Gordon Institute of Business Science
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The effectiveness of digital technology in enhancing regulatory compliance in the banking sector

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ABSTRACT

This study explores how compliance professionals in South African banks perceive and experience the effectiveness of digital compliance technologies in supporting regulatory compliance. Guided by Institutional Theory and the Technology Acceptance Model (TAM), the research adopted a qualitative, interpretivist approach using semi-structured interviews with twelve compliance professionals from traditional and digital-only banks.

The findings reveal that while digital tools enhance accuracy, traceability and monitoring, their perceived effectiveness remains moderate due to integration gaps, limited user readiness and persistent manual oversight. International pressures, particularly, coercive regulatory demands following the Financial Action Task Force (FATF) Greylisting, drive adoption but not optimisation. Behavioural factors, including user trust, digital literacy and job insecurity, significantly influence acceptance and the continued use of digital technologies.

The study theoretically contributes by bridging Institutional Theory and TAM, identifying perceived job security as an important factor that influences technology acceptance. Practically, the study offers insights for banks and regulators in aligning legitimacy-driven adoption with user-centered implementation to enhance compliance outcomes. The study concludes that digital compliance effectiveness in emerging markets depends on harmonising institutional conformity, organisational capacity and human adaptability.

KEYWORDS

Digital technology; regulatory compliance; banking

PLAGIARISM DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Hazel Sgulugulu 02 November 2025

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CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM

1. Introduction

This chapter covers the background and rationale to the research problem, research questions, research aims, research contribution and scope of the study.

1.1. Research Background and Rationale

The financial services sector is undergoing a significant transformation with the adoption and investment in digital technologies. These technologies redefine how banks deliver services and manage their risks. Regulatory Technology (RegTech) and other digital technologies, such as artificial intelligence (AI), blockchain and data analytics, present opportunities that include faster detection of suspicious transactions, adherence to compliance regulations and lower compliance costs (Kshetri, 2021; Vives, 2019).

International regulatory standard setters such as Basel and the Financial Action Task Force (FATF) have identified digital compliance tools and systems as critical enablers of market stability and financial integrity (Financial Stability Board (FSB), 2020; FATF, 2021). South Africa's financial services sector faces increasing regulatory pressures from its regulators. This has resulted in banks adopting digital technology to address these external pressures. Although the country's banking sector is mature, it is still exposed to systemic risks and vulnerabilities relating to financial crime. As a result, South Africa's banking sector faces international scrutiny (Matsepe & Van der Lingen, 2022; Thakor, 2020; Townsend & Botes, 2023).

Furthermore, banks operate in a heavily regulated environment and are supervised under the twin peaks model. This is due to this sector's critical role in the economy, mainly to protect depositors' money, promote financial stability, maintain solvency and liquidity and combat financial crime (South African Reserve Bank (SARB), 2024). Additionally, this sector is regulated by the SARB, Financial Sector Conduct Authority (FSCA) under different regulations such as the Banks Act, Financial Intelligence Centre Act and Financial Sector Regulation (South African Reserve Bank, n.d).

Although considerable investments have been made into digital compliance tools, most banks continue to face challenges of aligning these tools with regulatory requirements (Ado et al., 2024; Burdon & Sorour, 2020; Douaihy & Rowe, 2023).

Additionally, despite the increasing adoption and integration of digital technologies into regulatory compliance operations, academic research has mainly focused on adoption and implementation challenges (Charoenwong et al., 2024; Vives, 2019). Research studies highlighted the benefits of digital tools, such as enhancing operational efficiencies and improving decision-making through data-driven capabilities (Verhoef et al., 2021).

However, a gap exists in studies that evaluate the effectiveness of digital tools in improving compliance outcomes within banks in emerging markets such as South Africa (El Khoury et al., 2024; Townsend & Botes, 2023). Existing literature has not examined the impact of digital tools on compliance behaviour, specifically, whether these technologies decrease instances of non-compliance or result in reduced enforcement actions against banks (Canhoto, 2021; Douaihy & Rowe, 2023).

Literature has primarily focused on digital technology by looking at its adoption at the organisational level and this limits the view on the effectiveness of these tools. Consequently, this presents a gap in how individual compliance professionals within financial institutions experience and perceive these technologies in supporting compliance activities and functions (Ado et al., 2024). This also creates a theoretical gap in understanding how institutional factors and digital transformation merge at the level of day-to-day employee behaviour and professional judgement (Ado et al., 2024; Burdon & Sorour, 2020; Cetindamar & Abedin, 2021).

Campbell-Verduyn and Lenglet (2023) highlighted that technology adoption does not automatically result in compliance effectiveness. While institutions implement advanced suspicious-transaction monitoring systems, risk reduction depends on how compliance professionals perceive, interpret and use these tools in daily operations (Ado et al., 2024; Bankins et al., 2024; Cetindamar, 2021). Campbell-Verduyn and Lenglet (2023) further highlighted that regulatory technologies can create an illusion of control where adoption satisfies external legitimacy demands but fails to deliver substantive outcomes. Turksen et al. (2024) further warned that algorithmic opacity and accountability gaps generate new legal and ethical risks. In South Africa, evidence remains limited on whether digital tools genuinely strengthen compliance or merely serve as a checklist exercise.

This begs the question of whether digital tools used by banks effectively support the people who utilise them, being compliance professionals responsible for ensuring

that their organisation's internal and external compliance objectives are achieved. Without deep exploration and understanding of how these technologies are used and experienced by employees, banks run the risk of continuous compliance breaches, operational inefficiencies and underutilised systems. The implications of these risks may further result in increased financial crime violations, which may go undetected at banks, resulting in enforcement actions from the regulators. These may also lead to poor compliance cultures, which further destabilise the financial system (Burdon & Sorour, 2020; Canhoto, 2021; Douaihy & Rowe, 2023).

1.2. Definition of the Research Problem

1.2.1. Business Problem

South African banks are operating under heightened regulatory pressure due to the FATF Greylisting in 2023, which exposed deficiencies in the country's AML/CFT compliance framework (FATF, 2023). In response, regulators such as SARB have tightened supervisory expectations and encouraged the adoption of advanced digital compliance solutions. Consequently, banks have significantly invested in digital technologies to improve compliance efficiency, reduce manual errors and demonstrate regulatory alignment (Kshetri, 2021; Vives, 2019).

However, despite these investments, operational inefficiencies and regulatory breaches persist. During the 2023/2024 financial year, five major banks in South Africa were sanctioned for various non-compliances with the Financial Intelligence Centre Act, with collective financial penalties amounting to R61.18 million (Financial Intelligence Centre, 2024). This suggests that while digital compliance tools are being adopted, their optimisation and effective use remain limited. PwC South Africa (2023) identified regulatory compliance and digital transformation as principal strategic challenges in the sector, indicating that adoption does not automatically translate to effectiveness.

The business problem, therefore, lies in the disconnect between technology adoption and compliance outcomes. Despite digital technology adoption, banks continue to face operational inefficiencies, persistent non-compliances and reputational risks. Without understanding how compliance professionals experience and use these technologies, banks risk underutilising tools that could otherwise strengthen compliance behaviour, enhance decision-making and improve risk management (Douiahy & Rowe; Townsend & Botes, 2023).

1.2.2. Academic Problem

Although literature on digital technologies and regulatory compliance has grown substantially, academic inquiry has predominantly focused on adoption and implementation challenges instead of effectiveness and optimisation (Charoenwong et al., 2024; Vives, 2019). Studies have mainly examined how institutions adopt digital technologies to meet external regulatory pressures but have failed to assess whether these tools enhance compliance outcomes in practise (Ado et al., 2024; El Khoury et al., 2024). This creates a gap in understanding the relationship between institutional pressures, technology adoption and user-level effectiveness.

From a theoretical perspective, Institutional Theory explains how coercive, mimetic and normative pressures drive technology adoption in highly regulated environments such as banks (Matsepe & Van der Lingen, 2022). However, it does not fully capture the behavioural factors that shape how compliance professionals evaluate and use digital tools in their daily operations. Conversely, the Technology Acceptance Model (TAM) (Davis, 1989) provides insight into how perceived usefulness, ease of use and trust influence user acceptance. However, it overlooks the institutional and regulatory context that drives adoption.

This study addresses the academic problem by integrating Institutional Theory and TAM to provide a multi-level analytical lens that bridges macro-level organisational adoption and micro-level user experience. By examining how compliance professionals perceive and experience the effectiveness of digital compliance tools within South African banks, the research contributes to both theory and practise by addressing the existing gap between adoption and effectiveness (Ado et al., 2024; Campbell-Verduyn & Lenglet, 2023; Cetindamar & Abedin, 2021).

1.3. Research Purpose

This study explores how compliance professionals within South African banks perceive and experience the effectiveness of digital technologies in regulatory compliance. Additionally, the study seeks to identify opportunities for optimising digital tools to enhance regulatory compliance in heavily regulated and resource-constrained environments.

By applying a dual theory approach of integrating institutional theory and TAM, this research provides a multilevel analysis that explores the macro-level organisational

drivers of adoption and micro-level perceptions that determine utilisation and effectiveness. This addresses the gap between adoption and optimisation, ultimately making a theoretical and practical contribution relevant to regulators, banks and technology developers.

1.4. Research Objectives

To achieve the research purpose, the study was guided by the following objectives:

Firstly, to explore how compliance professionals within South African banks perceive and experience the effectiveness of digital technologies in achieving compliance outcomes. Secondly, to examine the operational, institutional and behavioural factors that influence the adoption of digital compliance tools. Lastly, to integrate insights from institutional theory and TAM as a way of assessing and understanding how adoption pressures and individual user perceptions influence effectiveness.

1.5. Scope of the Study

An exploratory study was conducted, and it focused on obtaining insights into how digital technologies enhance compliance within banks, encompassing both traditional and digital banks. The unit of analysis consisted of individual compliance professionals who had engaged with digital compliance tools in their previous and current roles. The institutions that were targeted were banks within the Gauteng province. The study focused on digital technologies used in regulatory compliance with a specific emphasis on AML/CFT regulatory obligations.

Although the scope was intended for the South African financial sector, it is acknowledged that regulatory and institutional dynamics differ across jurisdictions. The findings contained in the study may be relevant for other emerging markets. However, they are specifically focused and based on the challenges facing the South African banking sector and compliance environment, particularly after the FATF greylisting.

1.6. Research Contribution to Theory

The research aids academia by expanding the body of knowledge related to RegTech, contributing to the broader understanding of this problem in the banking sector and emerging economies, and encouraging future research on regulatory compliance and its applications (Ado et al., 2024; Cele & Mlitwa, 2024; Douaihy &

Rowe, 2023; Porfirio et al., 2024). Furthermore, the choice of a dual theoretical framework that combines Institutional Theory and TAM bridges the adoption and effectiveness gap that currently exists in digital compliance literature.

1.7. Research Contribution to Business

Exploring the banking sector offers a practical, robust framework for examining the impact of digital tools in compliance while yielding realistic findings for regulators and compliance experts in challenging environments. The insights from the research are intended to assist banks and compliance professionals with how banks can better align digital tools with employee needs, regulatory expectations and strategic goals (Cetindamar & Abedin, 2021). From a social impact perspective, this research contributes to the protection and integrity of South Africa's financial system and supports capacity building for compliance professionals.

From a practical perspective, South African banks operate under increasing regulatory scrutiny due to FATF greylisting, heightened AML/CFT obligations and growing international expectations. Banks are pressured to adopt digital compliance solutions to demonstrate regulatory alignment and institutional legitimacy. However, adoption without effectiveness creates risks of regulatory sanction, reputational harm and financial loss. By focusing on the lived experiences of compliance professionals, this study provides insights that can inform the design, implementation and optimisation of digital compliance tools in ways that support enhancing effectiveness.

