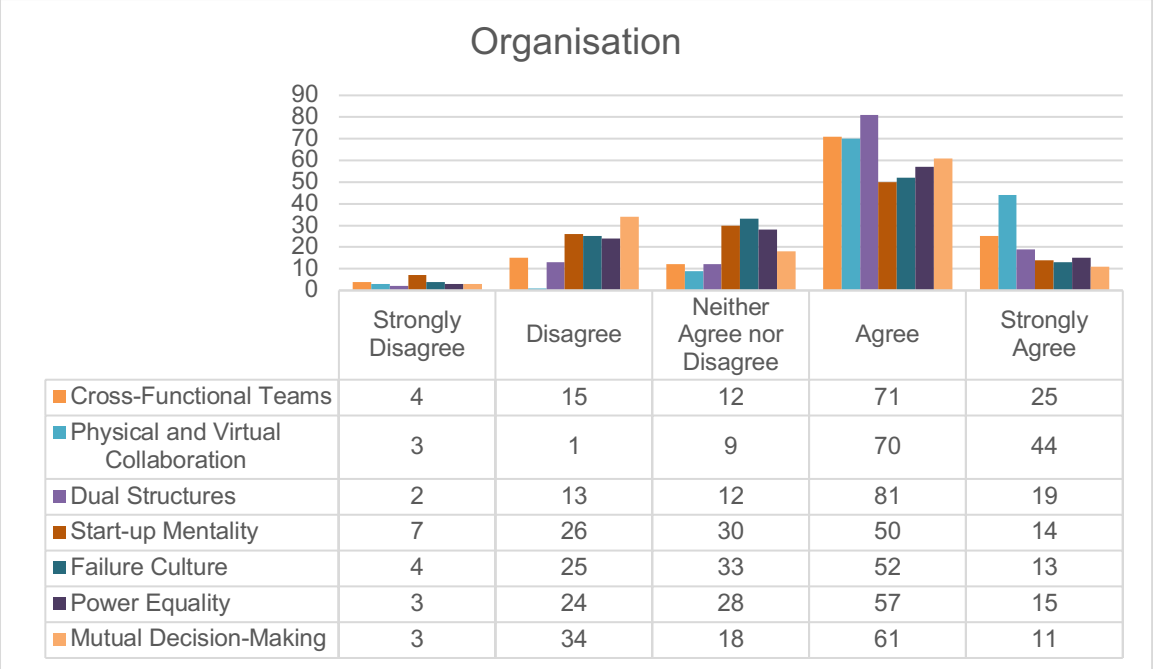
The 'Organisation' component, encompassing various aspects of organisational structure and culture, shows varied perceptions among the 127 respondents. The overall mean score for 'Organisation' is 3.60 with a standard deviation of 0.595, indicating a moderately positive view but with some response variability. This result

suggests a general, albeit not uniform, recognition of the organisation's readiness or suitability for digital platform adoption.

'Physical and Virtual Collaboration' received the highest mean score of 4.19, with a standard deviation of 0.794. The negative skewness (-1.608) and high kurtosis (4.677) indicate a strong tendency among respondents to rate this aspect highly, with a distribution more peaked than normal. This result significantly emphasises collaboration as a crucial factor in digital platform adoption.

'Dual Structures' and 'Cross-Functional Teams' scored 3.80 and 3.77, respectively, with standard deviations of 0.873 and 1.001. These scores and their negative skewness suggest recognising the importance of flexible and cross-functional team structures in supporting digital initiatives.

'Start-up Mentality' (3.30), 'Failure Culture' (3.35), and 'Power Equality' (3.45) presented lower mean scores, each with standard deviations exceeding 1.0. These aspects show a more varied perception, indicating potential areas where organisational culture might require further development to embrace digital platform adoption fully. 'Mutual Decision-Making' also received a similar mean score of 3.34 with a standard deviation of 1.041, pointing to varied views on decision-making processes within the organisation.



	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Cross-Functional Teams	4	15	12	71	25
Physical and Virtual Collaboration	3	1	9	70	44
Dual Structures	2	13	12	81	19
Start-up Mentality	7	26	30	50	14
Failure Culture	4	25	33	52	13
Power Equality	3	24	28	57	15
Mutual Decision-Making	3	34	18	61	11

Figure 18: Organisation

Figure 18 compares the Likert scale responses regarding 'Cross-Functional Teams', 'Physical and Virtual Collaboration Dual Structures', 'Start-up Mentality', 'Failure Culture', 'Power Equality', and 'Mutual Decision-Making'.

Table 11: Reliability statistics – Organisation

Cronbach's alpha	Cronbach's alpha – based on standardised items	N of Items
.716	.704	7

With a Cronbach's alpha of .716, the 'Organisation' component indicates good reliability, falling within the acceptable range. This result reflects a consistent measurement across the items assessing organisational factors.

4.4.3 Environment

Table 12 shows the mean, standard deviation, skewness, and kurtosis represented under the 'Environment' component.

Table 12: Descriptive statistics – Environment

	N	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic	Std. error
Environment	127	3.51	.773	-.494	.215	-.034	.427
Collaboration with Start-Ups	127	3.39	1.054	-.457	.215	-.476	.427
Platforms and Partnerships with Competitors	127	3.39	.968	-.418	.215	-.522	.427
Customer Integrations	127	3.76	.886	-.420	.215	-.449	.427
Valid N (listwise)	127						

The ‘Environment’ component, which includes aspects like ‘Collaboration with Start-Ups’, ‘Platforms and Partnerships with Competitors’, and ‘Customer Integrations’, reflects the external factors influencing digital platform adoption. The overall ‘Environment’ score has a mean of 3.51 with a standard deviation of 0.773, indicating a moderately positive view of the external business environment with some variability in perceptions. The skewness (-0.494) and kurtosis (-0.034) suggest a slight leftward skew but a distribution close to normal, indicating a general tendency towards higher ratings.

‘Collaboration with Start-Ups’ and ‘Platforms and ‘Partnerships with Competitors’ received mean scores of 3.39 but with different standard deviation levels (1.054 and 0.968, respectively). These scores and their negative skewness (-0.457 and -0.418) indicate a recognition of the importance of external collaborations and partnerships, though with a notable range of opinions. The kurtosis values (-0.476 and -0.522) suggest slightly flatter distributions than usual.

‘Customer Integrations’ scored higher with a mean of 3.76 and a standard deviation of 0.886. The skewness (-0.420) and kurtosis (-0.449) indicate a slight leftward skew and a distribution close to normal, reflecting a more robust consensus on the importance of integrating customers in the digital platform adoption process.

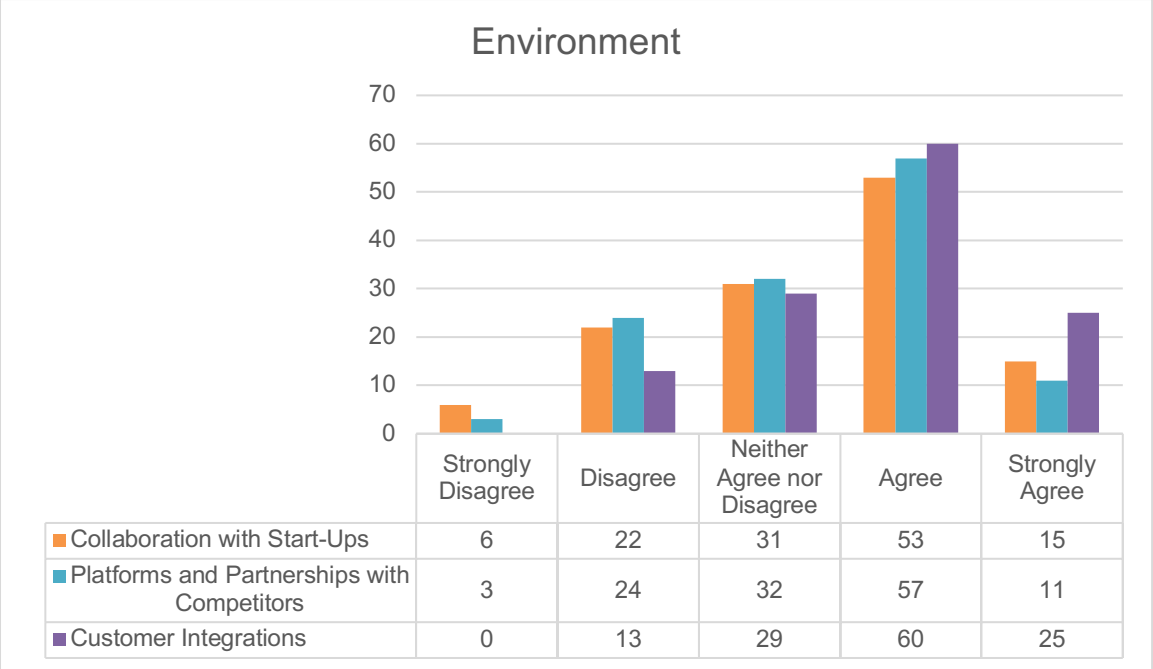


Figure 19: Environment

Figure 19 compares the Likert scale responses regarding 'Collaboration with Start-Ups', 'Platforms and Partnerships with Competitors', and 'Customer Integrations'.

Table 13: Reliability statistics – Environment

Cronbach's alpha	Cronbach's alpha – based on standardised items	N of Items
.709	.713	3

The 'Environment' component's Cronbach's alpha of .709 indicates good reliability. This score confirms that the environmental items consistently measure the same underlying construct within the banking industry context.

4.4.4 Adoption

Table 14 shows the mean, standard deviation, skewness, and kurtosis represented under the 'Adoption' component.

Table 14: Descriptive statistics – Adoption

	N	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic	Std. error
Adoption	127	3.94	.581	-.674	.215	1.202	.427
Extent of Use	127	4.02	.797	-1.272	.215	2.401	.427
Integration into Business Processes	127	3.59	.995	-.574	.215	-.641	.427
Perceived Benefits – Business Performance	127	4.00	.642	-.730	.215	1.814	.427
Integration into Strategic Plans	127	4.16	.717	-.767	.215	.962	.427
Perceived Benefits – New Business	127	3.94	.790	-.785	.215	.669	.427
Valid N (listwise)	127						

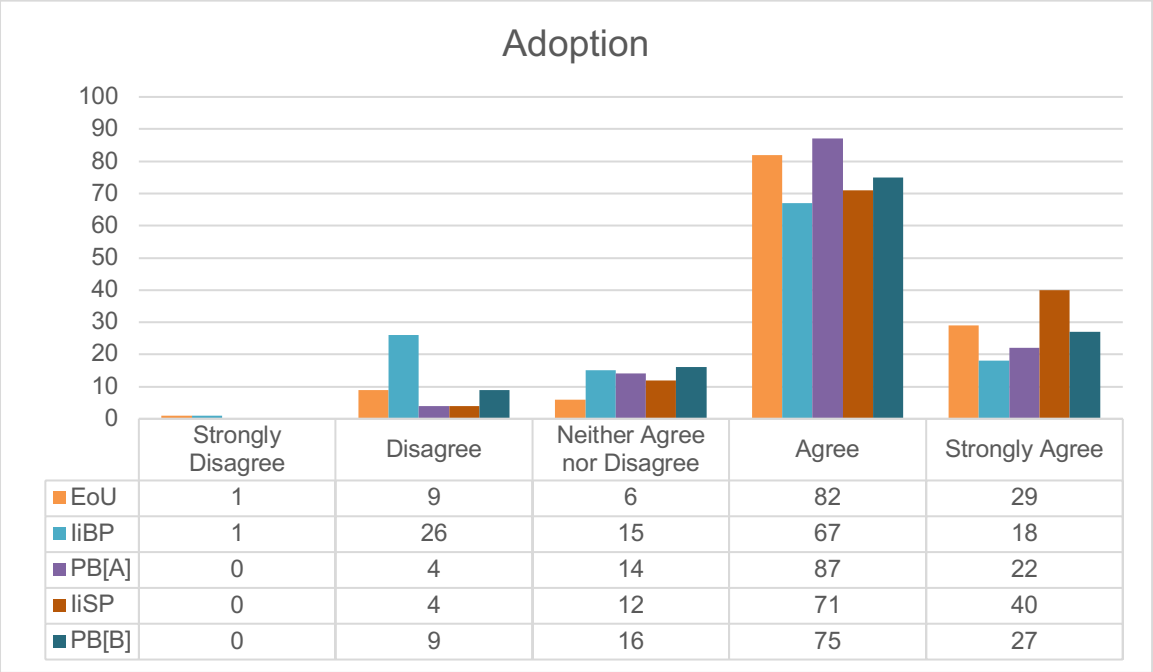
The ‘Adoption’ component, encompassing ‘Extent of Use’, ‘Integration into Business Processes’, ‘Perceived Benefits’, and ‘Integration into Strategic Plans’, reflects the respondents’ views on how digital platforms are adopted and integrated within their organisations. The overall ‘Adoption’ score has a mean of 3.94 with a standard deviation of 0.581, suggesting a positive view of digital platform adoption with moderate consistency in responses. The skewness (-0.674) and kurtosis (1.202) indicate a slight leftward skew and a somewhat more peaked-than-normal distribution.

‘Extent of Use’ and ‘Integration into Strategic Plans’ received higher mean scores of 4.02 and 4.16, respectively, with standard deviations of 0.797 and 0.717. These scores, particularly the higher skewness (-1.272 and -0.767) and kurtosis (2.401 and 0.962) suggest a strong inclination among respondents to rate these aspects favourably, indicating a recognition of the widespread use and strategic importance of digital platforms.

‘Integration into Business Processes’ scored 3.59 with a standard deviation of 0.995, showing more variability in perceptions. The skewness (-0.574) and kurtosis (-0.641)

suggest a slight leftward skew but a distribution close to normal, indicating varied views on how well digital platforms integrate into daily operations.

'Perceived Benefits' were rated with mean scores of 4.00 and 3.94, with standard deviations of 0.642 and 0.790, respectively. These scores, along with the negative skewness (-0.730 and -0.785) and kurtosis (1.814 and 0.669), reflect a generally positive perception of the benefits of digital platform adoption, though with some diversity in opinions.



	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
EoU	1	9	6	82	29
IiBP	1	26	15	67	18
PB[A]	0	4	14	87	22
IiSP	0	4	12	71	40
PB[B]	0	9	16	75	27

Figure 20: Adoption

Figure 20 compares the Likert scale responses regarding 'Ease of Use', 'Integration into Business Processes', 'Perceived Benefits', and 'Integration into Strategic Plans'.