1.8. Conclusion

This chapter introduced the research problem, established its relevance in the South African banking, and explained the purpose, objectives, and guiding research questions. By framing the study within Institutional Theory and the TAM, the chapter highlighted the need to understand both organisational adoption drivers and individual experiences relating to digital compliance tools. The next chapter reviews the academic literature that informs the theoretical and empirical foundation of the research.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The literature serves as a guide to clarify concepts relating to digital technology and regulatory compliance to evaluate the effectiveness of digital compliance tools from the perspective of compliance professionals working within South African banks. Previous studies have largely focused on the organisational level in assessing the adoption and implementation of digital compliance tools. This study focuses on how individual compliance professionals engage, perceive and evaluate the effectiveness of digital technologies in supporting regulatory compliance. The goal is to understand how digital tools shape or enhance day-to-day practises, decisions and behavioural responses in the face of regulatory pressures.

In assessing the effectiveness, the study goes beyond technology adoption. It examines the role of digital technology by evaluating the extent to which banks utilise digital technologies and how to optimise these tools to address the internal challenges from an operational efficiency perspective and external pressures from regulators. Going beyond adoption addresses the gap in research studies, which have often overlooked the micro-level factors such as employee adoption behaviour, usability challenges, lack of digital skills and individual impact on compliance outcomes.

The literature review draws upon Institutional Theory and TAM to explore how compliance professionals in South African banks perceive and experience digital tools in achieving regulatory compliance outcomes. Additionally, the study aims to understand why and how financial institutions respond to external regulatory pressure (Ado et al., 2024). The literature concludes by finding the link between digital technology and regulatory compliance as key constructs.

2.2. Regulatory Compliance

2.2.1. Definition and application of Regulatory Compliance

Regulatory compliance has been positioned as an evolving concept shaped by regulatory norms, complex and evolving regulatory frameworks, which influence the extent of digital technology adoption within financial institutions such as banks (Burdon & Sorour, 2020; Hashmi et al., 2015).

Hashmi et al. (2015) conceptualised regulatory compliance as a structured system of rules and standards that shape institutional behaviour within the financial sector. This perspective underscores the prescriptive nature of compliance, where external regulatory mandates primarily drive adherence. However, recent studies (Olaiya, 2024) highlight a shift toward a risk-based and technology-enabled compliance culture where compliance extends beyond rule-following to proactive governance and reputational management. This evolution is particularly relevant in digitally transforming financial institutions, where compliance effectiveness depends on regulatory alignment and adaptive technological capacity.

This conceptualisation of compliance as both a regulatory and behavioural construct has been further developed by Burdon and Sorour (2020) and Douaihy and Rowe (2023) who looked to Institutional Theory to explain how organisational contexts and norms shape compliance practises within digital environments.

The external pressures were classified as being coercive (regulatory obligations), normative (professional standards) and mimetic (industry peer benchmarking) (Burdon & Sorour, 2020; Douaihy & Rowe, 2023). Furthermore, Rodríguez-Espíndola et al. (2022) and Schreieck et al. (2022) further highlighted that the external factors were known to influence how institutions adopt and implement compliance controls and processes. Von Solms (2021) further expanded on this construct by highlighting that compliance cannot be separated from the organisation's strategy and culture. Subsequently, this explains why regulatory compliance comprises processes and procedures that drive company conduct and shape its compliance culture to respond to regulatory pressures.

Institutional pressures within organisations are often carried out by individuals such as compliance offices, risk managers and internal auditors. The professional's judgement and behavioural choices translate into practise. These micro-level interactions form what Von Solms (2021) described as the behavioural layer of institutional compliance culture where organisational norms are interpreted, negotiated and applied it every day work. Consequently, although regulatory compliance is often framed at the organisational level, there is growing literature that recognises that individual behaviours are central to achieving compliance effectiveness (Ado et al., 2024; Cetindamar & Abedin, 2021; Nikou et al., 20222; Porfirio et al., 2024).

Furthermore, existing literature provides limited insights on how compliance is implemented at the individual level, specifically in an emerging market context. Matsepe and Van der Lingen (2022) explored the local adoption drivers to demonstrate the unique dynamics and applications within the South African compliance context. The authors highlighted that although external regulatory and market pressures drive the adoption of emerging technologies within South African banks, institutional factors did not enable the tools to be used effectively by compliance professionals, demonstrating the gap between adoption and operational impact.

Consequently, this presents an opportunity to explore the employee-level side of compliance and understand how compliance professionals contribute to achieving compliance outcomes.

2.3. Digital Technology

2.3.1. Definition and context-specific applications

Studies defined digital technology to comprise a broad range of tools, including digital platforms, Artificial Intelligence (AI), blockchain, cloud computing and big data analytics (Chang et al., 2020; Grassi & Lanfranchi, 2022; Vives, 2019). The rapid evolution of these technologies has generated diverse interpretations and applications across scholarly disciplines, reflecting their contextual application and varied objectives that drive adoption. Furthermore, authors agree and acknowledge that these technologies have been regarded as transformative across industries, with context-specific definitions across disciplines. In education, for example, digital tools are primarily framed as enablers of virtual learning (Mukul & Büyüközkan, 2023), whereas in business and management, they are more closely associated with agility, process efficiency, and innovation (Kshetri, 2021; Rodríguez-Espíndola et al., 2022; Thakor, 2020).

The lack of a uniform definition underscores the significance of understanding context-specific applications and implications of digital technology. For purposes of this study, digital technology is defined as tools that automate, streamline and enhance compliance and regulatory functions within financial institutions. These include RegTech such as monitoring systems, AI-driven risk assessment, cloud-based reporting tools and digital identity verification.

In academia, digital technology has been studied across several disciplines such as organisational change, education, human resources, business and management. The focus of these studies has largely looked at the role of digital technology in transforming parts of an organisation, such as governance, performance and decision-making (Canhoto, 2021; Kshetri, 2021; Rodríguez-Espíndola et al., 2022; Thakor, 2020). Furthermore, digital technology has been widely studied and found to be rapidly adopted and effectively implemented in developed economies with sophisticated infrastructures (Kshetri, 2021). Consequently, limited research explores factors that enable the successful adoption and effectiveness of digital technologies in emerging markets and specifically, within the financial sector in South Africa (Kshetri, 2021; Sturgeon, 2021).

Research scholars acknowledged that digital compliance tools offer improved operational efficiency and enhanced reporting and compliance processes (Kshetri, 2021; Sturgeon, 2021). Additionally, these technologies were said to enable real-time detection of suspicious activities, reduce manual labour workload, and support effective regulatory responses (Canhoto, 2021). Moreover, literature acknowledged that the effective implementation of RegTech solutions alleviates external regulatory pressures through automatic tasks (Bankins et al., 2024).

Despite these benefits and opportunities, realising potential benefits relies on the institutional and regulatory environment and the organisation's readiness and acceptance of new technologies by staff members. This underscores the importance of exploring the perceptions of compliance professionals alongside the institutional, behavioural and regulatory factors that ensure the successful implementation of these tools.

2.3.2. Digital Technology in Regulatory Compliance Functions

Digital technologies have become increasingly significant in business, particularly for strengthening compliance functions and enhancing operational efficiencies. These technologies have been deployed to detect suspicious activity, reduce manual errors and improve overall risk and governance (Sturgeon, 2021). Furthermore, digital technologies support effective and timely decision-making by providing accurate, real-time data, which enhances responsiveness to regulatory requirements. The use of these technologies is motivated by the institutional pressures faced by financial

institutions, which are required to demonstrate transparency, credibility and control in highly regulated environments (Burdon & Sorour, 2020; Douaihy & Rowe, 2023).

However, authors agreed that the effective implementation of these tools depends not only on technological capabilities, but on the regulatory and institutional environment (Canhoto, 2021; Douaihy & Rowe, 2023). Rodriguez-Espindola et al. (2022) highlighted challenges such as limited digital infrastructure and workforce skills, which were highlighted as significant barriers to adoption and integration of digital solutions. Charoenwong et al. (2024) further added that despite the high initial cost of implementing digital solutions, these tools offered long-term efficiency gains provided that the institutional context was supportive. This reflects a broader trend towards prioritising innovation over traditional approaches as a way of enhancing regulatory compliance. However, several barriers persist. Research has attributed high implementation costs, concerns over data privacy and ambiguity surrounding regulatory standards as critical obstacles (Cele & Mlitwa, 2024; Quach et al., 2022).

The benefits and opportunities offered by these tools are highlighted in 2.3.1. above with empirical evidence relating to their impact from studies conducted. Furthermore, literature acknowledged that the tools have the potential to address the external pressures that financial institutions face from regulators and this can result in effective adoption and implementation of RegTech solutions.

Despite the benefits and opportunities offered by RegTech solutions, challenges exist.

2.3.3. Challenges of Digital Technology: Emerging markets and South Africa

Research studies relating to digital technology and regulatory compliance have largely focused on the contexts of developed countries with stable institutions, advanced digital ecosystems and mature regulatory frameworks (Chang et al., 2020; Von Solms, 2021). However, emerging markets such as South Africa operate under different institutional contexts which are often dominated by limited capacity, limited digital infrastructures and regulatory fragmentation. Douaihy and Rowe (2023) noted that SupTech and RegTech solutions are increasingly being adopted and implemented in developing countries. However, effectiveness is often impacted by institutional resistance and the gap that exists between innovation and regulatory readiness (Bakhos & Rowe, 2023; Burdon & Sorour, 2020).

Although digital compliance tools come with potential advantages, their adoption and implementation in emerging markets such as South Africa have been accompanied by significant and unique challenges, highlighting the urgency and strategic importance.

2.3.3.1. Transparency and Trust

Transparency and trust consistently emerge as critical determinants of employees' willingness to adopt digital compliance tools. Studies suggest that perceptions of inadequate transparency and concerns over data privacy can weaken confidence in automated decision-making processes, thereby undermining technology adoption (Balakrishnan & Dwivedi, 2021; Bankins et al., 2024; Cele & Mlitwa, 2024; Glikson & Woolley, 2020). Within compliance functions, such mistrust manifests in resistance, prompting professionals to revert to manual or legacy systems despite potential efficiency gains.

2.3.3.2. Institutional and Regulatory Constraints

Douaihy and Rowe (2023) observed that regulators in emerging markets are faced with fragmented legal frameworks and resource constraints. Furthermore, to Turksen et al. (2024) noted that these create uncertainty for banks and lead to slow adoption of new technologies. Consequently, this has created urgency for supervisory approaches that balance adaptability and encourage innovation.

2.3.3.3. Training and Organisational Capacity

Literature highlighted that the effective use of digital compliance tools requires a significant investment, staff training and effective change management strategies for effective adoption and implementation. However, South Africa is faced with uneven digital maturity and budget constraints, resulting in delays in implementation and underutilised systems (Matsepe & Van der Lingen, 2022).

The TAM model in this context helps to explain why adoption may fail to translate into effectiveness. If the perceptions of compliance professionals highlight limited usefulness and complexity or they lack sufficient training and organisational support, they are unlikely to integrate the tools into their daily tasks and routines, even in the face of regulatory pressure (Ado et al., 2024; Cetindamar & Abedin, 2021).

Highlighting the gaps and challenges addressed above becomes crucial due to the scrutiny South African banks face from local and international regulators and continued investments into RegTech solutions without proven impact and

effectiveness become a risk where compliance outcomes are not achieved. This evidence is useful in guiding regulatory expectations and policy reforms.

It is therefore critical to address the above challenges not only for achieving regulatory compliance objectives but to realise the wider economic benefits of digital transformation in the South African banking sector. Effective strategies and timely interventions, such as clear regulatory guidance, targeted training and investment in AI, promise greater efficiencies and can strengthen the integrity and soundness of the financial system.

2.3.3.4. Interaction between Digital Technology and Compliance Professionals

Digital technologies utilised in compliance functions are designed to support and improve monitoring, regulatory reporting, manual labour and supporting effective and timeous decision making. However, the impact and effectiveness of these tools heavily rely on how they are perceived and experienced by users (Balakrishnan & Dwivedi, 2021; Bankins et al., 2024; Glikson & Woolley, 2020). Bankins et al. (2024) highlighted that at the individual level factors such as employee behaviour towards technology, interaction and perception with managing the algorithm and interaction between the human and AI are at the core of understanding the role that digital technology plays in employees' perceptions and experiences. The authors' study focused its applications on organisational behaviour; however, further applications, practical elements and insights of the study also applied to the compliance context.

Consequently, this means that compliance professionals who engage with these tools need to build trust and learn how to interact with these tools. Where digital tools are perceived to enhance the employee’s ability to make better decisions and judgment, levels of adoption are likely to increase (Bader & Kaiser, 2019; Bankins et al., 2024; Glikson & Woolley, 2020). On the other hand, if these systems are perceived to be difficult to use and understand, employees are likely to resist adoption and revert to manual processes. This is supported by Porfirio et al. (2024), who argued that behavioural factors such as perceived usefulness, individual motivation and ease of use influence the adoption and effectiveness of digital compliance tools.

Additionally, normative pressures, which are based on professional standards, the culture of compliance within an organisation and peer expectations, influence these individual-level dynamics. Compliance professionals may feel compelled to use certain technologies not only because of rules but also because industry peers and bodies dictate that digital transformation is an expected norm (Burdon & Sorour, 2020). This level of analysis is essential to understanding why digital tools may be effective and succeed in one institution but fail in another, even when they are both faced with the same external pressures.

2.3.3.5. Individual Level Experience of Digital Technology

Existing research has largely focused on the use of digital technologies at the organisational level, focusing on adoption and implementation. However, there is growing literature which acknowledged that the individual-level user experience plays a critical role in assessing whether such tools are effective on a day-to-day basis behaviour (Ado et al., 2024; Bader & Kaiser, 2019; Cetindamar, 2021). This has created a gap in understanding how individual employees (compliance professionals) experience digital technologies. It is important to understand this lens as compliance plans and outcomes are implemented through professional judgement, discretion and behaviours of employees who engage with these tools as part of their daily responsibilities. The under-researched elements present limitations in understanding environments where professional judgement and discretion are a focal point to compliance behaviour (Ado et al., 2024; Bader & Kaiser, 2019 Cetindamar, 2021). Therefore, it is critical to explore how individuals in compliance roles interact, perceive, use and interpret these tools in evaluating their true effectiveness.

2.3.3.6. Perception and Trust

Trust as it applies to digital technology has been highlighted to be a recurring and growing area of interest in literature (Balakrishnan & Dwivedi, 2021; Bankins et al., 2024; Cele & Mlitwa, 2024; Glikson & Woolley, 2020). Bankins et al. (2024) highlighted that perceptions around transparency and algorithms have a direct impact on an employee's willingness to use digital technologies such as AI. The issue of transparency was emphasised as critical in compliance environments due to the high-stakes nature of decision-making that has legal and ethical implications (Bader

& Kaiser, 2019; Pethig & Kroenung, 2022). If the outputs are not aligned or easily explained to regulators, compliance professionals may resist relying on these tools.

This lens is aligned to Ado et al. (2024), who highlighted that compliance professionals' perceptions of effectiveness, considered with leadership support and organisational culture, play a significant role in adopting and implementing digital tools. Similarly, Centindamar and Abedin (2021) looked at digital literacy as a multifaceted approach. The authors suggested that an employee's ability to trust, understand and effectively use digital technology is a driver and significant factor for digital transformation success. However, emerging markets such as South Africa struggle with skills gaps and resource challenges (Cele & Mlitwa, 2024).

2.3.3.7. Job Redesign and Professional Identity

A significant theme has been how digital technologies redefine job specialisations and roles (Marikyan et al., 2022). Bankins et al. (2024) emphasised that the adoption of digital technologies such as AI, triggers a different way of doing things and brings complexities around job role design, control and job satisfaction. This means that though compliance professionals may find that digital compliance tools help reduce manual labour and enhance productivity, the same tools may have limitations and pose challenges relating to compliance-specific processes requiring the professional judgement of a compliance employee.

This tension has become evident in South Africa's financial services sector and more especially within banking, where local and global regulatory pressures influence banks to adopt digital technologies, often without sufficient consultation and training of relevant staff (Douaihy & Rowe, 2023). Consequently, there is an incongruency between organisational adoption and individual acceptance and this results in compliance objectives not being achieved.

2.4. Theoretical Framework: Institutional Theory and TAM

The theoretical framework carefully evaluates the effectiveness of digital technologies within regulatory compliance. This research is underpinned by two theories: Institutional Theory and TAM. Institutional Theory explains how the pressure from regulators, professional norms and industry peers influences the adoption of digital compliance technologies in banks. Conversely, TAM provides an understanding of how individual behaviours, perceptions and experiences influence the use of digital technologies. Collectively, these frameworks provide a dual

perspective that links institutional drivers of adoption with the lived experiences of compliance professionals.

2.4.1. Institutional Theory

Institutional Theory provides a significant view of how financial institutions respond to external regulatory pressure. It provides a view which highlights that organisations adopt and implement certain policies, behaviours, processes and governance structures as a way of responding to the coercive (laws and regulations), normative (industry standards and shared values) and mimetic pressures from industry peers (Burdon & Sorour, 2020; Hashmi et al., 2015). This assertion is further supported by Murinde et al. (2022) and Olaiya et al. (2024), who highlighted that the pressure from regulators influenced how financial institutions chose to comply with regulatory obligations. Consequently, the rapidly evolving financial sector requires financial institutions to adopt compliance practises that align with regulatory requirements, which often require effective digital solutions.

The findings discussed above in sections 2.3 and 2.4 on regulatory compliance, digital technology as constructs underpinning this study and the link between the two, further strengthen the application of institutional theory within the banking environment by arguing that institutions are influenced by the need to meet regulators' obligations, professional standards, pressure from industry peers and not only by efficiencies (Burdon, & Sorour, 2020).

When linked to digital compliance tools, this view demonstrates why the adoption of digital technologies does not always align with actual impact and effectiveness. Banks implement digital compliance tools due to institutional pressures and not directly as an avenue to address legal and regulatory requirements. This validates the observation made by Douaihy and Rowe (2023), where the benefits and limitations of Reg Tech are observed by compliance professionals.

According to Burdon and Sorour (2020), there is limited insight into the institutional pressures that influence the behaviour of employees. Compliance professionals frequently operate under multiple layers of pressure, including internal policies, local and global regulations and industry standards (Burdon & Sorour, 2020). These pressures influence and impact how they interpret compliance requirements, use technology and balance competing interests.

Institutional Theory, therefore, supports the study in examining how institutions adapt under regulatory pressure and how digital technology plays a role in reinforcing and shaping compliance practises of financial institutions (Burdon & Sorour, 2020). By applying a micro-level approach, this study assesses how individual compliance professionals in banks use digital technology to make decisions and address organisational compliance outcomes. Understanding this behavioural response is key to evaluating the effectiveness of digital technologies in supporting sustainable compliance outcomes. It is through this lens that institutional theory seeks to explain why organisations adopt digital compliance tools which may not effectively address how individuals experience and engage with such tools once implemented.

Consequently, institutional theory alone is unable to explain the importance of the individual level lens of compliance professionals relating to their experiences, perceptions and use of digital technology. Further, although the theory compensates for institutional-level responses, it has limitations on how compliance professionals engage, interpret and interact with digital tools in their daily roles (Burdon & Sorour, 2020; Olaiya et al., 2024). This presents a critical gap as institutional actions are executed by individuals.

2.4.2. Technology Acceptance Model (TAM)

To address the above gap, the Technology Acceptance Model (Davis, 1989) is incorporated to explore the individual behavioural dynamics of compliance professionals. TAM suggests that an individual's intention to use technology is influenced by its perceived usefulness and ease of use, which are beliefs that enhance job performance (Davis, 1989). Over time, TAM has been expanded to include elements such as trust and perceived risk. However, the critical element remains: employees will willingly adopt technology if they find it valuable for their role, performance and whether they perceive it to be user-friendly.

The application of TAM within regulatory compliance provides a view on why some digital tools succeed when others fail. Ado et al. (2024) highlighted that the effectiveness of digital compliance tools is often determined by user perceptions. In circumstances where systems and tools are perceived to be complex to use, understand, or misaligned to daily tasks, there may be resistance to adopting them. This view is aligned with Centindamar and Abedin (2021), who emphasised that digital literacy is a critical factor in influencing whether professionals perceive digital

tools as usable and beneficial. It is therefore crucial to understand these user-level factors, which influence the effectiveness and long-term adoption of digital compliance tools (Ado et al., 2024; Cetindamar, 2021).

Furthermore, TAM provides insights into the adoption of blockchain in banking. According to Garg et al. (2021), benefits such as a reduction in fraud cases, improved transparency and enhanced efficiencies influence the adoption of blockchain technology in financial services. These perceived benefits directly link to TAM's construct of perceived usefulness, and this reinforces that user attitudes are critical to realising the opportunities and benefits of digital compliance tools.

2.4.2.1. Application of individual-level experience to TAM

The TAM model provides a deeper understanding of individual/user-level experiences. TAM is based on the perceived usefulness and perceived ease of use, which influences the user's intention to use the system (Davis, 1989). The findings made by Bankins et al. (2024) align with TAM and highlight that employees perceive digital tools such as AI to be useful if they are user-friendly, improve their productivity and are integrated into their existing systems. Conversely, if employees perceive these tools to be complex to use and lack the understanding of how they fit into their roles and daily tasks, there is a low chance of adoption and effective use of the tools.

Applying this to the compliance context, TAM provides an understanding of why the adoption and effective use of digital technology fails to achieve its purpose despite significant investment by banks (Campbell-Verduyn & Lenglet, 2023; Matsepe & Van der Lingen, 2022). If compliance officers do not perceive digital compliance tools to support them in meeting regulatory requirements, reducing manual labour and increasing productivity, they are likely to integrate these tools into their daily tasks. This emphasises the importance of assessing individual perceptions, organisational support and training in examining the effectiveness of digital technologies (Ado et al., 2024; Cetindamar & Abedin, 2021).

The literature presented in this section has highlighted that in assessing the effectiveness of digital technologies, it is critical to approach it from an individual level of the users. The perceptions of usefulness and ease of use play a critical role in the adoption and optimisation of these tools. Furthermore, Bankins et al. (2024) expanded on this view by looking at digital technology, human interaction, job roles and algorithm trust. TAM and Institutional theory, therefore, signify the importance of

these findings and the need to explore how compliance in South African banks interacts and integrates digital compliance tools in their unique regulatory and organisational contexts.

2.5. Linking Digital Technology and Regulatory Compliance

The 2008 financial crisis marked a turning point for the global financial sector, bringing in significant market shifts and enabling the rapid development of digital technologies (Ado et al., 2024; Canhoto, 2021; Olaiya et al., 2024). These technological advancements coincided with heightened regulatory demands, compelling financial institutions to transition from manual legacy systems to innovative, dynamic and affordable digital solutions (Charoenwong et al., 2024; Verhoef et al., 2021).

Consequently, RegTech, also known as digital compliance tools, have been found to provide advantages such as predictive analytics, streamlined regulatory reporting, real-time transaction monitoring and improved customer due diligence (Avenyo et al., 2024; Chang et al., 2020; Vives, 2019). Theoretically, these tools are designed to support compliance functions and reduce instances of non-compliance while enabling institutions to remain agile in a rapidly evolving and demanding regulatory environment.

However, the successful implementation and impact of digital compliance tools does not rely on technical capabilities alone. A growing body of research highlighted that the effectiveness of digital tools is also influenced by how its users (compliance professionals) perceive, experience, engage and interpret these tools (Ado et al., 2024; Porfírio, 2024). Therefore, it is unclear whether digital tools simplify compliance, empower compliance professionals to meet their obligations efficiently, or whether they create an added layer of complexity, generate resistance and fail to address compliance requirements. These are some of the critical questions that this research seeks to answer.

The classification presented and discussed in section 2.2 being regulatory compliance, becomes even more important in assessing digital technology's role in compliance. Digital compliance tools appear to address compliance obligations from a surface level, such as the generation of an alert to assist with reporting however, they do not go beyond what is required in analysing and making a decision that requires human judgement and context. This presents a limitation of these tools.