Table 15: Reliability statistics – Adoption

Cronbach's alpha	Cronbach's alpha – based on standardised items	N of Items
.779	.786	5

The ‘Adoption’ component scored a Cronbach’s alpha of .779, which is considered good and suggests a prominent level of internal consistency among the items related to the adoption of banking technologies.

4.5 Inferential statistical analysis

Inferential analysis is used to make inferences about a larger population based on observations and analysis of a sample (Schindler & Cooper, 2019). Factor, regression, and correlation analysis are inferential analysis tools used to understand the results of the survey variables.

4.5.1 Distribution check

The distribution of the responses to the Likert-scale items is checked at the start of the inferential statistical analysis process. This test uses a Kolmogorov-Smirnov or a Shapiro-Wilk analysis to determine whether the data is normally distributed (Papachristou et al., 2022). The Shapiro-Wilk test provides a statistic and the significance level (p-value). A p-value of less than .05 indicates that the data is not normally distributed. Non-parametric tests are more appropriate for data that is not normally distributed (Haşiloğlu & Hasiloglu-Ciftciler, 2023).

Table 16: Normality test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cross-Functional Teams	.346	127	<.001	.804	127	<.001
Physical and Virtual Collaboration	.304	127	<.001	.727	127	<.001
Dual Structures	.377	127	<.001	.765	127	<.001
Start-up Mentality	.245	127	<.001	.894	127	<.001
Failure Culture	.250	127	<.001	.889	127	<.001
Power Equality	.275	127	<.001	.876	127	<.001
Mutual Decision-Making	.304	127	<.001	.840	127	<.001
Digital Skills	.335	127	<.001	.755	127	<.001
IT as a Business Creator	.307	127	<.001	.805	127	<.001

Collaboration with Start-Ups	.255	127	<.001	.889	127	<.001
Platforms and Partnerships with Competitors	.273	127	<.001	.874	127	<.001
Customer Integrations	.274	127	<.001	.859	127	<.001
a. Lilliefors significance correction						

A significance (Sig.) value of less than .001 in the Shapiro-Wilk test means a rejection of the null hypothesis that the data is normally distributed. The test suggests that the data distribution significantly deviates from a normal distribution. This result implies that parametric tests, which assume the normality of the data, may not be appropriate and the use of non-parametric alternatives for data analysis.

4.5.2 Factor analysis

Factor analysis is a statistical method to identify underlying relationships between measured variables (Field, 2017). This analytical method explored the underlying structure of the 12 observed variables representing digital culture within the TOE framework. This technique aimed to reduce the data's dimensionality and uncover latent factors that encapsulate the interrelationships among the variables (Field, 2017). Three parts of the output illustrate the dimension reduction: total variance explained, scree plot, and rotated component matrix (RCM).

Principal component analysis (PCA) with Varimax rotation was used to extract the factors, with the criterion for factor retention set at eigenvalues greater than one (Field, 2017). The RCA revealed four distinct components, each corresponding to a unique aspect of the digital culture construct.

Total variance explained

Table 17 lists the eigenvalues (extraction sums of squared loadings) for each component (factor), the percentage of total variance each one explains, and the cumulative percentage of variance explained by the components. Component 1 has an eigenvalue of 3.975, explaining 33.126% of the variance alone. Combined with

Components 2, 3, and 4, the cumulative variance explained rises to 64.487%. After rotation (which aims to achieve a more straightforward and interpretable structure), the rotation sums of squared loadings show that Component 1 accounts for 19.929% of the variance, with Components 1 through 4, accounting for 64.487%.

Table 17: Total variance explained

Component	Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	3.975	33.126	33.126	2.391	19.929	19.929
2	1.565	13.042	46.167	2.225	18.538	38.466
3	1.168	9.735	55.902	1.789	14.907	53.373
4	1.030	8.584	64.487	1.334	11.114	64.487

Extraction method: Principal component analysis.

Scree plot

In the scree plot, the elbow appears to occur at Component 4, suggesting that the first three components may be sufficient to capture the most significant variance within the data. Components beyond this point contribute less to explaining the variance and may be considered less important or redundant (Field, 2017). This interpretation aligns with the familiar “eigenvalue greater than 1” rule, which suggests retaining factors with eigenvalues above this threshold.

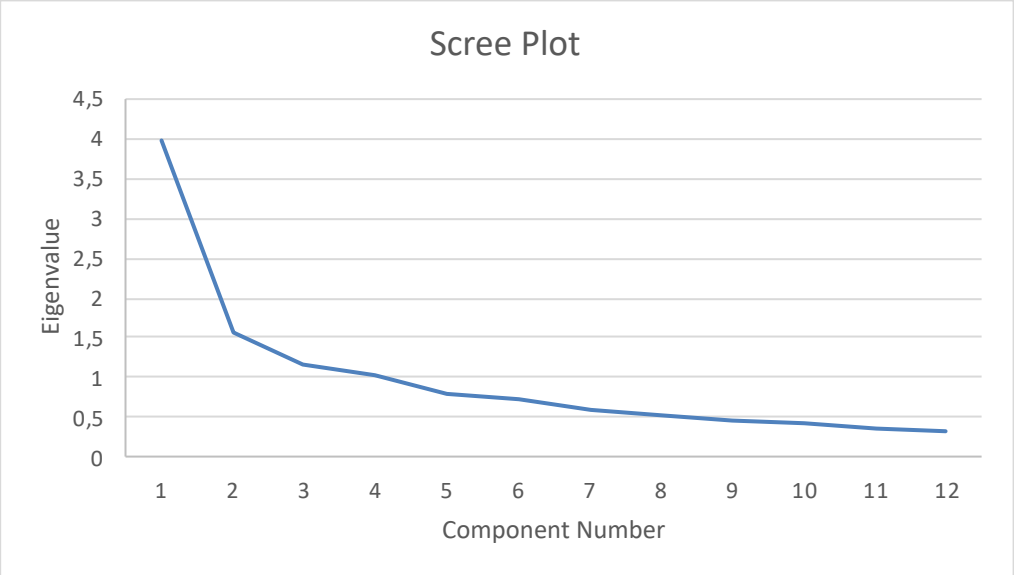


Figure 20: Scree plot

Rotated component matrix

The RCM provides a refined view after factor rotation, simplifying the interpretation by seeking to make each variable load highly on one component and as low as possible on all others (Field, 2017).

Table 18: Rotated component matrix

	Component			
	1	2	3	4
Cross-Functional Teams				.555
Physical and Virtual Collaboration				.867
Dual Structures			.653	
Start-up Mentality		.708		
Failure Culture		.864		
Power Equality		.636		
Mutual Decision-Making		.625		
Digital Skills	.712			
IT as a Business Creator	.752			
Collaboration with Start-Ups			.777	
Platforms and Partnerships with Competitors			.657	
Customer Integrations	.615			

Extraction method: Principal component analysis.
Rotation method: Varimax with Kaiser normalisation.[a]

The synthesis of the RCM results and the subsequent interpretation for each component is a structured approach that aligns with best practices in factor analysis. The clarity and interpretability of the factors are enhanced by assigning variables to the component where they load the highest (Field, 2017).

Based on the loadings, the components are defined as follows:

Component 1: Technology and customer-centric innovation

- **'Digital Skills'** (.712) and '**IT as a Business Creator**' (.752) underscore the crucial role of IT competency and leadership in shaping an organisation's digital landscape. The **'Customer Integrations'** variable (.615) highlighted the strategic incorporation of customer feedback into digital initiatives, underpinning the alignment between digital platform adoption and customer needs.

Component 2: Organisational agility and empowerment

- Reflecting an adaptive and empowering culture, **'Start-up Mentality**' (.708) and '**Failure Culture'** (.864) capture the essence of an organisation's capacity for innovation and learning. **'Power Equality'** (.636), and **'Mutual Decision-Making'** (.625) further accentuate the democratisation of decision-making, a crucial factor in fostering organisational flexibility.

Component 3: Collaborative ecosystem (for Innovation)

- The factor is defined by **'Dual Structures**' (.653), indicating the presence of a bimodal strategy that balances traditional and digital imperatives. The high loadings on '**Collaboration with Start-Ups'** (.777), and '**Platforms and Partnerships with Competitors'** (.657) reveal a propensity for strategic external alliances that drive innovation and market competitiveness.

Component 4: Collaborative work dynamics

- Dominated by '**Physical and Virtual Collaboration'** (.867), this component represents the evolving hybrid work environment that transcends physical boundaries. Complemented by **'Cross-Functional Teams**' (.555), it highlights how diverse and integrated team structures support a dynamic digital workplace conducive to digital platform adoption.

The 12 variables measuring digital culture are all represented in the four components.

4.5.3 Regression analysis

Regression analysis is a statistical technique that assesses the association between a dependent variable and one or more predictors (independent variables) (Field, 2017). This widely used method is ideal for forecasting, time series modelling, and finding the causal effect relationship between variables. Multicollinearity and outliers checks were conducted before the regression analysis. The checks aim to ensure that the data fit the requirements for linear regression.

Multicollinearity

The purpose of checking for multicollinearity is to ensure that the independent variables in the regression model are not highly correlated. The variance inflation factor (VIF) and tolerance statistics are standard measures used to detect multicollinearity (Field, 2017):

- **Variance inflation factor (VIF)**: A VIF value above ten indicates multicollinearity, although some sources may suggest a lower threshold, such as five, as a cause for concern (Field, 2017). None of the VIF values exceed the typical threshold of 5 or 10, indicating that multicollinearity is not a concern for the model. The lack of multicollinearity confirms the independent contribution of each variable to the regression model.

- **Tolerance**: This is the reciprocal of VIF, and values close to 0 indicate potential problems; usually, a value below 0.1 might cause concern (Field, 2017). All values

are well above the threshold of concern (0.1), confirming that multicollinearity is not problematic in the dataset.

Table 19: Coefficients table

Model		Unstandardised coefficients		Standardised coefficients	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
1	(Constant)	1.703	.352		4.844	<.001		
	Cross-Functional Teams	.178	.053	.308	3.396	<.001	.647	1.545
	Physical and Virtual Collaboration	.046	.059	.063	.779	.437	.811	1.233
	Dual Structures	-.009	.054	-.014	-.172	.864	.814	1.229
	Start-up Mentality	.087	.046	.163	1.870	.064	.702	1.425
	Failure Culture	.068	.054	.118	1.256	.212	.602	1.660
	Power Equality	.086	.059	.149	1.466	.145	.516	1.938
	Mutual Decision-Making	-.114	.057	-.205	-1.997	.048	.503	1.987
	Digital Skills	.114	.065	.160	1.746	.084	.633	1.581
	IT as a Business Creator	.066	.063	.096	1.053	.294	.639	1.566
	Collaboration with Start-Ups	-.001	.049	-.002	-.019	.985	.659	1.517
	Platforms and Partnerships with Competitors	.026	.059	.043	.433	.666	.550	1.818
	Customer Integrations	.044	.062	.067	.714	.477	.602	1.662

a. Dependent variable: Adoption

Given that multicollinearity does not appear to be a problem in the model, regression analysis may proceed with more confidence that the coefficients obtained are reliable estimates of the relationship between each independent variable and the dependent variable. It also means that the interpretation of the coefficients (i.e., the change in the dependent variable for a one-unit change in an independent variable) is more likely to be accurate.

Outliers

Outliers are data points that differ significantly from other observations in a data set (Field, 2017). They can be unusually high or low values that deviate from the general trend of the data and can skew the results of statistical analyses (Field, 2017).

There were 35 respondents who provided outlier responses. Most of these outliers were associated with the variables ‘Cross-Functional Team’ and ‘Dual Structure’, which could indicate variability in participants’ perceptions or experiences related to these areas. However, variables such as ‘Start-Up Mentality’, ‘Mutual Decision-Making’, and ‘Customer Integrations’ displayed remarkable consistency, with no outliers reported.

The incidence of outliers in the remaining variables ranged from two to four, which, given the sample size, does not constitute a significant concern. The highest occurrence of outliers was found in responses from Participant 86, followed by Participant 98, suggesting isolated instances of divergence. The analysis concluded that the minimal and isolated outliers are unlikely to skew the overall research outcomes. The outliers were retained to preserve the data’s richness and breadth.

Model summary

The model summary includes the R-squared statistic, reflecting the percentage of variation in the dependent variable that can be explained by the independent variables (Field, 2017). The adjusted R-squared value is also essential as it adjusts the R-squared value based on the number of predictors and the sample size (Field, 2017).

Table 20: Model summary

Model	R	R-squared	Adjusted R-squared	Std. error of the estimate
1	.629[a]	.395	.331	.47480

This result suggests that while the predictors explain a massive portion of the variance in adoption, further research might explore additional factors contributing to digital platform adoption.

ANOVA (analysis of variance)

ANOVA tests the overall significance of the model. It helps to understand whether there is a statistically significant difference in the dependent variable across the various independent variable levels (Field, 2017). The F-statistic and its significance (p-value) are key here.

Table 21: ANOVA

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	16.789	12	1.399	6.206	<.001[b]
	Residual	25.699	114	.225		
	Total	42.489	126			

a. Dependent variable: Adoption

b. Predictors: (Constant), Environment: Customer Integrations, Organisation Physical and Virtual Collaboration, Organisation Failure Culture, Organisation Dual Structures, Technology: IT as a Business Creator, Environment: Collaboration with Start-Ups, Organisation: Cross-Functional Teams, Organisation: Start-up Mentality, Technology: Digital Skills, Organisation: Power Equality, Environment: Platforms and Partnerships with Competitors, Organisation Mutual Decision-Making

The F-statistic is significant at a level far below .001, indicating that the regression model is statistically significant and that the independent variables, as a group, significantly influence the dependent variable, 'Adoption' (Field, 2017).

Coefficients table

In the regression analysis of the role of digital organisational culture in digital platform adoption within South African banking organisations, several predictors were examined to understand their influence on adoption. The results serve the purpose of testing the hypotheses formulated as follows:

H_1: Digital skills positively influence the adoption of digital platforms in organisations.

H_2: The transformation of IT from a support function to a business creator positively impacts the adoption of digital platforms in organisations.