From a compliance professional's perspective, the effectiveness of digital tools should go beyond achieving compliance outcomes and address context-specific situations that compliance professionals are confronted with when engaging with these tools (Hashmi et al., 2015).

Olaiya et al. (2024) emphasised the distinction presented by Hashmi et al. (2015) by highlighting that emerging technologies in the field of compliance, such as AI and big data analytics, are further posing a regulatory burden to financial institutions. Though the author acknowledges the benefits and opportunities presented by these technologies, the author failed to see how these technologies address the full normative requirements as highlighted by Hashmi et al. (2015).

The gap and limitation of digital technologies raised above is supported with evidence from a developing country context that highlighted that institutional pressures (coercive, normative and reputational) played a significant role in getting financial institutions to adopt Reg Tech (Douaihy & Rowe 2023). Banks have largely adopted these digital technologies, and this is due to international pressure from global watchdogs and pressure from local regulators and other correspondent banks that impose more stringent regulations that local banks have to align with. Despite the benefits and opportunities of these digital tools, compliance professionals continue to face challenges such as incomplete data sets, inaccurate data and integration with legacy systems. These are also undermined and overlooked when testing the effectiveness of Reg Tech solutions. Furthermore, compliance professionals perceive these tools to be effective for eliminating routine, repetitive and time-consuming manual tasks but not effective from a strategic ongoing monitoring perspective. This challenges the long-term requirement from an effective perspective, which compliance is underpinned by (Douaihy & Rowe, 2023).

Although most of the existing literature explores digital transformation and RegTech adoption from an organisation perspective, it often overlooks the lived experiences and behavioural responses of individual employees, particularly in emerging markets (Douaihy & Rowe, 2023; Porfírio, 2024). Additionally, research on how digital tools is optimised for adoption is still developing. Specifically in environments where banks face legacy system limitations, resource constraints and evolving compliance cultures (Gao & McDonald, 2022).

From a practical perspective, this presents a gap and an opportunity. More efficient and sustainable compliance practises are urgently needed in South Africa, specifically in the wake of the FATF greylisting. However, banks in the region differ in their resource capabilities, digital solutions and many lack standardised frameworks for integrating digital solutions into their compliance strategies (Cele & Mlitwa, 2024; Porfirio et al., 2024). Therefore, understanding how digital tools are perceived and experienced by compliance professionals is critical for informing practical strategies to improve regulatory outcomes (Ado et al., 2024).

This research adopts an individual-level perspective supported by Institutional Theory and TAM to explore the perceptions of compliance professionals in South African banks regarding the adoption and effectiveness of digital compliance technologies. Institutional Theory aided our understanding of how external regulatory pressures shape organisational responses, while TAM provided insights into how perceived usefulness and ease of use influence individual acceptance and optimisation of digital tools. Collectively, these theories have presented a multi-level lens to assess both the structural pressures and internal user dynamics that underpin successful digital compliance.

Ultimately, this study contributes to addressing an underexplored area in compliance literature by focusing not only on the availability or adoption of technology, but also on the social, behavioural and contextual factors that influence its practical effectiveness in emerging banking sectors.

2.5.1. Integrating Institutional Theory and TAM

Although Institutional Theory and TAM operate at different levels of analysis, they are complementary for this study. Institutional Theory explains macro-level drivers of digital technology adoption, such as regulatory mandates, competitive pressures, and professional norms. TAM, on the other hand, explains micro-level experiences of compliance professionals who engage with these technologies in practise.

For example, a bank may adopt blockchain-based compliance tools due to coercive pressures from regulators (Institutional Theory), but the actual effectiveness of those tools will depend on whether compliance officers perceive them as useful and easy to use (TAM). In this way, Institutional Theory explains the why of adoption, while TAM explains the how of usage and optimisation.

This multilevel perspective is echoed by Bankins et al. (2024), who highlighted that organisational effectiveness with AI depends both on institutional dynamics and on individual perceptions of fairness, transparency, and collaboration. Integrating these frameworks, therefore, allows this study to capture the complex interplay between external regulatory pressures and internal user experiences, providing a holistic lens for evaluating digital compliance technologies in South African banks.

By integrating Institutional Theory and TAM, this research provides a combined theoretical framework that enables the research to explore why banks adopt digital technologies in response to regulatory pressures and explore how individual compliance professionals perceive, use and experience digital tools which ultimately determines their practical effectiveness – this is explained by the application of TAM (Ado et al., 2024; Douaihy & Rowe, 2023; Porfirio et al., 2024).

Furthermore, the integrated theoretical framework will enable an in-depth exploration of the factors driving adoption and the behavioural patterns affecting implementation and outcomes. This ensures that the research encompasses both structural and experiential aspects of regulatory compliance in the digital era. By applying these complementary lenses, this study addresses the research gap identified in the literature: the need to move beyond adoption and efficiency, toward understanding the lived experiences of compliance professionals and their role in optimising digital compliance tools in an emerging market context.

2.6. Conclusion

The literature review has highlighted a significant relationship between digital technology and regulatory compliance. Digital Technology is regarded as a mechanism that financial institutions adopt to respond to the complex and dynamic nature of the regulatory environment. Digital technology innovations such as RegTech, blockchain and AI are influencing compliance practises by enabling proactive monitoring, improving efficiency and reducing manual errors. Such technologies can be regarded as enablers of regulatory adherence within the financial sector.

However, despite their capabilities and potential, the effective use and implementation of these solutions is hindered by high costs, alignment with regulations and data privacy concerns. Additionally, although existing research demonstrates efficiency benefits, there is limited empirical evidence that assesses

the ability of digital tools to improve actual compliance outcomes such as fewer non-compliance incidents or reduced administrative fines or lower enforcement actions. This is particularly critical and relevant in the South African context where digital transformation in banking is progressing unevenly yet regulatory scrutiny and compliance expectations continue to rise.

Furthermore, although the benefits digital technology tools offer to increase efficiency and compliance outcomes, there is a gap in understanding how compliance professionals experience and use these technologies in practise. Current research focuses on organisational or system level adoption and has overlooked the individual perceptions, attitudes and day-to-day realities of those responsible for implementing compliance requirements. By exploring how professionals view the usefulness and efficacy of digital compliance tools, this study aims to close that gap.

Collectively, the studies illustrate a merger between compliance, RegTech capabilities and the institutional context in which they are utilised and applied. Compliance obligations are shaped by normative and regulatory pressures, while digital tools are introduced as strategic responses to reduce costs and manage the growing regulatory burden. Yet from a compliance professional's perspective, effectiveness goes beyond the mere adoption of digital solutions: it depends on whether these technologies help the organisation meet its compliance objectives, respond to external regulatory pressures and overcome internal operational constraints (Burdon & Sorour, 2020; Douaihy & Rowe, 2023; Hashmi et al., 2015; Olaiya, 2024).

Building on the above, the study seeks to close the identified gap by exploring how compliance professionals in South African banks perceive and experience the effectiveness of digital technologies in supporting regulatory compliance. By applying both Institutional Theory and TAM, the research aims to connect the external institutional forces that drive adoption with the internal behavioural and perceptual factors that influence actual use and effectiveness. This approach strengthens the link between digitalisation, regulatory practice and professional experience, directly addressing the research problem outlined in Chapter One.

CHAPTER 3: RESEARCH QUESTIONS

3.1. Introduction

This chapter outlines the research questions that guide the study and directly build on the theory presented in Chapter 2. As discussed, the literature established that the effectiveness of digital compliance technologies is shaped by the interaction of institutional forces, behavioural perceptions and operational practicalities (Burdon & Sorour, 2020; Douaihy & Rowe, 2023; Kshetri, 2021).

Qualitative inquiry enables the exploration of these complex relationships through the lived experiences of compliance professionals, allowing deeper insights into how digital compliance technologies are understood and applied in practise (Creswell & Poth, 2018; Saunders et al., 2019). The research questions, therefore, aim to address both the micro-level behavioural responses and macro-level institutional pressures.

3.1.1. Research Question 1

How do compliance professionals perceive and experience the effectiveness of digital compliance technologies in supporting regulatory compliance?

This research question examines perceptions of effectiveness by focusing on how compliance professionals perceive and experience digital tools in their daily work practises. As established in Chapter 2, TAM highlights that perceived usefulness and ease of use are key determinants of acceptance and perceived effectiveness. In compliance environments, these perceptions are influenced by the degree to which digital tools enhance accuracy, efficiency and transparency (Rodriguez-Espindola et al., 2022; Sturgeon, 2021).

However, several studies have highlighted that while digitalisation improves operational constraints, it often fails to replace the interpretive and ethical judgment inherent and required in compliance decision-making (Porfirio et al., 2024; Von Solms, 2021). Similarly, Institutional Theory literature emphasises that adoption in emerging markets often results in coercive pressures where regulators compel institutions to adopt digital tools for legitimacy rather than for genuine strategic transformation (Burdon & Sorour, 2020; Douaihy & Rowe, 2023).

This question, therefore, aims to uncover how compliance professionals reconcile these tensions: whether they perceive digital systems as enabling meaningful compliance outcomes or as administrative tools that achieve procedural legitimacy without deep operational impact (Ado et al.,2024; Kshetri, 2021). The exploration provides insight into how institutional coercion and individual perception intersect to shape the perceived effectiveness of digital compliance systems in South African banks.

3.1.2. Research Question 2

What institutional pressures, behavioural and operational factors enable or hinder the effective adoption and use of digital compliance tools by individual employees in banks?

The second research question investigates the enablers and barriers affecting the adoption and sustained use of digital compliance tools. As discussed in Chapter 2, Institutional Theory (Burdon & Sorour, 2020) explains that technology adoption is influenced by coercive, normative and mimetic pressures, particularly in highly regulated industries such as banking. Regulatory expectations from authorities like SARB and FIC create coercive pressures that drive digital adoption to maintain institutional legitimacy (Douaihy & Rowe, 2023; Murinde et al., 2022).

Concurrently, behavioural and operational factors determine whether these technologies are effectively utilised. Studies have highlighted that user trust, training and continuous support are essential for sustained adoption (Bankins et al., 2024; Cetindamar & Abedin, 2021). From a TAM perspective, behavioural intention is shaped by perceived usefulness and ease of use (Davis, 1989), while institutional factors influence how these perceptions are formed and reinforced.

Operational practicalities such as infrastructure, integration and leadership support influence adoption outcomes (Cele & Mlitwa, 2024; Matsepe & Van der Lingen, 2022). These factors reflect what Burdon and Sorour (2020) referred to as institutional duality, where technology implementation serves both external legitimacy and internal efficiency goals.

Accordingly, this question explores how institutional, behavioural and operational dynamics interact to enable or hinder the effectiveness of digital compliance

adoption. It further investigates whether the adoption of digital tools in South African banks represents strategic transformation or reactive compliance alignment.

3.2. Theoretical Framework: Institutional Theory and TAM

The conceptual framework integrates Institutional Theory and TAM to explain how compliance professionals experience the effectiveness of digital technologies in regulatory compliance. It combines institutional pressures (coercive, normative and mimetic) with individual perceptions of technology (perceived usefulness and ease of use) to illustrate how external and behavioural factors influence digital compliance practises.

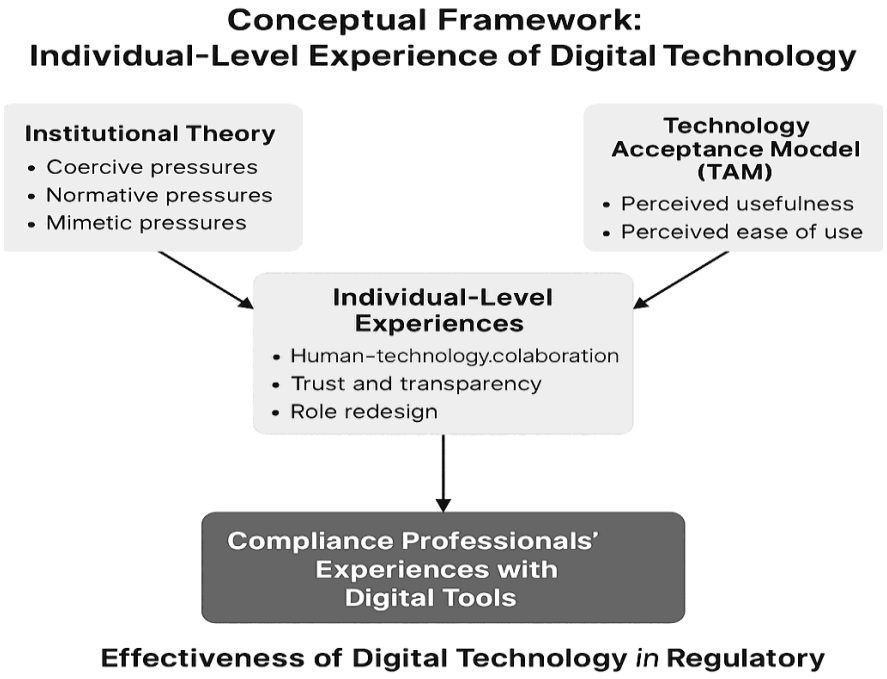

Figure 1: A conceptual framework: Individual Level Experience of Digital Technology

Source: (author's own interpretation, 2025)

3.3. Conclusion

The research questions provide a coherent framework for understanding the complex relationship between institutional legitimacy, technological capability, and human behaviour within digital compliance transformation.

Research Question 1 focused on professionals' perception of the effectiveness of digital tools, while Research Question 2 examined the institutional, behavioural and operational factors that influence adoption and use. Collectively, these questions bridge the theoretical gap identified in Chapter 2 by integrating Institutional Theory

(Burdon & Sorour, 2020; Douaihy & Rowe, 2023) and TAM (Davis, 1989) to contextualise digital compliance within South African banking.

This dual approach allows the study to contribute both to theoretical understanding by extending existing models to compliance contexts and to practical improvement by identifying actionable levers for strengthening the adoption and optimisation of compliance tools.

CHAPTER 4: RESEARCH METHODOLOGY

4.1. Introduction

This chapter outlines the research methodology followed in the study. This section starts with a discussion of the philosophical premise and approach for the study. It then moves to research design, population/sampling/selection criteria, level and unit of analysis, data gathering process and research instrument. The study then discusses analytical procedures, followed by the data analysis approach and research quality. Finally, the limitations of the methodology are discussed and acknowledged. The purpose of this chapter is to elaborate on the research methodology used to address the research questions outlined in Chapter 3 above. The research followed a qualitative approach to explore the effectiveness of digital technology in enhancing regulatory compliance within South African banks.

4.2. Purpose of Research Design

Given that digital technology is an evolving field of study in regulatory environments, it was appropriate for the study to explore how compliance professionals in South African banks perceive and experience the effectiveness of digital technologies. According to Gill (2020), a qualitative approach explores and attempts to understand human experiences and ultimately unearths insights from the participants. This study employed a qualitative research design method to explore how digital technology has shaped regulatory compliance in South Africa. Since various institutional and technological factors influence regulatory compliance, a qualitative method enabled a nuanced exploration of lived experiences and perceptions to understand how compliance officers perceive, navigate and interpret regulatory tools (Gill, 2020).

4.3. Research Philosophy

Interpretivism assumes that reality is shaped by social constructs and is subjective. In contrast, positivist paradigms make use of objective and measurable approaches and favours quantifiable measures such as compliance costs. This study employed an interprevist approach to explore perceptions and experiences of compliance professionals and emphasising the subjective interpretation of social realities (Saunders & Lewis, 2018). This paradigm was appropriate since the aim of the study was to understand human experiences, perceptions and meanings within a specific context (Saunders et al., 2019). Within the context of this study, interpretivism

allowed for a deeper exploration into understanding how compliance professionals attribute meaning to the effectiveness of digital compliance tools (Saunders & Lewis, 2018). A positivist approach would not have revealed how compliance professionals perceive and trust the usefulness of these technologies.

Furthermore, given that institutional theory and TAM focus on institutional pressures and perceived usefulness, the interpretivist approach was more suitable. Ultimately, effectiveness in compliance is understood and assessed through professional judgment and organisational dynamics, which are better understood through qualitative means. Since this study employed elements of phenomenology, it is worth highlighting that phenomenology is concerned with lived experiences, which include the meanings individuals attribute to phenomena (Creswell & Poth, 2018). The unit of analysis being compliance professionals further supports the study's objective of exploring how these individuals experience and perceive digital compliance tools in their daily tasks.

4.4. Approach Selected

Rather than seeking to uncover universal laws or generalisable patterns, an interpretivist and inductive approach allows the researcher to delve into the nuanced, context-dependent aspects of digital technology. In this context, an interpretivist-inductive stance enables an open-ended exploration of the relationships between digital technology and regulatory compliance.

A qualitative inductive approach was employed to enable insights to emerge from the data collected rather than testing predefined research questions. This approach was suitable for exploring under-researched areas such as the individual level's view on the effectiveness of digital compliance tools in emerging markets (Bell et al., 2022). Furthermore, this approach is aligned with Institutional Theory as it allows for an in-depth exploration of how compliance professionals interpret institutional drivers and how this shapes technology adoption and use in compliance environments. Additionally, the selected research questions and insights derived from interviews supported the development of theories aligned to the inductive approach (Saunders & Lewis, 2018).

4.5. Methodological Choices

Semi-structured interviews offer depth and flexibility, enabling the interviewer to explore themes and probe further where relevant (Lim, 2024). Moreover, Saunders and Lewis (2018) asserted that employing multiple and mixed methods is advantageous for business and management research since it mitigates the limitations of using a single source; however, due to the time constraints of this research project, this approach was not feasible. This research employed semi-structured interviews as the primary data collection tool to gather in-depth insights. Furthermore, the use of semi-structured interviews was motivated by the exploratory nature of the study. This approach was suitable for gathering participants' insights and allowing for a balance in the line of questioning. Furthermore, this approach allowed probing, flexibility, and exploration of topics while ensuring that key themes were addressed (Cele & Mlitwa, 2024; Creswell & Creswell, 2017; Myers, 2019). This was ideal for gathering insights from the participants to allow for probing and a balance in the line of questioning.

4.6. Strategy

According to Sanders (1982), phenomenology is the study of conscious phenomena. Phenomenology is a qualitative research method that attempts to examine the lived experiences of research participants. Specifically, how individuals perceive, interpret events and objects in the real world. Phenomenology highlights how individuals interpret their social realities and therefore, becomes valuable when uncovering knowledge and perceptions that may not be captured through surveys or case studies (Moustakas, 1994). Given that the effectiveness of compliance technology relies on how compliance professionals interact and make sense of it, phenomenology provides the required level of depth.

This research adopted a phenomenological research strategy within a qualitative interpretivist paradigm. Furthermore, this choice was justified as it allows for a deep exploration of real-world experiences and responsiveness in exploring how compliance professionals experience digital technologies (Gill, 2020). This assertion was further supported by Nassaji (2020), who highlighted that the objective of qualitative research is exploratory since its focus is directed at unearthing the in-depth views of the people being interviewed rather than focusing on explanations (Larkin et al., 2019). Additionally, this approach enabled the researcher to explore

key themes while allowing participants to surface issues that may not have been anticipated, and this is essential for an interpretivist and inductive approach (Gill, 2020).

Compliance professionals were asked to share their personal experiences relating to the digital technologies implemented in their organisations, including how organisational digital culture shaped or hindered these experiences.

4.7. Time Horizon

Cross-sectional studies are suitable for exploring perceptions and experiences without tracking changes over time (Saunders et al., 2019). A cross-sectional time horizon was used to analyse existing experiences and perceptions of compliance professionals regarding digital technologies. A longitudinal design would have replaced how perceptions evolve as technology matures and evolves rapidly; therefore, such an approach would require more time and subsequently fall beyond the scope of this study. This method was appropriate for assessing the current state of regulatory compliance and immediate challenges faced by compliance professionals.

4.8. Proposed Research Methodology

4.9. Population

Saunders and Lewis (2018) defined the population to be studied as a complete group of members. The population for this study was aimed at the banking sector in South Africa. The targeted institutions were representative of the traditional big five banks, which dominate the banking sector in South Africa and are subject to stringent regulatory oversight. The study also included a digital-only bank, representing emerging technology-driven business models relying on digital platforms for compliance and operations. The reason for selecting financial institutions was that banks are at the forefront of regulatory compliance and are impacted by digital technologies (Porfírio et al., 2024). Moreover, including both traditional and digital-only banks allows for a comparative analysis, which assists in understanding how different banking models experience the effectiveness of digital technologies in meeting regulatory obligations.

4.10. Unit of Analysis

Creswell et al. (2007) defined the unit of analysis in the context of phenomenological research technique as the individuals who have experienced the phenomenon. Furthermore, Creswell et al. (2007) highlighted that the unit of analysis varies across research techniques, and this is important to understand, to ensure that the data collected is credible.

The unit of analysis for this research was the individual, particularly compliance officers, risk managers and professionals involved in the use of digital technologies in regulatory compliance. The full list of the roles of the participants has been provided and detailed in Table 1 below, contained in Chapter 5. This method allowed for a deep understanding of the lived experiences and behavioural interpretations that shape compliance practises at the operational level (Ado et al., 2024).

4.11. Sampling Method and Size

According to Saunders and Lewis (2017), a sample is a subset of the entire population or group. The authors advised researchers to obtain a representative sample rather than trying to collect data from the entire population, given the challenges of doing so. Furthermore, Gill (2020) provided that the research should attempt to collect good-quality data that answers the research questions. Moreover, Fossey et al. (2002) highlighted that sampling should be purposive to allow for the selection of appropriate sources to challenge the researcher's bias. Purposive sampling ensures that only relevant, knowledgeable participants are included, enabling the collection of rich, experience-based insights. In line with Fossey et al. (2002), purposive sampling also assists the researcher with minimising bias by targeting appropriate sources.

This study employed a non-probabilistic sampling approach, specifically using purposive sampling as the primary technique to select interview participants. Purposive sampling enables the researcher to intentionally choose individuals with specific knowledge or expertise and lived experience relevant to the research topic (Cele & Mlitwa, 2024; Patton, 1999). The initial set of participants was accessed through the researcher's professional network within the South African banking and regulatory community and particularly among compliance and technology departments of major banks. Snowball sampling was employed to reach additional participants through referrals. This is particularly important given the specialised

nature of the research, which focuses on the interplay between regulatory compliance and digital technology in South African banks. The researcher complied with the Protection of Personal Information Act (POPIA) elements in sourcing additional participants, ensuring participant anonymity and confidentiality.

The final sample consisted of compliance professionals employed at South Africa's big five commercial banks and one digital bank. Participants were selected due to their direct experience with the design, adoption and operalisation of digital compliance tools within their institutions. This also positioned them well to ensure that they could provide relevant and experience-based insights that would advance the understanding of the phenomenon under study. Participants were all based in Gauteng, where most banking head offices are located. The participants' years of experience ranged from five to ten years and within compliance-related roles. These roles included but were not limited to, regulatory compliance, risk management, internal audit, financial crime compliance, legal and governance functions with compliance oversight. The researcher used her network and relationships from the financial services sector to source initial interviews with individuals involved in compliance. For a complete list of roles that participated in the study, please refer to Table 1 in Chapter 5 below.

Due to time constraints and the nature of the study, the interviews were limited to twelve (12) participants from the banking sector. Although this is a small number compared to quantitative research studies, this size was deemed appropriate for qualitative research (Gill, 2020). Furthermore, as Gill (2020) and Fossey et al. (2002) noted, the emphasis in qualitative research is not on generalisability but on gathering rich and detailed data that illuminates the phenomenon being researched. Consequently, a smaller sample size is justified when participants provide clear, articulate and meaningful contributions. Furthermore, this balance also ensures a balance of depth of insights while maintaining feasibility. The researcher aimed to reach saturation, which was established by using ATLAS.ti to ensure that no new codes emerged from additional interviews.