'Digital Skills' (β = .160, p = .084) and **'IT as a Business Creator**' (β = .096, p = .294) both had positive standardised coefficients. Although not statistically significant, they suggest a trend that aligns with the literature on IT's role in driving digital initiatives.

H_3: The presence of cross-functional teams in an organisation promotes the adoption of digital platforms.

'Cross-functional teams' showed a significant positive influence on adoption (β = .308, p < .001), suggesting that departments with collaborative teams from various functions are likely to adopt digital platforms more extensively.

H_4: A hybrid work environment that supports physical and virtual collaboration positively impacts adopting digital platforms in organisations.

H_5: The presence of dual structures in an organisation facilitates the adoption of digital platforms.

'Physical and Virtual Collaboration' and **'Dual Structures'** did not significantly predict the adoption, indicating that while these factors may be present in the organisation, their direct impact on digital platform adoption was not evident in this analysis.

H_6: An organisational mentality resembling a start-up and a culture that embraces failure positively influence the adoption of digital platforms.

'Start-up Mentality' approached significance (β = .163, p = .064), hinting at a potentially positive influence on adoption that may warrant further investigation. However, **'Failure Culture**' did not reach significance (β = .118, p= .212) despite showing a positive direction in its influence on adoption.

H_7: Power equality and mutual decision-making at all levels of the organisation promote the adoption of digital platforms.

'Power Equality' and **'Mutual Decision-Making**' showed positive directions in their influence on adoption. However, only **'Mutual Decision-Making'** reached statistical significance ($\beta = -.205$, $p < .05$), surprisingly suggesting a negative influence on digital platform adoption.

H_8: Collaboration with start-ups positively influences the adoption of digital platforms in organisations.

H_9: Collaborating with partners and competitors on shared platforms promotes the adoption of digital platforms.

H_{10}: Integrating customers into the innovation chain positively impacts the adoption of digital platforms in organisations.

'Collaboration with Start-Ups', **'Platforms and Partnerships with Competitors**', and **'Customer Integrations'** were not significant predictors of adoption in this model, indicating that these factors may not have a direct, measurable impact on digital platform adoption as captured by the adoption.

The overall model accounted for 39.5% of the variance in adoption (adjusted R-squared = .331), demonstrating a moderate effect size (Temile, 2018). This analysis provides insights into the key drivers of digital platform adoption, highlighting the potential role of cross-functional teamwork and questioning the expected positive impact of mutual decision-making on adoption levels. Variables such as 'Digital Skills', 'Cross-Functional Teams', and the 'Start-Up Mentality' show promise and suggest areas for further focused research.

Table 22: Summary of regression analysis

Variable	Influence on adoption
Cross-Functional Teams	Positive
Physical and Virtual Collaboration	Not significant
Dual Structures	Not significant

Start-up Mentality	Borderline positive
Failure Culture	Not significant
Power Equality	Positive
Mutual Decision-Making	Negative
Digital Skills	Borderline positive
IT as a Business Creator	Not significant
Collaboration with Start-Ups	Not significant
Platforms and Partnerships with Competitors	Not significant
Customer Integrations	Not significant

The term “Borderline positive” refers to a variable with a p-value slightly above the traditional threshold for significance (e.g., .05) but shows a trend that may be worth considering in the study context. Variables that are “Not significant” did not reach statistical significance in the regression model and are, therefore, not supposed to have a measurable influence on the adoption in this analysis. The “Positive” or “Negative” designations indicate the direction of the relationship between the variable and the adoption when the variable is statistically significant.

4.5.4 Correlation analysis

Component-level analysis

Spearman’s rank-order correlation tests the strength and direction of the association between two ordinal variables or between one ordinal and one continuous variable if it does not follow a normal distribution (Field, 2017). This test explores the relationship among four fundamental constructs: ‘Technology’, ‘Organisation’, ‘Environment’, and ‘Adoption’, and separately, the relationship between the 12 variables and ‘Adoption.’

‘Technology’, ‘Organisation’, ‘Environment’, and ‘Adoption’ displayed significant correlations. This interconnectedness highlights the multifaceted nature of digital platform adoption and provides empirical support for the conceptual framework, addressing hypotheses H_1, H_3, H_7, and H_{10}.

Table 23: Component-level Spearman's Rho

		Technology	Organisation	Environment	Adoption
Technology	Correlation Coefficient	1.000	.435**	.444**	.450**
	Sig. (2-tailed)	.	<.001	<.001	<.001
	N	127	127	127	127
Organisation	Correlation Coefficient	.435**	1.000	.387**	.552**
	Sig. (2-tailed)	<.001	.	<.001	<.001
	N	127	127	127	127
Environment	Correlation Coefficient	.444**	.387**	1.000	.338**
	Sig. (2-tailed)	<.001	<.001	.	<.001
	N	127	127	127	127
Adoption	Correlation Coefficient	.450**	.552**	.338**	1.000
	Sig. (2-tailed)	<.001	<.001	<.001	.
	N	127	127	127	127
**. Correlation is significant at the 0.01 level (2-tailed).					

'Technology' shows significant positive correlations with all other components: 'Organisation (ρ = .435, p < .001), 'Environment' (ρ = .444, p < .001), and 'Adoption' (ρ = .450, p < .001). This result suggests that technological capabilities and competencies closely align with organisational structure, external environmental factors, and the overall adoption of digital platforms.

'Organisation has a strong positive correlation with 'Adoption' (ρ = .552, p < .001), indicating that organisational factors, such as culture, structure, and processes, play a significant role in successfully adopting digital platforms. There is also a notable correlation between 'Organisation' and 'Environment' (ρ = .387, p < .001), suggesting that internal organisational characteristics are aligned with or influenced by external environmental factors.

'Environment' is positively correlated with 'Adoption' (ρ = .338, p < .001), indicating that external factors, such as market conditions, regulatory environment, and competitive landscape, are associated with digital platform adoption in the banks.

The correlations suggest an interplay among technology capabilities, organisational structure and culture, external environmental factors, and the successful adoption of

digital platforms. Each component appears to influence and be influenced by the others, highlighting the multifaceted nature of digital platform adoption in the banking sector. All correlations are significant at the 0.01 level (2-tailed), providing convincing evidence for these relationships.

The correlations indicate that successful digital platform adoption in South African banks is a complex process influenced by technological capabilities, organisational factors, and external environmental conditions. The strong correlation between 'Organisation' and 'Adoption' underscores the crucial role of digital organisational culture in this process.

Variable level analysis

The Spearman's rank-order correlation tests results are found in Appendix C and presented as follows:

- **'Cross-Functional Teams'**: There is a very strong positive correlation with 'Adoption' ($\rho = .503$, $p < .001$), which supports H_3, indicating that the presence of cross-functional teams in an organisation promotes the adoption of digital platforms.

- **'Physical and Virtual Collaboration'**: Shows a positive correlation with 'Adoption' ($\rho = .274$, $p = .002$), supporting the idea that hybrid work environments that support physical and virtual collaboration can positively impact adopting digital platforms in organisations (H_4).

- **'Dual Structures'**: The correlation with 'Adoption' is not statistically significant ($\rho = .141$, $p = .115$), indicating that the presence of dual structures may not have a discernible direct effect on adopting digital platforms (H_5).

- **'Start-up Mentality'**: There is a strong positive correlation with 'Adoption' ($\rho = .381$, $p < .001$), which supports H_6, suggesting that an organisational mentality that encourages innovation like a start-up influences the adoption of digital platforms.

- **‘Failure Culture**’: Also demonstrates a strong positive correlation with ‘Adoption’ ($\rho = .374$, $p < .001$), supporting H_6 in that a culture which embraces failure as a learning opportunity positively influences the adoption of digital platforms.

- **‘Power Equality**’: Shows a strong positive correlation with ‘Adoption’ ($\rho = .393$, $p < .001$), supporting H_7 that power equality at all levels promotes the adoption of digital platforms.

- **‘Mutual Decision-Making’**: The correlation with ‘Adoption’ is positive ($\rho = .293$, $p < .001$), which may indicate support for H_7, suggesting that mutual decision-making promotes digital platform adoption, albeit this may warrant a more nuanced interpretation considering the potential complexities of decision-making processes.

- **‘Digital Skills’**: There is a strong positive correlation with ‘Adoption’ ($\rho = .424$, $p < .001$), which strongly supports H_1, indicating that digital skills positively influence the adoption of digital platforms in organisations.

- **‘IT as a Business Creator’**: Shows a strong positive correlation with ‘Adoption’ ($\rho = .396$, $p < .001$), supporting H_2 that transforming IT from a support function to a business creator positively impacts digital platform adoption.

- **‘Collaboration with Start-Ups’**: Positive correlation with ‘Adoption’ ($\rho = .208$, $p = .019$), which suggests that collaboration with start-ups influences the adoption of digital platforms, supporting H_8, albeit not as strongly as some other variables.

- **‘Platforms and Partnerships with Competitors**’: Displays a positive correlation with ‘Adoption’ ($\rho = .248$, $p = .005$), indicating a potential influence on the adoption of digital platforms, which aligns with H_9, suggesting that collaboration on shared platforms can promote adoption.

- **‘Customer Integrations’**: Shows a strong positive correlation with ‘Adoption’ ($\rho = .341$, $p < .001$), supporting H_{10} that integrating customers into the innovation chain positively impacts adopting digital platforms in organisations.

These correlations provide empirical support for the hypotheses, demonstrating significant influences of various aspects of organisational culture on the adoption of digital platforms. The strongest correlations were observed with cross-functional teams, digital skills, and IT as a business creator, suggesting these factors are particularly influential in adopting digital platforms.

Table 24: Summary of correlation analysis

Hypothesis	**Spearman’s Rho Result**
H_1: Digital skills positively influence the adoption of digital platforms.	Significant ($p < .001$)
H_2: IT transformation from support to business creator impacts adoption positively.	Significant ($p < .001$)
H_3: The presence of cross-functional teams promotes adoption.	Significant ($p < .001$)
H_4: A hybrid work environment impacts adoption positively.	Significant ($p = .002$)
H_5: The presence of dual structures facilitates adoption.	Not Significant ($p = .115$)
H_6: Start-up mentality and embracing failure influence adoption positively.	Significant ($p < .001$)
H_7: Power equality and mutual decision-making promote adoption.	Significant ($p < .001$)
H_8: Collaboration with start-ups influences adoption positively.	Significant ($p = .019$)
H_9: Collaborating with partners and competitors promotes adoption.	Significant ($p = .005$)
H_{10}: Integrating customers into the innovation chain impacts adoption positively.	Significant ($p < .001$)

4.5.5 Adoption in distinct types of banks

The Mann-Whitney U test compares the medians between two independent groups on ordinal variables (Field, 2017). It is helpful to examine whether there are significant differences between traditional and digital banks adopting digital platforms.

Table 25: Adoption by bank type

	Type of Bank	N	Mean Rank	Sum of Ranks
Extent of Use	Traditional bank	118	62.46	7370.50
	Digital-only bank	7	72.07	504.50
	Total	125		
Integration into Business Processes	Traditional bank	118	61.95	7310.00
	Digital-only bank	7	80.71	565.00
	Total	125		
Perceived Benefits – Business Performance	Traditional bank	118	62.67	7394.50
	Digital-only bank	7	68.64	480.50
	Total	125		
Integration into Strategic Plans	Traditional bank	118	62.21	7340.50
	Digital-only bank	7	76.36	534.50
	Total	125		
Perceived Benefits – New Business	Traditional bank	118	63.06	7441.00
	Digital-only bank	7	62.00	434.00
	Total	125		

While digital-only banks perceived a greater extent of use, integration into business processes, and integration into strategic plans of digital platforms (Table 25), the p-values are more significant than the typical threshold of .05 (Table 26), suggesting no statistically significant differences between the two types of banks. This finding indicates a convergence in digital adoption practices across the banking industry, offering a broader perspective on the digital transformation landscape within South African banks.

Table 26: Mann-Whitney adoption analysis

	EoU	liBP	PBBP	liSP	PBNB
Mann-Whitney U	349.500	289.000	373.500	319.500	406.000
Wilcoxon W	7370.500	7310.000	7394.500	7340.500	434.000
Z	-.801	-1.453	-.515	-1.124	-.085
Asymp. Sig. (2-tailed)	.423	.146	.607	.261	.933
a. Grouping variable: Type of Bank					

4.5.6 Digital culture in distinct types of banks

A comprehensive statistical analysis compared traditional/legacy banks with their neobank/digital-only counterparts to understand the nuances of digital platform adoption in the banking sector. This analysis employed the Mann-Whitney U test, a non-parametric test ideal for comparing two independent groups, especially when dealing with non-normally distributed data. The focus was on various organisational, technological, and environmental factors that are pivotal in shaping the adoption and integration of digital platforms in banking operations. The objective was to discern whether significant differences exist in these crucial areas between the more established traditional banks and the newer, technology-driven digital banks.

Table 27: Digital culture by bank type

	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Cross-Functional Teams	300.500	7321.500	-1.339	.181
Physical and Virtual Collaboration	336.000	7357.000	-.927	.354
Dual Structures	341.000	369.000	-.897	.369
Start-up Mentality	316.500	7337.500	-1.081	.280
Failure Culture	181.000	7202.000	-2.618	.009
Power Equality	360.500	7381.500	-.597	.550
Mutual Decision-Making	395.500	423.500	-.202	.840
Digital Skills	343.000	371.000	-.861	.389
IT as a Business Creator	333.500	361.500	-.944	.345
Collaboration with Start-Ups	364.000	7385.000	-.553	.580
Platforms and Partnerships with Competitors	390.500	418.500	-.257	.797
Customer Integrations	400.500	7421.500	-.144	.886

a. Grouping variable: Type of Bank				

The Mann-Whitney U test results for various organisational technological, and environmental factors show that most factors, including 'Cross-Functional Teams', 'Physical and Virtual Collaboration', 'Dual Structures', 'Start-up Mentality', 'Power Equality', 'Mutual Decision-Making', 'Digital Skills', 'IT as a Business Creator', 'Collaboration with Start-Ups', 'Platforms and Partnerships with Competitors', and 'Customer Integrations' do not show statistically significant differences between traditional and digital banks, with p-values well above the .05 threshold (Table 27). Most comparisons' lack of statistical significance suggests that traditional/legacy banks are not far behind in these areas. However, 'Failure Culture' shows a statistically significant difference with a p-value of .009, indicating a significant difference in perceptions or practices related to failure culture between the two types of banks.