4.12. Measurement Instrument

Semi-structured and in-depth interviews allow for flexibility in exploring various topics while ensuring that the interview addresses key themes relevant to the research

questions (Myers, 2019). Given that the nature of the research is exploratory, the interview guide served as the primary measurement instrument. This was the most appropriate method, enabling the researcher to ask specific pre-determined questions (Saunders & Lewis, 2018). The guide ensured alignment with the research questions and the theoretical framework. The guide further allowed the researcher to focus on digital compliance topics while allowing participants to share practical experiences and provide a structured yet open-ended format that facilitated comparative analysis across interview questions (Myers, 2019).

This approach ensured that guiding questions gave interviewees flexibility in their responses and enabled a deeper conversation and insights to emerge. The interview guide was updated throughout the process to enhance the data-gathering process and ensure that information obtained from interviews was aligned with the research topic and key themes.

The challenges experienced were that the process was time-consuming, especially when transcribing interviews and coding data during the data analysis phase, given the uniqueness of each individual's responses. The interviews ran for 45 minutes to one hour.

4.13. Data Gathering Process

Semi-structured interviews are ideal for deep insights into participants' experiences and perspectives. They encourage open-ended responses and allow the researcher to probe further based on participants' answers (Cele & Mlitwa, 2024; Creswell & Creswell, 2017). The primary data collection method was semi-structured interviews (conducted online), which allowed for a balance in the line of questioning and the opportunity to explore emerging themes and subjects while ensuring consistency.

Before formally commencing the interviews, the researcher conducted one pilot interview to test the effectiveness of the measuring instrument (Malmqvist et al., 2019) and to check the researcher's interview techniques (Roulston, 2010). The findings from the pilot interviews allowed the researcher to adjust early in the process to ensure that the questions were not ambiguous. This enabled the researcher to improve their interview skills and effectiveness before the actual interviews (Roulston, 2010; Saunders & Lewis, 2018).

The interviews were conducted on Microsoft Teams and the transcription service was used to record the discussions. Before beginning the recording, consent was obtained from the participants.

Interview data was stored without the participant's identifier to maintain confidentiality. Information was also reported in an aggregated fashion to ensure that neither the participant nor the organisation's identity was disclosed. The data will be stored on Google Drive for at least 10 years.

The interview guide was accompanied by a covering letter and consent to conduct the interview. The questions for the interview guide were formulated based on the research questions identified through the literature review. The interview questions were aligned to the research questions to ensure that the interview guide addressed the research questions and remained tightly aligned to the study's objectives.

4.14. Data Analysis Approach

According to Braun and Clarke (2006), thematic analysis provides a way to analyse data theoretically flexibly whilst offering simplicity for researchers with little experience. The data from the semi-structured interviews was analysed utilising thematic methods (Creswell & Creswell, 2017). This method entailed detecting, analysing, and interpreting patterns and themes within the interview data.

Thematic analysis is appropriate for qualitative research because it allows data to be organised into relevant categories and aids in the discovery of crucial insights from participant replies (Cele & Mlitwa, 2024; Creswell & Creswell, 2017).

The thematic analysis process that was followed was prescribed in Braun and Clarke (2006) and described below:

Acquaint yourself with the data - this entails getting to grips with the breadth and the depth of the contents of the data. Since the interviews are voice recordings, transcription of the data was necessary to ensure accurate capture and recording. This phase of the process formed the foundation for the analysis to come (Braun & Clarke, 2006).

Generation of initial codes from the interview data - collecting information pertinent to each code by methodically classifying the data's intriguing aspects throughout the collection (Braun & Clarke, 2006). ATLAS.ti was used to document the codes emerging from the data.

Searching for themes - assembling all data relevant to each prospective theme by grouping codes into themes (Braun & Clarke, 2006). ATLAS.ti was utilised to collate the codes into code groups, which were then collected to form themes.

Reviewing themes – ensuring congruence between the codes and the themes (Braun & Clarke, 2006). ATLAS.ti was leveraged to create the themes, supported by the frequency analysis in Appendix 4.

Defining and naming themes - continuous analysis to produce precise definitions and names for each theme and improve the details of each theme and the overall narrative the study conveys (Braun & Clarke, 2006).

Producing the write-up of the findings entailed documenting the findings so that links are checked back to the literature and the research questions (Braun & Clarke, 2006).

4.15. Quality Controls

According to Omol (2024), the research findings should result from the interview participants' experiences rather than the researcher's own characteristics and preferences. To ensure the quality of the research is maintained, he suggests the use of informant triangulation. Informant triangulation was thus the method used to verify information, as also advocated by Shenton (2004). Due to time constraints placed on the research project, the researcher used only the triangulation of sources, where respondents' interview responses were compared, with differences and similarities highlighted to either strengthen or weaken an argument or line of inquiry.

The researcher interviewed a range of informants as stipulated in the unit of analysis section to ensure diversity of thought and opinion. This approach is encouraged by Shenton (2004), who argues that the viewpoints of others can be cross-checked against each other to gather deeper insights. Triangulation of sources thus also reduced researcher bias and ensured that the experiences of the phenomena under study, as described by the informants, were documented in the findings.

The research quality and rigour for this study was maintained through careful design of the interview guide. The interview guide was designed to ensure that bias is eliminated during and after the interviews. Furthermore, the interview questions in the guide were carefully formulated to address the research questions. The data was

triangulated across the participants. Data analysis and discussion were conducted with specific reference to the literature and the theoretical and conceptual framework discussed in chapter two of this research report to ensure that the research questions were addressed. Moreover, careful attention was paid to the overall conceptualisation of the research report to ensure a coherent flow and connections of chapters to provide 'a golden thread' for the study.

Data collected during the study will be kept confidential and stored for 10 years after the research project is completed.

4.16. Research Ethics

The researcher obtained ethical clearance from the Ethics Committee of the Gordon Institute of Business Science (GIBS) before commencing with the data collection phase of the research project. All research participants were requested to sign consent forms (Appendix 2) after being informed that the confidentiality of the information provided would be maintained. Furthermore, interviewee responses were anonymised in the reporting of the findings. Please refer to Ethical Clearance entitled Appendix 1.

4.17. Limitations

The chosen methodology has limitations. Firstly, the qualitative approach limits generalisability to the broader banking sector. However, the aim is not statistical generalisation but analytical generalisation, where findings may inform theory and practice beyond the immediate context. Secondly, reliance on self-reported data introduces potential bias, though measures such as triangulation and member checking mitigate this risk. Thirdly, the cross-sectional design captures perceptions at one point, whereas attitudes may evolve as technologies mature. Finally, the volume of the data collected and research findings were largely dependent on how the researcher interpreted the codes, along with the type of questions asked by the researcher during the interviews. This could have influenced the quality of the data collected. However, to minimise the impact, a pilot interview was conducted and the data collected was tracked and monitored throughout the interview process.

Despite these limitations, the methodology is well-suited to address the research objectives and provides a rigorous foundation for the study.

4.18. Conclusion

This chapter has outlined and defended the methodological choices guiding the study. An interpretivist, inductive, qualitative approach was justified as appropriate for investigating how compliance professionals perceive the effectiveness of digital compliance technologies. The phenomenological strategy ensured attention to both contextual and experiential dimensions, aligned with Institutional Theory and TAM. Sampling, data collection and analysis procedures were detailed, alongside measures for ethics and limitations. Thus, the methodology provided a coherent and robust framework for addressing the research objectives and contributing meaningfully to theory and practise.

CHAPTER 5: FINDINGS/RESULTS

5.1. Introduction

This chapter details the methodological approach employed to analyse the qualitative data gathered from twelve (12) in-depth, semi-structured interviews conducted on Microsoft Teams with compliance professionals working in South African banks. The data was analysed using Atlas.ti and the primary objective of the analysis was to distil the interview transcripts into a structured and coherent set of findings that directly addresses the core inquiries of this research. The data analysis process was systematically designed to uncover the rich, nuanced perspectives of participants, focusing on their lived experiences and perceptions within their professional environments. The qualitative analysis was conducted based on data obtained from interviews, which were coded. The themes are specifically geared towards answering the two central research questions presented in Chapter 3, guiding this study:

Research Question 1 (RQ1): How do compliance professionals perceive and experience the effectiveness of digital compliance technologies in supporting regulatory compliance?

Research Question 2 (RQ2): What institutional pressures, behavioural and operational factors enable or hinder the effective adoption and use of digital compliance tools by individual employees in banks?

5.2. Description of the sample

The table below describes the job roles of the participants to demonstrate diversity of perspectives and experiences relating to the effectiveness of digital technology within South African Banks.

Table 1: Interview Participant Details

Research Participant	**Role**
Participant 1	Senior Manager
Participant 2	Head of Compliance

Participant 3	Compliance Specialist
Participant 4	Vice President - Regulatory Compliance
Participant 5	AML Transaction Monitoring Team Leader
Participant 6	Head of Tech Change and Risk
Participant 7	Group Compliance Specialist
Participant 8	Group Compliance Specialist
Participant 9	Compliance Specialist
Participant 10	Regulatory Compliance Specialist
Participant 11	Regulatory Compliance Specialist
Participant 12	Data Specialist

5.3. Data Saturation

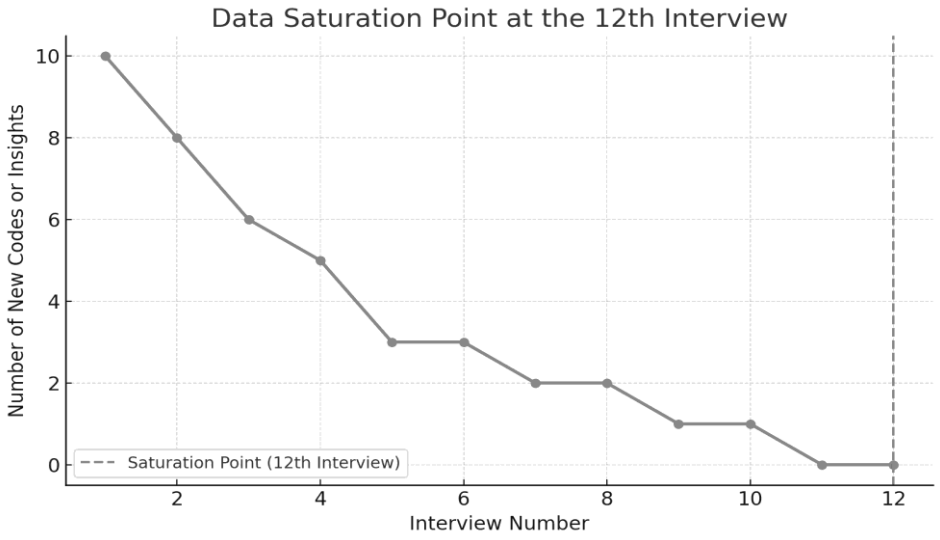

Figure 2: Data Saturation Graph

Data saturation was monitored throughout the data collection process as suggested by Creswell (2013). Hennink et al. (2017) defined saturation as the point in the data collection process where no new insights or issues emerge from the collected data. Data saturation in this study was reached at the 12th interview.

5.4. Research Findings

This section begins by providing context and issues arising from the interviews to provide context for the research findings. The section proceeds by delving into a detailed presentation of the empirical research findings which have been categorised and structured in a thematic manner to address research questions and objectives of the study. The chapter concludes by bringing together and synthesising all the empirical findings into overall conclusions.

The findings are based on a dataset that captures the perceptions of 12 compliance professionals. Participants rated the effectiveness of technology for each theme on a three-point scale: 1 (Highly effective), 2 (Moderately effective) and 3 (Not effective).

5.4.1. Results for Research Question 1

Research Question 1: How do compliance professionals perceive and experience the effectiveness of digital compliance technologies in supporting regulatory compliance?

The aim of Research Question 1 was to understand how compliance professionals perceive and experience the effectiveness of digital compliance technologies in supporting regulatory compliance within banks. This inquiry is particularly relevant in light of the ongoing digital transformation and emergence of RegTech solutions that continue to reshape compliance functions. In reflecting on participants' lived experiences, the researcher considered how digital tools influence efficiency, accuracy and adaptability within regulatory compliance processes. Guided by TAM and Institutional Theory principles, the researcher used probing questions to explore professionals' perceptions of technological usefulness, ease of use, and institutional pressure that shape their experiences with these systems

Through iterative thematic analysis, ten high-level themes emerged. These themes explain participants' perceptions and experiences of digital compliance technologies. Each theme comprises several subthemes that capture distinct but related aspects of technology effectiveness within compliance.

These are summarised in the table below:

Table 2: Themes and Subthemes Addressing Research Question 1

Themes	Subthemes
Digital Compliance Tools	• Improved Effectiveness and Accuracy • Integration and System Limitations • User Adoption and Learning Curve
Operational Efficiency	• Streamlined Processes Workflow Automation • Reliance on Manual Oversight • Increased Productivity
Regulatory Challenges	• Navigating Complex and Evolving Regulations • Managing Regulatory Reporting and Data Demands • Misalignment between Technology and Regulatory Intent
Cost Technology	• High Financial Investment and Cost Sensitivity • Unclear Return on Investment • Maintenance • Upgrades and Hidden Cost • Balancing Cost with Strategic Value
False Positives	• High Volumes of Alerts and Limited Relevance • Impact on Workload and Morale • Causes of False Positives • Mitigation Efforts
The Human Element in Compliance	• Technology Support • Shifting Roles and Professional Identity • Maintaining Human Oversight and Ethical Accountability • Balancing Technology and Human Expertise
Job Security Concerns	• Anxiety Over Automation and Role Redundancy • Shift Toward Higher-Order • Skills and Adaptability • Organisational Communication and Psychological Safety • Resilience and Professional Repositioning
Upskilling Needs	• Recognition of Skills Gaps and Need to Evolve • Formal and Informal Learning Pathways • New Skillsets in Demand • Organisational Support and Learning Culture
Regulatory Environment	• Regulation as Catalyst for Digital Adoption • Complexity and Interpretation Challenges • Supervisory Pressures and Accountability • Balancing Regulatory Rigour and Innovation • Evolving Regulatory

Technology Adoption	• Early Adoption and Institutional Readiness • Integration with Existing System and Process • User Adoption and Behavioural Adjustment • Demonstrated Benefits and Operational Improvements • Persistent Barriers and Lessons Learned

5.4.1.1. Theme 1: Digital Compliance Tools

This theme explored the participants' lived experiences and perceptions of how digital tools support regulatory compliance in banking. While most professionals acknowledged the systems' transformative potential, their reflections revealed significant variation in perceived effectiveness depending on integration quality, user competence and organisational readiness.

5.4.1.1.1. Improved Effectiveness and Accuracy

Most participants emphasised that digital tools have improved efficiency by automating repetitive compliance processes and enhancing data accuracy.

"Our monitoring tools have reduced the high volumes and manual work. We can complete what used to take us two days in a few hours." (Participant 3)

The above statement was echoed by another participant who shared that *"automated screening tools for sanctions and adverse media have made our reviews quicker, consistent and more accurate." (Participant 1).*

The majority of the participants agreed that automation has improved accuracy, consistency and response times in their daily workflows. Moreover, some participants observed efficiency gains in cases where systems were fully integrated into their daily tasks and training was found to be adequate.

5.4.1.1.2. Integration and System Limitations

Although digital compliance tools are being adopted in banks, participants expressed ongoing challenges related to system integration and compatibility with legacy systems.

One participant shared that: *"these tools do not always talk to our legacy systems, so we are required to do manual checks." (Participant 4)* This was reiterated by another participant who stated that:

“The tool itself works, but the data it pulls is not always up to date. This affects the quality of what we see.” (Participant 5)

This revealed a split view amongst the participants and highlighted that participants who work in digitally driven environments experience seamless integration more than those who work in less digitally mature environments.

5.4.1.1.3. User Adoption and Learning Curve

Most of the participants described the introduction of new systems as a challenging learning experience that required adjustment and patience. As one participant noted:

“You cannot just switch on a tool and expect people to know how to use it because it takes time and proper training.” (Participant 6)

Other participants described that with practise and support, the users gained confidence and the benefits of the tools became evident. This was supported by a participant who remarked that “*at first, it was overwhelming but now, it is part of how we work.” (Participant 8)*

Across all the interviews, the participants portrayed digital compliance tools as valuable enablers of compliance, subject to improvements. The participants observed that technology enhanced efficiency but noted ongoing integration and user adoption issues.

Overall, participants described digital compliance tools as necessary but not sufficient. It was noted that the actual value of these tools materialised when it was supported by robust data governance and trained users.

5.4.1.2. Theme 2: Operational Efficiency

This theme explored how compliance professionals experienced and perceived digital tools in improving operational workflows and productivity. Participants noted that automation, workflow dashboards and data integration have improved speed however, these benefits were overshadowed by challenges such as intensified workload and continued manual workarounds.

5.4.1.2.1. Streamlined Processes and Workflow Automation

Participants agreed that the use of digital compliance tools enhanced response time and controls within compliance operations. This was enabled by features such as

automatic case allocations, task routing and reporting which were credited for replacing manual tracking with seamless process visibility.

This was evidenced by participants who noted that *“the system automatically assigns cases and generates reports, so we do not have to track everything manually anymore.” (Participant 2)*

Another participant observed, “*our workflows are more structured now. Tasks move from initiation to review without delay.” (Participant 5*) T

his was also supported by a participant who shared that *“it is easy to pull the full history of actions for any case. That visibility helps both audits and internal reviews.” (Participant 9)*

The above confirms that digitisation has brought measurable improvements in accuracy and transparency. This marks a clear shift from fragmented manual oversight to structured and auditable workflows.

5.4.1.2.2. Continued Reliance on Manual Oversight

Although automation has improved certain compliance processes, participants emphasised that human oversight remains an important factor. The participants viewed systems as reliable but imperfect and requiring constant validation and interpretation.

“We will still do a lot of manual checks, you can’t just accept what the system spits out.” (Participant 4)

“Some reports still need manual review because the data isn’t always accurate or complete.” (Participant 6)

“The alerts are helpful, but interpretation is still a human job, not everything can be automated.” (Participant 8)

Participants attributed residual manual processes to inconsistent data quality, weak integration, and limited trust in system logic. As a result, participants noted that automation has improved operational flow but not eliminated manual intervention, reinforcing the balance between efficiency and professional judgment.

5.4.1.2.3. Increased Productivity but Reduced Reflection Time

While technology accelerated task completion, participants noted that it also compressed work cycles and reduced time for strategic reflection.

“We’re more productive, but there’s less breathing room. Everything moves faster now.” (Participant 11)

“The system helps us process more, but it’s made the job more reactive.” (Participant 3)

“Technology has improved throughput, but it’s also made the work more intense , less time to think, more pressure to deliver.” (Participant 7)

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“Technology has improved throughout, but it’s also made the work more intense with less time to think, more pressure to deliver.” (Participant 7)

Participants observed that increased productivity sometimes shifted focus from quality to volume, creating “efficiency fatigue.” The faster pace of digital work often reduces opportunities for critical thinking and team reflection, particularly in judgment-based decision-making.

Operational efficiency was regarded as both a technical success and a human strain. Automation has standardised workflows and improved accountability, yet it has also intensified the pace and pressure. Participants perceived efficiency not as reduced workload, but as a restructured workload where the expectation to deliver continuously replaces previous manual repetition.

5.4.1.3. Theme 3: Regulatory Challenges

This theme examines how compliance professionals perceive the role of digital tools in addressing complex and evolving regulatory requirements. Participants agreed that digital systems have strengthened tracking and reporting but expressed frustration with their limited ability to interpret, adapt, or reflect the intent behind new regulations.

5.4.1.3.1. Navigating Complex and Evolving Regulations

Participants consistently described regulation as dynamic and demanding, often exceeding the adaptability of digital systems.

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“The biggest challenge is that regulation keep changing but our systems don’t change as quickly.” (Participant 6)

“Technology helps us to track and monitor, but it doesn't understand the intent behind new regulations - we will still have to interpret manually." (Participant 3)

"Every time a new update comes in, we have to reconfigure the system. It's a never-ending cycle." (Participant 10)

While systems aid in maintaining regulatory visibility, they do not replace interpretive expertise. Professionals must continuously translate regulatory intent into system logic, reflecting a persistent gap between regulatory change and technological responsiveness.

5.4.1.3.2. Managing Regulatory Reporting and Data Demands

A recurring issue was the escalating volume of regulatory data. Although digital tools improved information retrieval, they introduced data validation and dependency challenges.

"We've become data managers more than compliance experts. Reports depend on system data that isn't always perfect." (Participant 7)

"It's easier to extract information, but we still spend hours checking for inconsistencies." (Participant 5)

"Technology made reporting faster, not necessarily easier,- there's just too much data." (Participant 9)

Automation has shifted compliance from manual reporting to digital oversight, but the burden of ensuring data quality remains significant. Systems deliver volume and speed, yet accuracy and interpretive depth continue to rely on professional scrutiny.

5.4.1.3.3. Misalignment Between Technology and Regulatory Intent

Several participants highlighted that digital tools often capture regulatory formality but miss contextual nuance.

“Sometimes the tools tick the boxes but don’t help us meet the real regulatory purpose.” (Participant 4)

“We’ve digitised compliance but not necessarily made it better. The system doesn’t capture ethical nuance.” (Participant 11)

“When regulators ask for insight, the technology gives data, not reasoning, we still have to explain what it means.” (Participant 8)

Participants attributed this misalignment to vendor-driven designs and imported frameworks not tailored for South Africa’s evolving regulatory landscape. As a result, professionals act as intermediaries between system logic and regulatory expectations.

Participants viewed regulatory challenges as the point where digital effectiveness plateaus. While technology enhances record-keeping and transparency, it lacks adaptive reasoning. Systems are strong in process management but weak in interpretive function, underscoring a need for human expertise.

One participant said, *“The tools make us faster, not necessarily wiser.” (Participant 3)*

Digitalisation has evolved compliance operations, but not compliance reasoning, reinforcing the enduring importance of professional interpretation in navigating regulatory complexity.

5.4.1.4. Theme 4: Cost of Technology

This theme explored participants' perceptions of the financial implications of implementing and maintaining digital compliance systems. While acknowledging technology as essential, participants expressed concern over escalating costs, hidden expenses and difficulty quantifying return on investment (ROI).

5.4.1.4.1. High Financial Investment and Cost Sensitivity

Participants described compliance technology as both vital and financially burdensome.

"We've spent millions on these systems, but I'm not convinced we're getting full value." (Participant 2)

"The technology is expensive to procure and maintain, it's a big commitment." (Participant 6)

"Digital transformation is sold as cost-saving, but the savings aren't always visible." (Participant 8)

Budget limitations often forced institutions to compromise on system quality or delay enhancements. As one participant noted, *"We sometimes settle for cheaper tools that meet minimum requirements because of budget limits." (Participant 11)*

Cost, therefore, shapes not only adoption speed but also the strategic depth of implementation.

5.4.1.4.2. Unclear Return on Investment

Most participants expressed difficulty in demonstrating measurable value from compliance systems.

"It's hard to show ROI, compliance tools don't make money, they prevent loss." (Participant 5)

“Management asks for value-add but compliance system don’t directly generate revenue.” (Participant 10)

“You know it’s working when there are no issues but that’s not easy to quantify.” (Participant 7)

The absence of tangible financial metrics makes it challenging to sustain executive buy-in. Participants described this as a paradox: the better a system performs, the less visible its success becomes.

5.4.1.4.3. Maintenance, Upgrades and Hidden Costs

Ongoing expenses such as vendor fees, integration costs and upgrades were identified as underestimated financial pressures.

“Once you’ve implemented the system, the real costs start: upgrades, patches and support.” (Participant 9)

“Every new regulation means system tweaks and that costs money.” (Participant 12)

“You become locked into vendor contracts and switching becomes expensive.” (Participant 4)

Participants described digital transformation as a continuous financial journey rather than a one-off investment. Ongoing maintenance erodes perceived efficiency gains, revealing the long-term resource demands of compliance technology.