4.5.7 Kruskal-Wallis test (digital culture)

The Kruskal-Wallis Test is a non-parametric alternative to one-way ANOVA when comparing more than two independent groups (Field, 2017). In this instance, the groups are the roles in the organisation, defined as executive, senior management, middle management, and non-management staff.

Table 28: Kruskal-Wallis test (digital culture)

	Kruskal-Wallis H	df	Asymp. Sig.
Cross-Functional Teams	11.363	3	.010
Physical and Virtual Collaboration	1.914	3	.590
Dual Structures	1.160	3	.763
Start-up Mentality	1.437	3	.697
Failure Culture	.846	3	.839
Power Equality	2.373	3	.499
Mutual Decision-Making	5.082	3	.166
Digital Skills	4.833	3	.184
IT as a Business Creator	4.660	3	.198
Collaboration with Start-Ups	9.517	3	.023

Platforms and Partnerships with Competitors	4.600	3	.204
Customer Integrations	2.313	3	.510

The Kruskal-Wallis H test detected significant differences in ‘Cross-Functional Teams’ across various roles (p = .010) and in ‘Collaboration with Start-Ups’ (p = .023). The tests found no significant differences in other areas like ‘Physical and Virtual Collaboration’, ‘Dual Structures’, ‘Start-up Mentality’, ‘Failure Culture’, ‘Power Equality’, ‘Mutual Decision-Making’, ‘Digital Skills’, ‘IT as a Business Creator’, ‘Platforms and Partnerships with Competitors’, and ‘Customer Integrations’ (all with p-values greater than .05).

This result suggests that perceptions or practices regarding ‘Cross-Functional Teams’ and ‘Collaboration with Start-Ups’ vary significantly across various organisational roles, whereas other factors do not show significant variation based on role.

4.6 Summary of results

In this research project, the 12 characteristics of digital organisational culture, as defined in Duerr et al.’s (2018) exploratory case studies, were tested to examine the role of organisational culture on digital platform adoption. This chapter systematically analysed the interplay between various organisational, technological, and environmental factors in the context of digital platform adoption within South African banks.

The demographic analysis highlighted a diverse representation across separate roles, experience levels, and types of banks, predominantly featuring insights from experienced professionals in traditional banking institutions. A detailed descriptive analysis was conducted on key components of digital culture, revealing generally positive perceptions of technological capabilities, organisational structures, and external environmental factors influencing digital adoption. Notably, ‘Digital Skills’ and ‘IT as a Business Creator’ emerged as significant aspects within the technology

component, while ‘Physical and Virtual Collaboration’ was emphasised in the organisational context.

The inferential statistical analysis, encompassing factor analysis, identified four distinct components representing unique aspects of digital culture: ‘Technology and ‘Customer-Centric Innovation', ‘Organisational Agility and Empowerment’, ‘Collaborative Ecosystem for Innovation’, and ‘Collaborative Work Dynamics’. A crucial finding from the regression analysis was the significant positive influence of ‘Cross-Functional Teams’ on digital platform adoption, contrasting with the unexpected negative impact of ‘Mutual Decision-Making’. Correlation analysis further supported the interconnectedness of the ‘Technology’, ‘Organisation’, ‘Environment’, and ‘Adoption’ constructs, underscoring their collective influence on digital platform adoption. The analysis confirmed that the 12 variables explained almost two-thirds (64.487%) of the total variance.

The regression analysis conducted within the TOE framework reveals a nuanced picture of the factors influencing the adoption of digital platforms within South African banking organisations. The checks for multicollinearity and outliers confirm the robustness of the model, with no multicollinearity detected among the variables and minimal impact from outliers. The regression analysis highlights the significant positive effects of ‘Cross-Functional Teams’ on adoption, underscoring the value of collaborative and integrated team structures. Conversely, when considering other variables, ‘Mutual Decision-Making’ has a surprising negative influence on adoption. This intriguing finding may suggest complexities in decision-making processes within the organisational context. The model’s adjusted R-squared value of .331 indicates that the model can account for approximately one-third of the variance in digital platform adoption, a moderate yet significant effect size.

Correlation analysis using Spearman’s Rho complements these findings by demonstrating significant positive relationships between ‘Technology’, ‘Organisation’, ‘Environment’, and ‘Adoption’, thus lending empirical support to the conceptual framework. This constructive collaboration between the technological capabilities, organisational structure, and external environmental factors underscores an

integrated approach to understanding digital platform adoption. Notably, variables such as ‘Digital Skills’ and ‘IT as a Business Creator’ strongly correlate with adoption, reinforcing the hypotheses of their positive influence. The consistent significant correlations across multiple dimensions of the organisational culture underscore the multifaceted nature of digital platform adoption and the importance of an integrated organisational culture that fosters innovation, embraces change, and values customer integration within the innovation process. Table 29 provides a side-by-side summary of the regression and correlation analysis results.

Comparative analysis between traditional/legacy banks and neo/digital-only banks revealed no significant differences in most factors, except for ‘Failure Culture’, suggesting that conventional banks closely align with digital banks in many aspects of digital culture. However, their attitude towards risk-taking and experimentation lags neo/digital-only banks. This chapter’s findings provide a comprehensive understanding of the factors influencing digital platform adoption in the banking sector, highlighting the crucial role of cross-functional collaboration and the evolving nature of organisational culture in the digital era.

Table 29: Summary of regression and correlation analysis

Hypothesis	Variable	Regression analysis	Correlation analysis result	Conclusion
H_1	Digital Skills	Borderline positive ($p = .084$)	Positive correlation ($p < .001$)	Suggests a positive influence; borderline in regression
H_2	IT as a Business Creator	Not significant ($p = .294$)	Positive correlation ($p < .001$)	May have an indirect influence; not a direct predictor in the model
H_3	Cross-Functional Teams	Positive ($p < .001$)	Positive correlation ($p < .001$)	Strong positive influence on adoption
H_4	Physical and Virtual Collaboration	Not significant ($p = .437$)	Positive correlation ($p = .002$)	Correlation present but not a direct predictor in regression
H_5	Dual Structures	Not significant ($p = .864$)	No significant correlation ($p = .115$)	Little to no influence on adoption
H_6	Start-up Mentality	Borderline positive ($p = .064$)	Positive correlation ($p < .001$)	Suggests a positive influence; borderline in regression
H_6	Failure Culture	Not significant ($p = .212$)	Positive correlation ($p < .001$)	Correlation present but not a direct predictor in regression
H_7	Power Equality	Not significant ($p = .145$)	Positive correlation ($p < .001$)	Correlation present but not a direct predictor in regression

H_7	Mutual Decision-Making	Negative ($p = .048$)	Positive correlation ($p < .001$)	Negative impact in regression despite positive correlation
H_8	Collaboration with Start-Ups	Not significant ($p = .985$)	No significant correlation ($p = .019$)	Little to no influence on adoption
H_9	Platforms and Partnerships with Competitors	Not significant ($p = .666$)	Positive correlation ($p < .005$)	Correlation present but not a direct predictor in regression
H_{10}	Customer Integrations	Not significant ($p = .477$)	Positive correlation ($p < .001$)	Correlation present but not a direct predictor in regression

CHAPTER 5. INTERPRETATION OF FINDINGS

5.1 Introduction

This chapter summarises and discusses the research findings based on the analysis done in Chapter 4. The study's primary objective was to investigate how organisational culture influences the adoption of digital platforms in South African banks.

The literature clarifies that digitalisation and digital transformation require a modern adaptation of organisational culture, referred to as the digital organisational culture (Busco et al., 2023; Trushkina et al., 2020). Duerr et al.'s (2018) exploratory case studies into the characteristics of digitalising firms' organisational culture identified 12 attributes of digital organisational culture.

This study used the findings of Duerr et al. (2018) to investigate the role of organisational culture in adopting digital platforms.

5.2 Summary and interpretation of findings

Based on the statistical analysis results, organisational culture influences the adoption of digital platforms, and elements of digital organisational culture significantly correlate with successful adoption in South African banks. The adjusted R-squared value of .331 indicates that the model explains a significant portion of the variance in the 'Adoption' variable. Customer expectation, competition, regulation, leadership, resistance to change, legacy IT systems, and organisational readiness also drive digital platform adoption and could explain the omitted variance (Memic et al., 2022)

This study applied and empirically explored Duerr et al.'s (2018) digital organisational culture attributes and examined their impact on digital platform adoption within South African banks. The loading of all 12 variables in the factor

analysis reinforces their relevance to the research framework. The loading provides a foundation for deeper analysis and interpretation of how these factors influence digital platform adoption. The researcher mapped each variable from Duerr et al.'s (2018) model to its corresponding component in the TOE framework based on its relevance to the component.

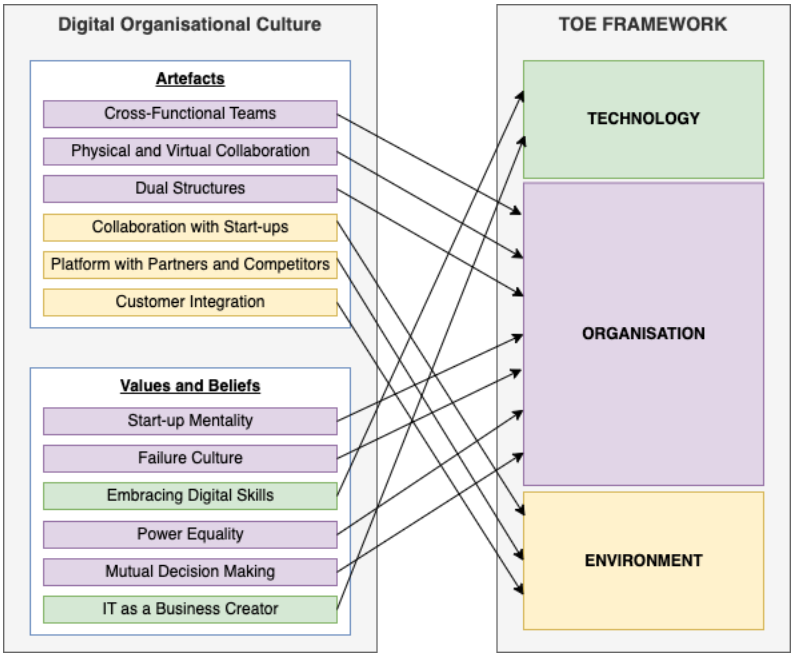


Figure 21: Mapping digital organisational culture to TOE

Digital organisational culture, expressed through the TOE framework as the primary theoretical lens, positively influenced digital platform adoption as tested through the regression and correlation analysis. Results from Spearman's Rho found significant correlations between 'Technology' ($\rho = .450$, $p < .001$), 'Organisation' ($\rho = .552$, $p < .001$), 'Environment' ($\rho = .338$, $p < .001$) and 'Adoption'. The result aligns with the research conducted by Martínez-Caro et al. (2020), who argued that digital organisational culture plays a crucial role in facilitating the adoption and effective use of digital technologies.

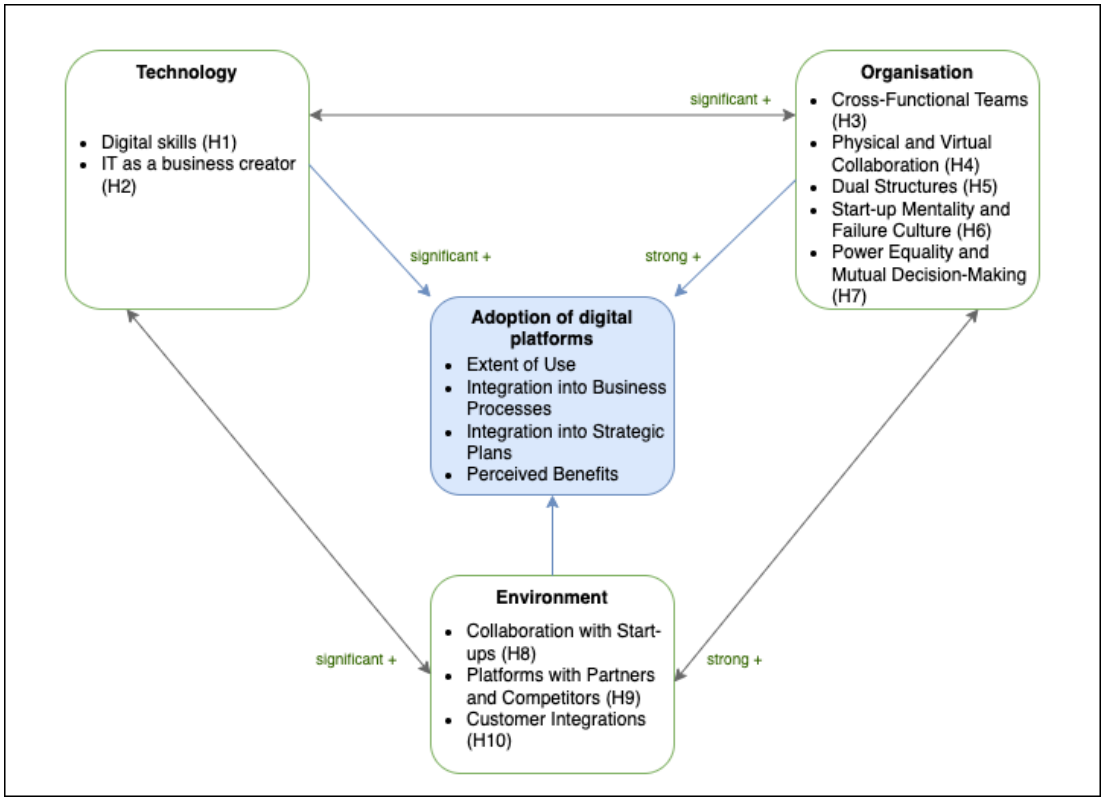


Figure 22: Analytical results of TOE

Digital organisational culture positively influences digital platform adoption, but not all 12 variables have the same influence and significance on adoption. Grounded in the TOE framework, this study set out to answer three research questions to understand organisational culture's role in adopting digital platforms.

RQ1. How does organisational culture influence the adoption of digital platforms in South African banks?

RQ2. How do technological factors, such as digital skills, influence the adoption of digital platforms in South African banks

RQ3. How does collaboration with external entities influence the adoption of digital platforms in South African banks?

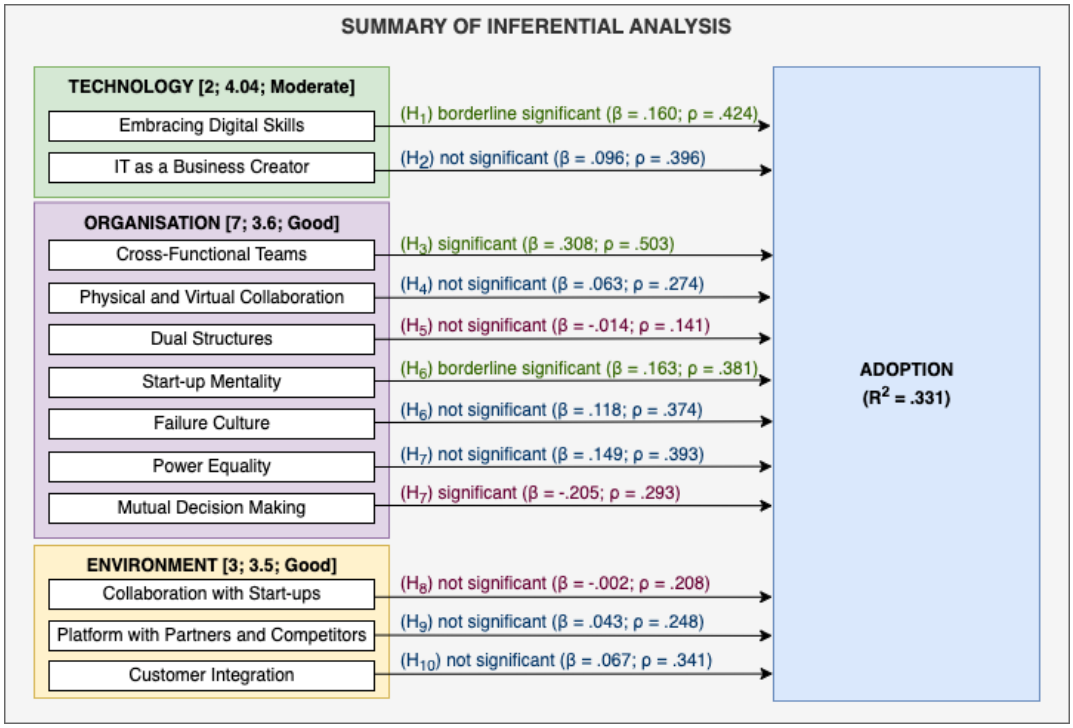


Figure 23: Inferential analysis summary illustration

RQ1: How does organisational culture influence the adoption of digital platforms in South African banks?

Respondents completed a 5-point Likert scale questionnaire, which collected data for measuring the organisational component. The questionnaire asked seven questions to measure each variable, testing the respondents' level of agreement from 1 – "Strongly Disagree" to 5 – "Strongly Agree". These questions collect data to test hypotheses H_3 to H_7.

Organisations that execute digital initiatives and drive innovation through *cross-functional teams* (H_3) have better outcomes for adopting digital platforms. Cross-function teams do more than execute tasks and collaborate; they embody and propagate the digital ethos of the organisation, playing a crucial role in the broader digital adoption narrative (Grover et al., 2022; Martínez-Caro et al., 2020).

This study robustly demonstrates the significant role of cross-functional teams in fostering the adoption of digital platforms ($\beta = .308$, $p < .001$; $\rho = .503$, $p < .001$).

The variable shows a generally positive response trend towards the survey question (mean = 3.77), with a moderate spread of opinions (*s* = 1.001) and a distribution that leans towards the higher end of the scale (*Sk = -1.019; Ku = .611*), indicating a preference for agreement among respondents. This finding is not merely a statistical observation but a reflection of a more profound, strategic truth about organisational digital transformation. Cross-functional teams are beneficial and essential for adopting digital platforms because they represent an integrated approach, facilitating constructive interaction between traditional and digital business areas (Smith & Beretta, 2020). These teams are vital cultural and strategic components that drive digital transformation, innovation, and platform success for organisations.

Hybrid work environments (H_4) foster collaboration, a key tenet of digital culture, and orient employees towards a digital environment (Duerr et al., 2018; Grover et al., 2022). The positive correlation ($\rho = .274$, $p = .002$) suggests that these collaborative modes favour digital adoption. However, their lack of significant predictive power ($\beta = .063$, $p = .779$) in the regression analysis paints a more complex picture, indicating that while important, they are not the definitive drivers of digital platform adoption. Respondents generally selected options indicating strong agreement (mean = 4.19) or approval, with relative consistency (*s* = .794). However, the pronounced negative skewness (*Sk = -1.608*) and high kurtosis (*Ku = 4.677*) may suggest a potential response bias towards the positive end or a genuinely high level of agreement or satisfaction among respondents. The extreme skewness and kurtosis warrant further investigation into the commonalities of the outliers. Physical and virtual collaboration are vital components of a hybrid work environment conducive to adopting digital platforms. However, their role is part of broader and more intricate organisational dynamics.

Organisations with *dual structures* (H_5) or bimodal operating models seek to balance the transition from traditional to digital business. This operating model aims to inject speed into the business transformation while maintaining stability

in the core business functions (Duerr et al., 2018). Respondents generally agree (mean = 3.80, *s* = 0.873) that their organisations employ new way of work to deliver digital innovations while maintaining their core operating structure through traditional waterfall-type project management methods. Despite the theoretical appeal of dual structures in balancing innovation and core business operations, the lack of significant prediction (β = -.014, p = -.172) or correlation (ρ = .141, p = .115) challenges the conventional wisdom that dual structures inherently drive digital platform adoption. While Duerr et al. (2018) suggest that these structures enable a strategic balance between various innovation speeds, this study indicates that more than this balance is required for digital adoption. The perceived value from ambidextrous or bimodal organisations has not met the respondents' expectations of business outcomes. Therefore, the effectiveness of dual structures may hinge more on their implementation and integration with organisational strategy and culture than on their existence.

Rohn et al. (2021) identified start-up culture as one of the six success factors of digital platform business models. A *start-up mentality* (H_6) espouses a culture that fosters collaboration, obsesses about the customer, and is nimble (Duerr et al., 2018). The survey results suggest that respondents must be more convinced that their organisations operate with a start-up mentality despite moderate agreement (mean = 3.30, *s* = 1.086). Şimşek et al. (2022) identified a start-up mentality as an enabling factor for digital platform adoption. 'Start-up Mentality' approached significance (β = .163, p = .064), hinting at a potentially positive influence on adoption. At the same time, the correlation analysis revealed a strong positive correlation with 'Adoption' (ρ = .381, p < .001), aligning with Şimşek et al.'s (2022) findings. This correlation suggests that organisations mirroring a start-up's agility and innovation-driven ethos are likely better equipped for embracing digital platforms. Rohn et al. (2021) and Trenerry et al. (2021) advocate creating separate entities or environments within traditional firms to foster a start-up-like culture. Therefore, a start-up mentality must be innate to the organisation's culture or be part of an ambidextrous configuration to impact digital platform adoption.

A *failure culture* (H_6) is associated with learning organisations and is observed through employees taking risks despite potential adverse outcomes (Duerr et al., 2018). Risk appetite in South African banks depends on the orientation of their culture Gani and Mashamba (2022) and Camarate and Maritz (2018) conclude that South African banks must embed failure risk-taking into their culture to compete in the digital era. With a mean of 3.35 and a standard deviation of 1.021, respondents moderately agreed, albeit with varied perceptions, that their organisations view failure as an opportunity for learning and innovation. Failure culture did not reach significance ($\beta = .118$, $p = .212$) despite showing a positive direction in its influence on 'Adoption' and a strong positive correlation ($\rho = .374$, $p < .001$). However, respondents from 'Neo/Digital-only banks' showed a statistically significant ($p = .009$) difference in perception of failure culture compared to those from traditional banks. This phenomenon implies that organisations that embrace a start-up mentality, like fintechs, are likelier to have an embedded failure culture, enhancing their propensity to adopt digital platforms successfully. The direct predictive power of these cultural aspects may not be conclusively strong. Still, their positive correlation with digital adoption is undeniable, pointing towards their latent potential in facilitating digital transformation.

Power equality (H_7) refers to organisations where decision-making is federated and not concentrated at the top. Teams are empowered to make decisions and operate under clear roles and responsibilities (Duerr et al., 2018). Respondents generally agreed (mean = 3.45) that employees have clear responsibilities and contribute to decision-making, notwithstanding the diverse viewpoints ($s = 1.006$). Though not statistically significant, power equity displayed a positive directional influence on 'Adoption' ($\beta = .149$, $p = .145$). However, power equality shows a strong positive correlation with digital adoption ($\rho = .393$, $p < .001$), aligning with Duerr et al. (2018), who note the shift towards distributed power in organisations to enhance digital innovation processes. The data suggests that organisations can respond more swiftly and effectively to digital challenges and opportunities when power is more evenly distributed.

Mutual decision-making (H_7) brings organisational functions closer together, removing silos to facilitate greater alignment toward the organisation's business objectives. Respondents moderately agreed (mean = 3.34) that mutual decision-making involved various teams and levels in their organisations despite having varied views (*s* = 1.041). The positive correlation with 'Adoption' (ρ = .293, p < .001) suggests that mutual decision-making promotes the adoption of digital platforms. However, the regression analysis presents a surprising twist with mutual decision-making displaying a negative influence on digital adoption (β = -.205, p < .05). This unexpected finding suggests potential inefficiencies in decision-making processes that might arise from overly collaborative approaches, possibly leading to decision paralysis or a slowdown in necessary agility for digital transformation. This paradoxical outcome resonates with broader organisational theory, which posits that while inclusive decision-making can foster engagement and idea generation, it might also hinder swift action, which is crucial in digital environments (Smith et al., 2016). The literature on organisational agility and digital transformation emphasises balancing collaborative decision-making and decisive leadership (O'Reilly & Tushman, 2013).

RQ2: How do technological factors, such as digital skills, influence the adoption of digital platforms in South African banks

Having or acquiring *digital skills* (H_1) aids in assimilating digital technologies and taking advantage of technological advancements to gain a competitive edge. Respondents demonstrated a high level of agreement (mean = 4.08) that their organisations acquire and nurture digital skills, with a moderate standard deviation (*s* = .813). While digital skills displayed a positive trend in their influence on adoption (β = .160, p = .084), it is the strong positive correlation (ρ = .424, p < .001) that robustly supports the hypothesis, indicating that digital skills are a crucial facilitator in adopting digital platforms in organisations. This finding aligns with the observations of Duerr et al. (2018), who noted the increasing demand for digital skills in organisations transitioning towards digital business models. The emphasis on acquiring and cultivating digital skills reflects a broader

organisational shift towards embracing digital values and solutions. Similarly, von Solms and Langerman (2022) identified the lack of digital skills as a significant roadblock in implementing digital technologies, further underscoring the importance of these skills in successful digital adoption.

IT is evolving from a support function to a partner collaborating with business units to create value. *IT as a business creator* (H_2) equalises the relationship between IT and business, giving IT an ever-increasing role in the organisation's digital transformation (Duerr et al., 2018). Respondents showed an elevated level of agreement (mean = 4.01), with moderate response variation (*s* = .840). Respondents confirmed that IT is increasingly moving away from a traditional support role to become a proactive business creator, actively shaping new products and services. 'IT as a Business Creator' did not show statistical significance in the regression analysis (β = .096, p = .294); the strong positive correlation with digital platform adoption (ρ = .396, p < .001) indicates its growing importance in this domain. This trend aligns with observations by Duerr et al. (2018), who noted a fundamental shift in the perception and role of IT in digitally transforming organisations. This evolution is crucial for organisations aiming to leverage digital platforms effectively and remain competitive in an increasingly digital marketplace.

RQ3: How does collaboration with external entities influence the adoption of digital platforms in South African banks?

Collaboration with start-ups (H_8) allows organisations to acquire access to markets, technology, and knowledge and accelerate their digital transformation (Duerr et al., 2018). This partnership can accelerate product innovation and infuse a more entrepreneurial spirit into traditional firms. Respondents moderately agreed (mean = 3.39) that their organisation collaborates with start-ups to enhance business offerings and improve customer experience. However, this factor was not a significant predictor in the regression model (β = -.002, p = .985) and had no significant correlation to 'Adoption'. The literature's broader context suggests a more nuanced understanding of its role.

Duerr et al. (2018) observed that organisations *collaborate with partners and competitors* (H_9) to enhance their digital capabilities. 'Collaboration with Start-Ups' role in digital platform adoption is not a significant predictor in the regression model ($\beta = .043$, $p = .666$) despite the positive correlation with digital adoption ($\rho = .248$, $p = .005$). Choudary et al. (2021) highlight how financial institutions like Standard Bank have developed digital platforms like OneHub to offer assorted services through partnerships. This collective action strategy underscores the importance of building networks and embracing partnerships to thrive in the platform economy. Collective action reflects a broader trend where traditional banking and financial groups form ecosystems with other organisations to meet diverse customer needs. Direct statistical evidence from the model does not strongly support the hypothesis. However, the literature suggests that collaboration on shared platforms, including with competitors, significantly enhances digital platform adoption.

According to the literature, organisations exhibiting a digital culture co-create solutions through *customer integrations* (H_{10}). Customers are an integral part of the product development process through direct feedback loops and early engagement (Duerr et al., 2018). Respondents strongly agreed (mean = 3.76) that their organisations collaborate with customers. Despite the regression model's lack of significant predictive power, the strong positive correlation with digital platform adoption ($\rho = .341$, $p < .001$) suggests that customer integration plays a meaningful role. South African banks increasingly adopt customer-centric approaches (Camarate & Brinckmann, 2017; Telukdarie & Kayser, 2022). This shift towards client-centricity is crucial in responding to digital disruption and enhancing the customer experience.

5.3 Conclusion

This study aims to understand the role of organisational culture in adopting digital platforms within South African banks, a crucial inquiry given the rapid pace of digital transformation in the financial sector. The findings affirm that digital

organisational culture significantly influences digital platform adoption, with technology, organisational, and environmental elements playing pivotal roles. Specifically, the TOE framework served as a robust theoretical lens, revealing that technological factors ($\rho = .450$, $p < .001$), organisational components ($\rho = .552$, $p < .001$), and environmental aspects ($\rho = .338$, $p < .001$) each significantly correlate with successful digital adoption. This result underscores the multifaceted nature of digital transformation, which depends not solely on technological readiness but also on cultural and environmental readiness.

Cross-functional teams (H_3) and a *start-up mentality* (H_6) exhibit the most significant predictive capability and correlation with digital platform adoption, highlighting the importance of collaborative, agile, and innovative organisational cultures. Conversely, dual structures (H_5) and mutual decision-making (H_7) showed the least predictive power, suggesting that while these factors contribute to the digital culture, their direct impact on digital adoption may be less significant than anticipated. Collaboration with external entities (RQ3) did not significantly predict adoption despite a positive correlation, indicating that external partnerships, though beneficial, are not the primary drivers of digital platform adoption within banks. These insights contribute to the academic discourse on digital transformation and offer practical guidance for banking executives aiming to navigate the complex landscape of digital adoption, emphasising the need for a balanced approach that integrates technological, organisational, and environmental strategies.

CHAPTER 6. CONCLUSION AND RECOMMENDATION

6.1 Research Question 1 conclusion

Concluding the investigation into how organisational culture influences the adoption of digital platforms in South African banks, this study has illuminated the multifaceted nature of organisational dynamics and their impact on digital transformation. Through a comprehensive analysis using a 5-point Likert scale questionnaire, this study identified that cross-functional teams and a start-up mentality are paramount in fostering the adoption of digital platforms. These elements facilitate a strategic alignment between traditional and digital business areas and embody the digital ethos necessary for successful transformation. The significant roles of cross-functional teams ($\beta = .308$, $p < .001$; $\rho = .503$, $p < .001$) and the positive correlation of a start-up mentality with digital adoption ($\rho = .381$, $p < .001$) underscore the crucial importance of collaborative, agile, and innovative cultures within banking organisations.

However, the study also reveals complexities in the relationship between organisational culture and digital adoption. While hybrid work environments and dual structures are recognised as components of digital culture, their predictive power in digital platform adoption was limited. This discovery suggests that the effectiveness of these organisational structures may depend more on their integration with overall digital strategy and culture rather than their mere existence. Moreover, the findings on mutual decision-making highlight potential challenges in overly collaborative decision processes, indicating a need for a balanced approach to decision-making to avoid hindering digital adoption. These insights contribute to the academic understanding of digital transformation in the banking sector and offer practical implications for banking executives seeking to navigate the complexities of digital adoption.

6.2 Research Question 2 conclusion

In addressing the influence of technological factors, such as digital skills, on adopting digital platforms in South African banks, this study has highlighted the crucial role of digital competencies and the evolving function of IT departments. The findings reveal a strong consensus among respondents on the importance of acquiring and nurturing digital skills within their organisations (mean = 4.08), supported by a significant positive correlation ($\rho = .424$, $p < .001$) between digital skills and digital platform adoption. This result underscores the pivotal role of digital skills in enabling organisations to assimilate digital technologies effectively and leverage technological advancements for competitive advantage. The emphasis on digital skills development reflects a broader shift towards digital readiness within the banking sector, aligning with the observations of Duerr et al. (2018) and von Solms and Langerman (2022), who identified the cultivation of digital skills as a fundamental component of successful digital transformation.

Furthermore, the transformation of IT from a traditional support role to a proactive business creator emerges as a key theme, with respondents acknowledging IT's growing influence in driving digital initiatives (mean = 4.01). Despite the lack of statistical significance in the regression analysis ($\beta = .096$, $p = .294$), the strong positive correlation with digital platform adoption ($\rho = .396$, $p < .001$) signals the increasing importance of IT as a strategic partner in digital transformation efforts. This evolution of IT underscores a fundamental shift in how digital technologies are perceived and utilised within organisations, moving towards a more integrated and strategic approach to digital adoption. These insights contribute to understanding the technological underpinnings of digital platform adoption in the banking sector. They also highlight the need for ongoing investment in digital skills development and the strategic repositioning of IT departments to support digital transformation objectives effectively.

6.3 Research Question 3 conclusion

This study has shed light on external partnerships' subtle yet significant role in the digital transformation landscape by exploring the impact of collaboration with external entities on adopting digital platforms in South African banks. Despite moderate agreement from respondents on collaborating with start-ups to enhance business offerings (mean = 3.39), such collaborations were not significant predictors of digital platform adoption in the regression analysis (β = -.002, p = .985). This finding suggests that while start-up collaborations offer access to modern technologies, markets, and entrepreneurial spirit, their direct impact on digital adoption may be more complex and influenced by other factors not captured in this study.

Similarly, collaborations with partners and competitors, despite not being significant predictors in the regression model (β = .043, p = .666), showed a positive correlation with digital adoption (ρ = .248, p = .005). This result indicates that building networks and forming ecosystems with various stakeholders, as highlighted by Choudary et al. (2021), play a crucial role in enhancing digital capabilities and fostering a platform economy. The importance of such collaborative efforts, even if not directly quantifiable in digital platform adoption, underscores the strategic value of partnerships in navigating the digital landscape.

Moreover, the strong positive correlation between customer integration and digital platform adoption (ρ = .341, p < .001) emphasises the crucial role of customer-centric approaches in the digital transformation process. This position aligns with the broader trend towards client-centricity and Agile methodologies, highlighting the necessity of involving customers directly in product development and innovation processes.

These findings contribute to a deeper understanding of how external collaborations influence digital platform adoption, suggesting that while direct predictive relationships may not always be evident, the strategic, operational, and

customer engagement benefits derived from such collaborations are indispensable for digital transformation.

6.4 Recommendations

Based on the research on adopting digital platforms in South African banks, focusing on the influence of digital organisational culture, the following recommendations are proposed to guide banks and stakeholders in enhancing digital adoption strategies. These recommendations are linked to the study's key findings and are designed to be actionable, prioritised, and tailored to stakeholders involved in the digital transformation process.

6.4.1 For banking executives and management

1. **Promote cross-functional teams and start-up mentality**: The significant roles of cross-functional teams ($\beta = .308$, $p < .001$; $\rho = .503$, $p < .001$) and the positive correlation of a start-up mentality with digital adoption ($\rho = .381$, $p < .001$) underscore their importance. These findings were derived directly from the regression and correlation analysis, showing their direct influence on digital platform adoption. Banks should prioritise forming and empowering cross-functional teams to enhance digital platform adoption. These teams should include staff from diverse departments, including those less represented, such as Marketing and HR, to bring varied perspectives to digital projects. Effective communication and clear role definitions within these teams facilitate collaboration and efficient decision-making. Additionally, fostering a start-up mentality organisation-wide is crucial. This approach emphasises rapid innovation, flexibility, and risk-taking, with leadership playing a pivotal role in embedding these values into the organisational culture to propel digital initiatives forward.

2. **Strategic digital skills development**: Digital skills positively correlated with digital platform adoption ($\rho = .424$, $p < .001$). This high mean score (mean =

4.08) indicates a consensus among respondents on the importance of digital skills, reflecting their critical role in digital adoption. With digital skills identified as a crucial facilitator for adopting digital platforms, banks should allocate resources towards comprehensive training programmes. These programmes should focus on emerging technologies and digital best practices, targeting new entrants with less experience and seasoned employees to bridge the digital skills gap across all levels.

3. **Reposition IT as a Strategic Partner**: Although the regression analysis for IT as a business creator did not show statistical significance ($\beta = .096$, $p = .294$), the strong positive correlation ($\rho = .396$, $p < .001$) suggests IT is evolving its strategic role. This result indicates that while IT's direct predictive power may be limited, respondents recognise its strategic importance. Recognising the evolving role of IT from a support function to a strategic partner, it is recommended that banks reassess the positioning of their IT departments. This repositioning involves fostering a culture where IT is involved in strategic decision-making and product development from the outset, ensuring that digital initiatives align with business objectives. Addressing potential challenges may require restructuring certain aspects of the IT department to enhance agility and innovation capabilities.

6.4.2 For policymakers and industry regulators

4. **Promote external collaborations**: The positive correlations between collaboration with start-ups ($\rho = .208$, $p = .019$), partnerships with competitors ($\rho = .248$, $p = .005$), and digital platform adoption highlight the strategic value of these collaborations. Despite not being significant predictors in regression, their positive correlation underscores their importance. Although collaboration with start-ups and external entities did not show a direct significant predictor of digital platform adoption, the positive correlations suggest strategic value in these partnerships. Policymakers should consider incentivising banks to engage with fintech start-ups and other technology providers, facilitating

knowledge exchange and innovation. This environmental development could involve regulatory support for sandbox environments where banks and start-ups can explore new digital solutions collaboratively.

6.4.3 For the academic community

5. **Further research on digital culture models**: The reliance on Duerr's model to define digital culture highlights a gap in the diversity of theoretical frameworks applied. Future research should explore alternative models or develop new frameworks that capture the evolving nature of digital culture in banking, considering the rapid technological advancements and changing consumer expectations.

6.5 Limitations

The study on adopting digital platforms in South African banks has identified several limitations that may impact the findings' generalisability and depth, particularly concerning organisational culture's role. A notable limitation is the underrepresentation of non-management staff and executives among respondents. Non-management staff, as primary users of digital platforms, and executives, with their strategic oversight, offer crucial insights into the adoption process that this study may require to capture fully. This gap potentially leaves out crucial perspectives on ground-level challenges and strategic digital transformation initiatives.

Additionally, the study observed a limited demographic diversity among participants, especially concerning newer entrants to the banking sector and employees from underrepresented departments like Marketing and Credit. The perspectives of individuals with less experience, who may bring fresh, tech-savvy insights into digital adoption, should be adequately represented. Similarly, the scant participation from various crucial departments could lead to an incomplete understanding of digital platform adoption across the banking ecosystem.

Another oversight was the underrepresentation of neo/digital-only banks, which is particularly relevant given the observed significant differences in 'Failure Culture' perceptions between digital-only and traditional banks. This distinction underscores the need for a more nuanced exploration of digital culture across various banking models.

The study's exclusive reliance on Duerr's model for defining digital culture further limits the diversity of theoretical frameworks considered. While Duerr's model provides a valuable foundation, incorporating additional models could enrich the analysis by comprehensively capturing the evolving nature of digital culture in the banking industry. Addressing these limitations in future research could offer a more rounded view of digital transformation challenges and opportunities within the banking sector, enhancing strategies for digital platform adoption.

These limitations highlight areas for future research.

6.6 Suggestions for further studies

This study's exploration into digital platform adoption in South African banks opens several pathways for future research, particularly around integrating digital culture with organisational strategies and structures to bolster digital transformation. It is crucial to investigate how to elevate digital skills and IT capabilities to meet strategic digital adoption goals. Additionally, assessing the subtle impacts of external collaborations on digital adoption is vital, aiming to quantify these influences and devise strategies for fostering effective partnerships within the digital banking ecosystem.

Future research must also encompass a broader respondent base across various organisational levels, departments, and experience lengths. Such diversity could reveal more profound insights into digital culture's complex role in adopting digital platforms. Moving beyond the reliance on Duerr's model to include or develop alternative theoretical frameworks could provide a richer understanding of digital

culture’s evolving nature in banking, considering rapid technological progress and shifting consumer expectations.

By addressing these areas, future research promises to deepen our comprehension of digital transformation in banking and refine strategies for successful digital adoption. Embracing methodological innovation, a more comprehensive range of perspectives, and interdisciplinary approaches are crucial in building upon this study’s groundwork, offering more comprehensive insights into how digital culture, technology, and organisational strategy interplay within digital banking.

REFERENCES

Absa. (2023). *Absa Access*. Absa | Corporate and Investment Banking. https://cib.absa.africa/corporate-banking/digital-channels/absa-access/

Alamgir Hossain, M., & Quaddus, M. (2011). The adoption and continued usage intention of RFID: An integrated framework. *Information Technology & People*, *24*(3), 236–256. https://doi.org/10.1108/09593841111158365

Alstyne, M. W. V., Parker, G. G., & Choudary, S. P. (2016, April 1). Pipelines, platforms, and the new rules of strategy. *Harvard Business Review*. https://hbr.org/2016/04/pipelines-platforms-and-the-new-rules-of-strategy

Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic Management Journal*, *22*(6-7), 493–520.

Andriani, D., Putro, W., Sari, S., Nur Aini, A., & Anwar, A. (2020). Decision-making model for determinant factors of business digital platform adoption by SMEs. *Proceedings of the Proceedings of the 13th International Interdisciplinary Studies Seminar, IISS 2019, 30-31 October 2019, Malang, Indonesia*. Proceedings of the 13th International Interdisciplinary Studies Seminar, IISS 2019, 30-31 October 2019, Malang, Indonesia, Malang, Indonesia. https://doi.org/10.4108/eai.23-10-2019.2293048

Atca Gorgun, O., & Wolfs, B. (2021). Impact of the new digital competitors on Swiss banking business models. *International Journal of Research in Business and Social Science (2147- 4478)*, *10*(2), 33–45. https://doi.org/10.20525/ijrbs.v10i2.1055

Awa, H. O., Ojiabo, O. U., & Orokor, L. E. (2017). Integrated technology-organization-environment (T-O-E) taxonomies for technology adoption. *Journal of Enterprise Information Management*, *30*(6), 893–921. https://doi.org/10.1108/JEIM-03-2016-0079

Barney, J. B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *The Academy of Management Review*, *11*(3), 656–665. https://doi.org/10.2307/258317

Bonnet, D., & Westerman, G. (2021). The new elements of digital transformation. *MIT Sloan Management Review*, *62*(2), 82–89.

Bryman, A. (2016). *Social research methods*. Oxford University Press.

Busco, C., González, F., & Aránguiz, M. (2023). Factors that favor or hinder the acquisition of a digital culture in large organizations in Chile. *Frontiers in Psychology*, *14*. https://www.frontiersin.org/articles/10.3389/fpsyg.2023.1153031

BusinessTech. (2018, July 23). 6 new banks launching in South Africa soon [Business news website]. *BusinessTech*.

https://businesstech.co.za/news/banking/260077/6-new-banks-launching-in-south-africa-soon/

BusinessTech. (2019a, September 11). TymeBank is now one of the fastest-growing digital banks in the world: CEO [Business news website]. *BusinessTech*. https://businesstech.co.za/news/banking/340143/tymebank-is-now-one-of-the-fastest-growing-digital-banks-in-the-world-ceo/

BusinessTech. (2019b, November 13). Discovery vs Tyme bank vs Bank Zero – what South Africans think of the new banks [Business news website]. *BusinessTech*. https://businesstech.co.za/news/banking/352515/discovery-vs-tyme-bank-vs-bank-zero-what-south-africans-think-of-the-new-banks/

Camarate, J., & Maritz, C. (2018). *Digital disruption in the South African banking sector*. PwC. https://www.pwc.co.za/en/publications/digital-disruption-in-sa-banking-sector.html

Cameron, K. S., & Quinn, R. E. (2006). *Diagnosing and changing organizational culture: Based on the competing values framework* (Rev. ed). Jossey-Bass.

Choudary, S. P., Lamb, J., & Marais, K. (2021). *The power of the platform economy for financial services*.

Crawford, P., Brown, B., Baker, C., Tischler, V., & Abrams, B. (2015). Anthropology and the study of culture. In P. Crawford, B. Brown, C. Baker, V. Tischler, & B. Abrams (Eds.), *Health Humanities* (pp. 20–37). Palgrave Macmillan UK. https://doi.org/10.1057/9781137282613_2

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*.

Depietro, R., Wiarda, E., & Fleischer, M. (1990). The context for change: Organization, technology and environment. *The Processes of Technological Innovation*, *199*(0), 151–175.

Deshpande, R., & Webster, F. E. (1989). Organizational culture and marketing: Defining the research. *Journal of Marketing*, *53*(1), 3.

Diamond, S., Drury, N., Lipp, A., Marshall, A., Ramamurthy, S., & Wagle, L. (2019). The future of banking in the platform economy. *Strategy & Leadership*, *47*(6), 34–42. https://doi.org/10.1108/SL-09-2019-0139

Duerr, S., Holotiuk, F., Wagner, H.-T., Beimborn, D., & Weitzel, T. (2018). *What is digital organizational culture? Insights from exploratory case studies*.

Dutta, S. (2020). The rise of platform-based models and its impact on banking and financial services. *International Journal of Business and Management Research*, *8*(4), 132–136. https://doi.org/10.37391/IJBMR.080408

Field, A. (2017). *Discovering statistics using IBM SPSS statistics* (5th edition). SAGE Publications.

Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2014). Embracing digital technology: A new strategic imperative. *MIT Sloan Management Review*, *55*(2), 1.

Gani, S., & Mashamba, T. (2022). The effect of culture on risk-taking activities of banks. *Corporate Governance and Organizational Behavior Review*, *6*(3), 8–18. https://doi.org/10.22495/cgobrv6i3p1

Garača, Ž. (2011). *Factors related to the intended use of erp systems*. *16*.

Grover, V., Tseng, S.-L., & Pu, W. (2022). A theoretical perspective on organizational culture and digitalization. *Information & Management*, *59*(4), 103639. https://doi.org/10.1016/j.im.2022.103639

Hair, J. F., Page, M., & Brunsveld, N. (2019). *Essentials of business research methods* (4th ed.). Routledge. https://doi.org/10.4324/9780429203374

Harland, P. E., Uddin, Z., & Laudien, S. (2020). Product platforms as a lever of competitive advantage on a company-wide level: A resource management perspective. *Review of Managerial Science*, *14*(1), 137–158. https://doi.org/10.1007/s11846-018-0289-9

Hartl, E., & Hess, T. (2017). *The role of cultural values for digital transformation: Insights from a delphi study*.

Haşiloğlu, S. B., & Hasiloglu-Ciftciler, M. (2023). What should be the measure of conformity to normal distribution (normality) test in likert type digital and face-to-face survey data? *Journal of Internet Applications and Management*. https://doi.org/10.34231/iuyd.1346463

Hautala-Kankaanpää, T. (2022). The impact of digitalization on firm performance: Examining the role of digital culture and the effect of supply chain capability. *Business Process Management Journal*, *28*(8), 90–109. https://doi.org/10.1108/BPMJ-03-2022-0122

Intan, S. M., Marthandan, G., Daud, N. M., & Choy, C. S. (2009). E-commerce usage and business performance in the Malaysian tourism sector: Empirical analysis. *Information Management & Computer Security*, *17*(2), 166–185. https://doi.org/10.1108/09685220910964027

Jackson, S., & Philip, G. (2005). *Organizational culture and the management of technological change: A theoretical perspective*.

Jere, J. N., & Ngidi, N. (2020). A technology, organisation and environment framework analysis of information and communication technology adoption by small and medium enterprises in Pietermaritzburg. *SA Journal of Information Management*, *22*(1). https://doi.org/10.4102/sajim.v22i1.1166

Kavanaugh, J. (2020). Cultivating digital cultures. *Strategic HR Review*, *19*(1), 2–6.

Kiron, D., Kane, G. C., Palmer, D., Phillips, A. N., & Buckley, N. (2016). Aligning the organization for its digital future. *MIT Sloan Management Review*, *58*(1), 0–0.

Labuschagne, H. (2023, January 13). South African digital banking battle [ICT news website]. *MyBroadband*. https://mybroadband.co.za/news/banking/476201-south-african-digital-banking-battle.html

Lansing, J., Ole Kürtz, K., & Redlich, M. (2021, June 3). *Get the most out of your platform transformation | McKinsey & company*. https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/tech-forward/get-the-most-out-of-your-platform-transformation

Leidner, D. E., & Kayworth, T. (2006). Review: A review of culture in information systems research: toward a theory of information technology culture conflict. *MIS Quarterly*, *30*(2), 357–399. https://doi.org/10.2307/25148735

Li, J. C. F. (2020). Roles of individual perception in technology adoption at organization level: Behavioral model versus TOE framework. *Journal of System and Management Sciences*. https://doi.org/10.33168/JSMS.2020.0308

Liu, Z., Min, Q., & Ji, S. (2008). A comprehensive review of research in IT adoption. *2008 4th International Conference on Wireless Communications, Networking and Mobile Computing*, 1–5. https://doi.org/10.1109/WiCom.2008.2808

Low, C., Chen, Y., & Wu, M. (2011). Understanding the determinants of cloud computing adoption. *Industrial Management & Data Systems*, *111*(7), 1006–1023. https://doi.org/10.1108/02635571111161262

Lucas Jr, H. C., & Goh, J. M. (2009). Disruptive technology: How Kodak missed the digital photography revolution. *The Journal of Strategic Information Systems*, *18*(1), 46–55.

Magnus-Eweka, E. (2023). *Navigating the challenges to digital transformation: The case of a pan African Commercial Bank*.

Mallon, D. (2021). A systematic literature review of digital platform business models. In F. Ahlemann, R. Schütte, & S. Stieglitz (Eds.), *Innovation Through Information Systems* (Vol. 48, pp. 389–403). Springer International Publishing. https://doi.org/10.1007/978-3-030-86800-0_27

Martínez-Caro, E., Cegarra-Navarro, J. G., & Alfonso-Ruiz, F. J. (2020). Digital technologies and firm performance: The role of digital organisational culture. *Technological Forecasting and Social Change*, *154*, 119962. https://doi.org/10.1016/j.techfore.2020.119962

Matsepe, N. T., & Van der Lingen, E. (2022). Determinants of emerging technologies adoption in the South African financial sector. *South African Journal of Business Management*, *53*(1). https://doi.org/10.4102/sajbm.v53i1.2493

Memic, E., Lamest, M., Muehlenbrock, S., & Ittoo, A. (2022). How does the banking business model evolve and integrate in a platform ecosystem?: *Journal of Business Ecosystems*, *2*(2), 50–72. https://doi.org/10.4018/JBE.295556

Müller, S., Obwegeser, N., Glud, J., & Johildarson, G. (2019). Digital innovation and organizational culture: The case of a Danish media company. *Scandinavian Journal of Information Systems*, *31*(2). https://aisel.aisnet.org/sjis/vol31/iss2/1

Musawa, M. S., & Wahab, E. (2012). *The adoption of electronic data interchange (EDI) technology by nigerian SMEs: A conceptual framework*.

Nqala, Z. (2021). *The role of middle management in the execution of digital transformation in a South African Bank*.

Oliveira, T., & Martins, M. F. (2011). *Literature review of information technology adoption models at firm level*. *14*(1).

O'Reilly, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, *27*(4), 324–338. https://doi.org/10.5465/amp.2013.0025

Papachristou, E., Deftereos, S., Oikonomou, P., Bekiaridou, K., Foutzitzi, S., Gogoulis, I., Sinopidis, X., Romanidis, K., Tsaroucha, A., & Kambouri, K. (2022). Is it safe to stay at home? Parents' perceptions of child home injuries during the COVID-19 lockdown. *Healthcare*, *10*(10), 2056. https://doi.org/10.3390/healthcare10102056

Pedersen, C. L. (2022). Cracking the culture code for successful digital transformation. *MIT Sloan Management Review*, *63*(3), 1–4.

Rahman, M. S. (2016). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language "Testing and assessment" research: A literature review. *Journal of Education and Learning*, *6*(1), 102. https://doi.org/10.5539/jel.v6n1p102

Resca, A., Za, S., & Spagnoletti, P. (2013). Digital platforms as sources for organizational and strategic transformation: A case study of the midblue project. *Journal of Theoretical and Applied Electronic Commerce Research*, *8*(2), 11–12. https://doi.org/10.4067/S0718-18762013000200006

Rohn, D., Bican, P. M., Brem, A., Kraus, S., & Clauss, T. (2021). Digital platform-based business models – an exploration of critical success factors. *Journal of Engineering and Technology Management*, *60*, 101625. https://doi.org/10.1016/j.jengtecman.2021.101625

Schein, E. H. (2010). *Organizational culture and leadership* (Vol. 2). John Wiley & Sons.

Schindler, P. S., & Cooper, D. R. (2019). *Business research methods* (Thirteen edition). McGraw-Hill Education.

Seerpath, A. (2020). *Software development project success: Perspectives of project managers and developers in a South African bank.*

Serpa, S., José Sá, M., & Ferreira, C. M. (2022). Digital organizational culture: Contributions to a definition and future challenges. *Academic Journal of*

Interdisciplinary Studies, *11*(4), 22. https://doi.org/10.36941/ajis-2022-0095

Şimşek, T., Öner, M. A., Kunday, Ö., & Olcay, G. A. (2022). A journey towards a digital platform business model: A case study in a global tech-company. *Technological Forecasting and Social Change*, *175*, 121372. https://doi.org/10.1016/j.techfore.2021.121372

Smith, P., & Beretta, M. (2020). The gordian knot of practicing digital transformation: Coping with emergent paradoxes in ambidextrous organizing structures. *Journal of Product Innovation Management*, *38*. https://doi.org/10.1111/jpim.12548

Smith, W. K., Lewis, M. W., & Tushman, M. L. (2016). Both/and" leadership. *Harvard Business Review*, *94*(5), 62–70.

Svahn, F., Mathiassen, L., & Lindgren, R. (2017). Embracing digital innovation in incumbent firms. *MIS Quarterly*, *41*(1), 239–254.

Täuscher, K., & Laudien, S. M. (2018). Understanding platform business models: A mixed methods study of marketplaces. *European Management Journal*, *36*(3), 319–329. https://doi.org/10.1016/j.emj.2017.06.005

Telukdarie, A., & Kayser, K. (2022). *Digital ecosystems in financial services driven by embedded finance platforms in South Africa* (SSRN Scholarly Paper 4331766). https://doi.org/10.2139/ssrn.4331766

Temile, S. O. (2018). *An analysis of the effect of IFRS adoption in Nigeria on the quality of published financial information*.

Tiwana, A., Konsynski, B., & Bush, A. (2010). Platform evolution: Coevolution of platform architecture, governance, and environmental dynamics (research commentary). *Information Systems Research*, *21*(4), 675–687.

Tongsuksai, S., Mathrani, S., & Weerasinghe, K. (2023). Influential characteristics and benefits of cloud ERP adoption in New Zealand SMEs: A vendors' perspective. *IEEE Access*, *11*, 23956–23979. https://doi.org/10.1109/ACCESS.2023.3254500

Trenerry, B., Chng, S., Wang, Y., Suhaila, Z. S., Lim, S. S., Lu, H. Y., & Oh, P. H. (2021). Preparing workplaces for digital transformation: An integrative review and framework of multi-level factors. *Frontiers in Psychology*, *12*, 620766. https://doi.org/10.3389/fpsyg.2021.620766

Trushkina, N., Abazov, R., Rynkevych, N., & Bakhautdinova, G. (2020). Digital transformation of organizational culture under conditions of the information economy. *Virtual Economics*, *3*(1), 7–38.

Ünvan, Y. A., & Ergenç, C. (2023). A literature review on the digital transformation in the banking sector. *Journal of Financial Economics and Banking*, *4*(1), Article 1. http://www.jofeb.org/index.php/jofeb/article/view/48

Van Der Schaft, A. H. T., Lub, X. D., Van Der Heijden, B., & Solinger, O. N. (2022). How employees experience digital transformation: A dynamic and multi-layered sensemaking perspective. *Journal of Hospitality & Tourism Research*, 10963480221123098. https://doi.org/10.1177/10963480221123098

van Tonder, C., Schachtebeck, C., Nieuwenhuizen, C., & Bossink, B. (2020). A framework for digital transformation and business model innovation. *Management : Journal of Contemporary Management Issues*, *25*(2), 111–132. https://doi.org/10.30924/mjcmi.25.2.6

Vaska, S., Massaro, M., Bagarotto, E. M., & Dal Mas, F. (2021). The digital transformation of business model innovation: A structured literature review. *Frontiers in Psychology*, *11*. https://www.frontiersin.org/articles/10.3389/fpsyg.2020.539363

von Solms, J., & Langerman, J. (2022). Digital technology adoption in a bank treasury and performing a digital maturity assessment. *African Journal of Science, Technology, Innovation and Development*, *14*(2), 302–315. https://doi.org/10.1080/20421338.2020.1857519

Westerman, G., Bonnet, D., & McAfee, A. (2014). The nine elements of digital transformation. *MIT Sloan Management Review*, *55*(3), 1–6.

Williams, M. D., Dwivedi, Y. K., Lal, B., & Schwarz, A. (2009). Contemporary trends and issues in it adoption and diffusion research. *Journal of Information Technology*, *24*(1), 1–10. https://doi.org/10.1057/jit.2008.30

Wu, W.-W. (2011). Developing an explorative model for SaaS adoption. *Expert Systems with Applications*, *38*(12), 15057–15064. https://doi.org/10.1016/j.eswa.2011.05.039

Yoo, Y., Henfridsson, O., & Lyytinen, K. (2010). Research commentary—The new organizing logic of digital innovation: An agenda for information systems research. *Information Systems Research*, *21*(4), 724–735.

Zhu, K., Kraemer, K. L., & Dedrick, J. (2004). Information technology payoff in E-business environments: An international perspective on value creation of E-business in the financial services industry. *Journal of Management Information Systems*, *21*(1), 17–54. https://doi.org/10.1080/07421222.2004.11045797

APPENDIX A Research Instrument

Introduction

This survey is part of a research study on adopting digital platforms in South African banks. Your responses will be completely anonymous and confidential. The survey should take approximately 10-15 minutes to complete. Thank you for your participation.

Screening Question

1. What industry do you currently work in?
    - Banking
    - Technology
    - Retail
    - Education
    - Other (please specify)

(Only respondents who selected 'Banking' in Q1 will proceed to the next questions)

Section 1: Demographics

2. What is your role in the organisation?
    - Executive
    - Senior Management
    - Middle Management
    - Non-management Staff
3. How many years of experience do you have in the banking industry?
    - Less than 1 year
    - 1-5 years
    - 6-10 years
    - More than 10 years
4. In which department do you work?
    - Technology

- Digital
- Design
- Product
- Operations
- Client Relationships
- Sales
- Other (please specify)

5. Please indicate the type of bank you are currently employed with:
    - Traditional bank (e.g., Absa, FNB, Standard Bank, Nedbank)
    - Digital-only bank (e.g., Tyme, Discovery, BankZero)
    - I prefer not to say

Section 2: Organisational culture

Please indicate your level of agreement with the following statements (1 = Strongly Disagree, 5 = Strongly Agree):

6. In our organisation, employees from various departments (e.g., IT and marketing) often collaborate in teams to make collective decisions and drive innovation.
7. Our organisation values both in-office collaboration in open spaces and remote collaboration, allowing for teamwork independent of location.
8. Our organisation operates with two distinct speeds: one focused on agile digital innovations and the other on maintaining our traditional core functions.
9. Our organisation operates with a start-up mentality, encouraging adaptiveness, direct communication, and a strong focus on customer needs.
10. Our organisation encourages a culture where failures are seen as opportunities for learning and innovation.
11. Our organisation promotes power equality, allowing employees at all levels to have clear responsibilities and contribute to decision-making.

12. Our organisation's decision-making is not limited to specific departments or the top hierarchy; it is a collaborative effort involving various teams and levels.

Section 3: Technological Factors

Please indicate your level of agreement with the following statements (1 = Strongly Disagree, 5 = Strongly Agree):

13. Employees in our organisation possess the necessary digital skills for adopting digital platforms.
14. IT is crucial in our organisation, not just as a support function but as a business creator.

Section 4: External Collaboration

Please indicate your level of agreement with the following statements (1 = Strongly Disagree, 5 = Strongly Agree):

15. Our organisation actively collaborates with start-ups to foster innovation.
16. Our organisation collaborates with partners and competitors on shared platforms.
17. Our organisation integrates customers into the innovation chain to improve our products and services.

Section 5: Adoption of Digital Platforms

Please indicate your level of agreement with the following statements (1 = Strongly Disagree, 5 = Strongly Agree):

18. Our organisation extensively uses digital platforms in its operations. (Extent of use)
19. Digital platforms are fully integrated into our business processes. (Integration into business processes)
20. Using digital platforms has led to significant improvements in our business performance. (Perceived benefits)
21. Our organisation's strategic plans heavily rely on the use of digital platforms. (Integration into strategic plans)

22. Our organisation has successfully leveraged digital platforms to create new business opportunities. (Perceived benefits)

Dear Sir/Madam,

My name is LeRoy Curtis Barnes. I am a Master's student in Management, in the field of Digital Business, at the University of the Witwatersrand, Johannesburg. My supervisor is Prof. Nixon Ochara. I am conducting a research study about platform business models and corporate culture. The study title is **the role of organisational culture in adopting digital platforms in South African Banks**.

I am inviting you to take part in a questionnaire. If you decide to participate, participating in this research study will last about 10-15 minutes. The research activity will take place via an online survey at a time and place convenient to you.

With your permission, I would like to record the survey results. This data will be stored on an encrypted drive on my laptop and deleted after two years. Only the researcher will have access to the data.

The survey will be confidential and anonymous. When I share the research study results, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this study, but your name and personal information will not be used or passed on.

If you decide to participate in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will retain all services, benefits, or rights you normally have if you decide not to join. There is no cost to participating in this study. You will not be paid for being in this research study.

The risks for this research study are no more than what happens in everyday life. However, if some of the questions asked make you sad or upset, you may opt out of the survey.

This research study will be written up as a research report. The report will be available on the University of the Witwatersrand's library website. If you would like to receive a summary of this report, I will gladly send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor at the details listed below. Suppose you have any concerns or complaints about the ethical procedures of this research study. In that case, you can contact the University Human Research Ethics Committee (Non-Medical) by telephone at +27(0) 11 717 1408 or by email at hrecnon-medical@wits.ac.za.

Yours sincerely,
LeRoy Curtis Barnes

Researcher:
Leroy Curtis Barnes, leroy.barnes1@students.wits.ac.za, +27 83 245 7009

Supervisor:
Nixon Ochara, nixon.ochara@wits.ac.za, +27 11 717 3543

Research Project Consent Form

Title of the research project: A study of the role of organisational culture in the adoption of digital platforms in South African banks

Name of researcher: LeRoy Barnes

I, ……., agree to participate in the research project investigating *the role of organisational culture in the adoption of digital platforms in South African banks*.

I agree to the following:

(Please circle the relevant options below)

The research study was explained to me. I understand what this study is about.	YES	NO
I understand that I can volunteer to take part in the study and may withdraw at any time.	YES	NO
I agree that the data collected will be used solely for research purposes.	YES	NO
I agree that my participation will remain anonymous (my name or other identifying data will not be used by the researcher in their research report).	YES	NO
I agree that other researchers may use the information I provide in my survey response (depending on their own ethics clearance being obtained) but my name and any personal information will not be used or passed on.	YES	NO

…… (signature)

…… (name of participant)

…… (date)

…… (signature)

…… (name of the researcher)

…… (date)

APPENIX B Variable-level Spearman's Rho

		CFT	PVC	DST	SUM	FCU	PEQ	MDM	DSK	IBC	CSU	PPC	CIN	ADO
Cross-Functional Teams (CFT)	Correlation Coefficient	1.000	.268**	.093	.241**	.275**	.369**	.368**	.322**	.297**	.113	.242**	.190*	.503**
	Sig. (2-tailed)	**.**	**.002**	**.299**	**.006**	**.002**	**<.001**	**<.001**	**<.001**	**<.001**	**.206**	**.006**	**.033**	**<.001**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Physical and Virtual Collaboration (PVC)	Correlation Coefficient	.268**	1.000	.223*	.262**	.140	.073	.177*	.215*	.139	.065	.127	.124	.274**
	Sig. (2-tailed)	**.002**	**.**	**.012**	**.003**	**.116**	**.413**	**.047**	**.015**	**.120**	**.465**	**.155**	**.165**	**.002**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Dual Structures (DST)	Correlation Coefficient	.093	.223*	1.000	.128	.058	.093	-.002	.162	.158	.194*	.263**	.175*	.141
	Sig. (2-tailed)	**.299**	**.012**	**.**	**.151**	**.520**	**.296**	**.980**	**.068**	**.076**	**.029**	**.003**	**.049**	**.115**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
	Correlation Coefficient	.241**	.262**	.128	1.000	.428**	.296**	.354**	.322**	.256**	.250**	.212*	.264**	.381**

Start-up Mentality (SUM)	**Sig. (2-tailed)**	**.006**	**.003**	**.151**	**.**	**<.001**	**<.001**	**<.001**	**<.001**	**.004**	**.005**	**.017**	**.003**	**<.001**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Failure Culture (FCU)	Correlation Coefficient	.275**	.140	.058	.428**	1.000	.429**	.468**	.242**	.197*	.151	.035	.160	.374**
	Sig. (2-tailed)	**.002**	**.116**	**.520**	**<.001**	**.**	**<.001**	**<.001**	**.006**	**.026**	**.090**	**.699**	**.072**	**<.001**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Power Equality (PEQ)	Correlation Coefficient	.369**	.073	.093	.296**	.429**	1.000	.601**	.285**	.361**	.094	.233**	.381**	.393**
	Sig. (2-tailed)	**<.001**	**.413**	**.296**	**<.001**	**<.001**	**.**	**<.001**	**.001**	**<.001**	**.292**	**.009**	**<.001**	**<.001**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Mutual Decision-Making (MDM)	Correlation Coefficient	.368**	.177*	-.002	.354**	.468**	.601**	1.000	.302**	.342**	.163	.296**	.361**	.293**
	Sig. (2-tailed)	**<.001**	**.047**	**.980**	**<.001**	**<.001**	**<.001**	**.**	**<.001**	**<.001**	**.067**	**<.001**	**<.001**	**<.001**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Digital Skills (DSK)	Correlation Coefficient	.322**	.215*	.162	.322**	.242**	.285**	.302**	1.000	.532**	.350**	.325**	.372**	.424**
	Sig. (2-tailed)	**<.001**	**.015**	**.068**	**<.001**	**.006**	**.001**	**<.001**	**.**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127

IT as a Business Creator (IBC)	Correlation Coefficient	.297**	.139	.158	.256**	.197*	.361**	.342**	.532**	1.000	.200*	.283**	.414**	.396**
	Sig. (2-tailed)	**<.001**	**.120**	**.076**	**.004**	**.026**	**<.001**	**<.001**	**<.001**	**.**	**.024**	**.001**	**<.001**	**<.001**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Collaboration with Start-Ups (CSU)	Correlation Coefficient	.113	.065	.194*	.250**	.151	.094	.163	.350**	.200*	1.000	.469**	.364**	.208*
	Sig. (2-tailed)	**.206**	**.465**	**.029**	**.005**	**.090**	**.292**	**.067**	**<.001**	**.024**	**.**	**<.001**	**<.001**	**.019**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Platforms and Partnerships with Competitors (PPC)	Correlation Coefficient	.242**	.127	.263**	.212*	.035	.233**	.296**	.325**	.283**	.469**	1.000	.470**	.248**
	Sig. (2-tailed)	**.006**	**.155**	**.003**	**.017**	**.699**	**.009**	**<.001**	**<.001**	**.001**	**<.001**	**.**	**<.001**	**.005**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Customer Integrations (CIN)	Correlation Coefficient	.190*	.124	.175*	.264**	.160	.381**	.361**	.372**	.414**	.364**	.470**	1.000	.341**
	Sig. (2-tailed)	**.033**	**.165**	**.049**	**.003**	**.072**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**.**	**<.001**
	N	127	127	127	127	127	127	127	127	127	127	127	127	127
Adoption (ADO)	Correlation Coefficient	.503**	.274**	.141	.381**	.374**	.393**	.293**	.424**	.396**	.208*	.248**	.341**	1.000
	Sig. (2-tailed)	<.001	.002	.115	<.001	<.001	<.001	<.001	<.001	<.001	.019	.005	<.001	.

N	127	127	127	127	127	127	127	127	127	127	127	127	127

APPENDIX C Consistency table

RQ #	State Research Question	Hyp #	State Hypothesis	Data collection detail	Data analysis method
1	How does organisational culture influence the adoption of digital platforms in South African banks?				
1.1	How does organisational culture influence the adoption of digital platforms in South African banks?	H_3	The presence of cross-functional teams in an organisation promotes the adoption of digital platforms.	Questionnaire Likert statement Q4	Correlation and Regression Analysis
1.2	How does organisational culture influence the adoption of digital platforms in South African banks?	H_4	A hybrid work environment that supports physical and virtual collaboration positively impacts the adoption of digital platforms in organisations	Questionnaire Likert statement Q5	Correlation and Regression Analysis

RQ #	State Research Question	Hyp #	State Hypothesis	Data collection detail	Data analysis method
1.3	How does organisational culture influence the adoption of digital platforms in South African banks?	H_5	The presence of dual structures in an organisation facilitates the adoption of digital platforms	Questionnaire Likert statement Q6	Correlation and Regression Analysis
1.4	How does organisational culture influence the adoption of digital platforms in South African banks?	H_6	An organisational mentality resembling a start-up and a culture that embraces failure positively influence the adoption of digital platforms	Questionnaire Likert statement Q7	Correlation and Regression Analysis
1.5	How does organisational culture influence the adoption of digital platforms in South African banks?	H_7	Power equality and mutual decision-making at all levels of the organisation promote the adoption of digital platforms.	Questionnaire Likert statement Q8	Correlation and Regression Analysis
2	How do technological factors, such as digital skills, influence the				

RQ #	State Research Question	Hyp #	State Hypothesis	Data collection detail	Data analysis method
	adoption of digital platforms in South African banks?				
2.1	How do technological factors, such as digital skills, influence the adoption of digital platforms in South African banks?	H_1	Digital skills positively influence the adoption of digital platforms in organisations	Questionnaire Likert statement Q9	Correlation and Regression Analysis
2.2	How do technological factors, such as digital skills, influence the adoption of digital platforms in South African banks?	H_2	The transformation of IT from a support function to a business creator positively impacts the adoption of digital platforms in organisations	Questionnaire Likert statement Q9	Correlation and Regression Analysis
3	How does collaboration with external entities influence digital platform				

RQ #	State Research Question	Hyp #	State Hypothesis	Data collection detail	Data analysis method
	adoption in South African banks?				
3.1	How does collaboration with external entities influence digital platform adoption in South African banks?	H_8	Collaboration with start-ups positively influences the adoption of digital platforms in organisations.	Questionnaire Likert statement Q11	Correlation and Regression Analysis
3.2	How does collaboration with external entities influence digital platform adoption in South African banks?	H_9	Collaborating with partners and competitors on shared platforms promotes the adoption of digital platforms.	Questionnaire Likert statement Q12	Correlation and Regression Analysis
3.3	How does collaboration with external entities influence digital platform adoption in South African banks?	H_{10}	Integrating customers into the innovation chain positively impacts adopting digital platforms in organisations.	Questionnaire Likert statement Q13	Correlation and Regression Analysis