5.4.1.4.4. Balancing Cost with Strategic Value

Despite cost concerns, participants recognised technology as indispensable for compliance credibility and institutional resilience.

“Not investing is riskier, you can’t run compliance manually anymore.” (Participant 5)

“It’s not about cutting costs but using technology smarter, that’s where the value lies.” (Participant 8)

Participants increasingly viewed compliance technology as a strategic necessity rather than a discretionary expense, emphasizing the importance of optimising utilization rather than minimising cost.

Cost considerations emerged as a defining lens through which professionals evaluate digital effectiveness. While the financial burden is significant, participants acknowledged that the alternative (manual compliance), is no longer feasible. The perceived imbalance between expenditure and realised value reflects an early stage of digital maturity, where investment is high but measurable impact remains evolving.

5.4.1.5. Theme 5: False Positives

This theme examined participants' experiences with false positives: system-generated alerts that incorrectly flag regulatory breaches or suspicious activity. Almost all participants described false positives as one of the most persistent operational frustrations, undermining automation's promised efficiency.

5.4.1.5.1. High Volume of Alerts and Limited Relevance

Participants explained that monitoring systems often generate excessive alerts, many irrelevant to actual risk.

"You can get thousands of alerts a day, but only a handful are worth investigating." (Participant 3)

"The system flags almost everything, we spend more time clearing noise than focusing on real cases." (Participant 7)

"After a while, people become numb to the alerts. You can't give each one full attention." (Participant 6)

Rather than reducing workload, automation often amplifies it. Participants described an unintended "alert fatigue" where vigilance declines under excessive volume.

5.4.1.5.2. Impact on Workload and Morale

False positives were said to drain time, morale and cognitive energy.

"It's exhausting, you clear one batch and another comes in the next morning." (Participant 5)

"The team spends hours on alerts that turn out to be nothing." (Participant 10)

"You start resenting the system because it makes the job harder, not easier." (Participant 9)

Participants emphasised that excessive low-value alerts delayed genuine investigations and created frustration that eroded motivation.

5.4.1.5.3. Causes of False Positives

Most participants linked false positives to rigid rule-based logic, poor data quality and lack of contextual intelligence.

“Most false positives come from outdated detection rules that don’t reflect current patterns.” (Participant 4)

“Data mismatches are a huge problem, something small like a missing field can trigger an unnecessary alert.” (Participant 8)

“These tools are imported and not calibrated for our market realities.” (Participant 11)

Participants viewed false positives as a symptom of immature or poorly localised system design rather than user error.

5.4.1.5.4. Mitigation Efforts

Some institutions are improving detection logic and exploring analytics-driven filtering.

“We’re recalibrating the rules, even small adjustments reduce noise.” (Participants 6)

“Machine learning pilots are helping prioritise alerts.” (Participant 5)

However, most noted that progress remains uneven and resource intensive.
“It's still trial and error, no quick fix.” (Participant 2)

False positives illustrate a key paradox: technology enhances surveillance but burdens human capacity. Participants called for “smarter systems” that prioritise accuracy over quantity. Digital vigilance they argued must evolved from volume-driven monitoring to intelligence-driven assurance

5.4.1.6. Theme 6: The Human Element in Compliance

This theme explored how digitalisation affects the human dimension of compliance: judgment, ethics, expertise and identity. Participants unanimously affirmed that while technology enhances accuracy, it cannot replace professional reasoning or accountability.

5.4.1.6.1. Technology Support

Participants emphasised that systems assist but do not decide.

“The system can tell you what’s happening, not why it’s happening. That still needs people.” (Participant 3)

“Technology flags issues, but judgment decides risk.” (Participant 5)

“Our systems are advanced but intent and nuance still come from humans.” (Participant 7)

Participants warned that excessive automation could erode critical thinking, underscoring the need to maintain analytical curiosity.

“If you depend too much on the system, you stop questioning it.” (Participant 9)

5.4.1.6.2. Shifting Roles and Professional Identity

Digitalisation has redefined the compliance role, blending analytical, regulatory and technical skills.

“I'm spending more time troubleshooting systems than analysing compliance.” (Participant 8)
“You know need to understand data and tech not just regulation.” (Participant 10)
“Sometimes it feels like we becoming IT auditors.” (Participant 1)

Others saw opportunity in this evolution.

“The job is more complex but more interesting: you have to evolve with the tech.” (Participant 6)

Compliance professionals now navigate dual identities: guardians of ethics and stewards of data driven systems.

5.4.1.6.3. Maintaining Human Oversight and Ethical Accountability

Participants repeatedly stressed that accountability cannot be automated.

“The system might be consistent but it’s not always right.” (Participant 4)

“When something goes wrong, the regulator calls you, not the system.” (Participant 12)

“Technology doesn’t have a conscience, people do.” (Participant 2)

Some warned that organisations risk hiding behind automation.

“Saying ‘the system missed it’ isn’t an excuse, responsibility stays with people.” (Participant 11)

Human oversight was viewed as essential for ethical and regulatory legitimacy.

5.4.1.6.4. Balancing Technology and Human Expertise

Participants valued synergy between human reasoning and system precision.

“The sweet spot is when tech and people complement each other: speed meets sense-making.” (Participant 5)

“You can't automate empathy or context.” (Participant 9)

“Digital tools need human logic to make sense.” (Participant 7)

The human element remains the cornerstone of effective compliance. Participants view the technology as an amplifier, not a replacement for human capability. Compliance is becoming more data-driven, yet its ethical and interpretive essence endures, signalling a shift toward augmented rather than automated compliance.

5.4.1.7. Theme 7: Job Security Concerns

This theme investigated how digital transformation influences perceptions and of job stability and career longevity among compliance professionals. While participants acknowledged efficiency gains, many expressed anxiety about automation’s potential to displace human roles.

5.4.1.7.1. Anxiety Over Automation and Role Redundancy

Participants voiced fear that automation may render certain compliance functions obsolete.

“The more we automate, the less we need people for the basics.” (Participant 3)

“In a few years, half the monitoring could be done by AI and that’s worrying.” (Participant 7)

“The system now does what used to take a whole team.” (Participant 10)

Some linked anxiety to loss of professional identity.

“It’s not just about losing a job , it’s feeling less needed, like expertise is being replaced by code.” (Participant 4)

Automation thus evokes both operational admiration and existential concern.

5.4.1.7.2. Shift Toward Higher-Order Skills and Adaptability

In contrast, several participants viewed technology as an opportunity for upskilling.

“Automation removes grunt work but lets us think strategically.” (Participant 9)

“Those who thrive are the ones who understand both regulation and technology.” (Participant 6)

“The role isn’t disappearing, it’s transforming.” (Participant 8)

Digitalisation is therefore recasting job profiles away from routine compliance toward analytical and strategic functions.

5.4.1.7.3. Organisational Communication and Psychological Safety

Uncertainty was often intensified by limited organisational transparency.

“People get nervous when changes happen without explanation.” (Participant 2)

“There’s speculation because leadership isn’t clear on what automation means for us.” (Participant 5)

“They train you on the tool, not on how your role will evolve.” (Participant 10)

Participants highlighted that effective change management requires not only technical training but open dialogue about career impact.

5.4.1.7.4. Resilience and Professional Repositioning

Despite anxiety, many respondents described proactive adaptation strategies.

“You can’t fight technology, you have to learn it and make it work for you.” (Participant 9)

“I’ve started studying data analytics because that’s where compliance is going.” (Participant 6)

“Technology won’t replace us if we evolve with it, it’s about mindset.” (Participant 8)

Participants increasingly frame adaptability as resilience, viewing transformation as an avenue for reinvention rather than redundancy.

Job security concerns emerged as one of the most emotionally charged findings. Participants expressed dual sentiments of fear and empowerment: fear of obsolescence and hope through adaptation. Digital transformation is not eliminating compliance roles but redefining their value proposition. Those who cultivate digital fluency and strategic agility will likely remain central to the future compliance function.

5.4.1.8. Theme 8: Upskilling Needs

This theme explored how compliance professionals are adapting to digital transformation by developing new technical and analytical competencies. Participants agreed that continuous learning has become essential for professional relevance and confidence in the digital era.

5.4.1.8.1. Recognition of Skill Gaps and Need to Evolve

Respondents acknowledged a widening skills gap within compliance teams.

“Compliance has become very data-driven but not everyone can interpret that data.” (Participant 1)

“Our strength used to be legal knowledge now you must understand how the system applies it.” (Participant 6)

“We weren’t trained for this environment, suddenly you need to know algorithms and coding logic.” (Participant 10)

Many described initial anxiety that later transformed into motivation for professional development. Upskilling was viewed as both a necessity and a form of empowerment.

5.4.1.8.2. Formal and Informal Learning Pathways

Participants reported that learning occurs through both institutional programmes and self-driven initiatives.

“We have mandatory e-learning on data governance and system use.” (Participant 3)

“Our bank partnered with a university to offer digital compliance certificates.” (Participant 11)

“Some of us do online courses in our own time just to stay current.” (Participant 5)

However, training access was inconsistent across departments. Where organisational support was limited, self-directed learning filled the gap, underscoring personal agency in professional growth.

5.4.1.8.3. New Skillsets in Demand

Professionals highlighted data literacy, analytical reasoning and digital communication as increasingly vital.

“Data analytics and visualisation are huge, you can’t make sense of large datasets without them.” (Participant 2)

“Understanding how systems generate outputs helps you question and validate them.” (Participant 12)

“It’s not just tech, you need agility and the ability to translate between IT and compliance.” (Participant 7)

The compliance function is evolving into a multidisciplinary field that blends regulation, data, and interpretation.

5.4.1.8.4. Organisational Support and Learning Culture

Institutional culture played a critical role in sustaining upskilling momentum.

“Leadership really pushes continuous learning, it is part of performance goals.” (Participant 4)

“The organisation now values curiosity and adaptability.” (Participant 9)

In contrast, others noted limited support: *“It’s still self-driven, if you don’t take initiative, no one pushes you.” (Participant 8)*

Professionals develop more substantial digital confidence and engagement where learning is institutionally encouraged.

Upskilling emerged as one of the most empowering experiences. It bridges technical gaps and rebuilds professional confidence, helping compliance officers transform anxiety into agency. Continuous learning is now seen as a shield and a strategy, protecting career security while enabling innovation.

5.4.1.9. Theme 9: Regulatory Environment

This theme examined how supervisory expectations, reforms and enforcement intensity influence digital compliance adoption. Participants agreed that regulatory pressure is the primary driver of digital transformation and a source of operational strain.

5.4.1.9.1. Regulation as a Catalyst for Digital Adoption

Most participants described regulation as the “engine” of digitalisation.

“If the regulator didn’t demand half of what they do, these systems wouldn’t exist.” (Participant 3)

“Every major tool came after a new requirement from the Reserve Bank or FIC.” (Participant 8)

“Technology is the only way to keep up with constant regulatory change.” (Participant 2)

Regulation thus acts as a coercive but necessary catalyst, compelling banks to modernise compliance infrastructure.

5.4.1.9.2. Complexity and Interpretation Challenges

Frequent amendments and overlapping frameworks create persistent implementation challenges.

“By the time you've built a system for one roll another arrives.” (Participants 6)

“The interpretation gap is huge: regulation tells you what to do, not how.” (Participant 4)

“You end up forcing technology to fit regulation instead of the other way around.” (Participant 11)

This tension exposes the limits of digital tools in adapting to fluid regulatory expectations.

5.4.1.9.3. Supervisory Pressures and Accountability

Heightened scrutiny from the SARB and FIC has accelerated digital investments.

“The regulator now expects continuous improvement, you can't fix and forget.” (Participant 1)

“They want real-time auditable evidence which pushed us toward automation.” (Participant 5)

However, several noted that pressure can lead to rushed implementations.
“When deadlines loom, systems get deployed half-ready just to show progress.” (Participant 12)

Regulatory urgency therefore drives innovation but can undermine sustainability.

5.4.1.9.4. Balancing Regulatory Rigour and Innovation

Participants expressed caution that strict oversight sometimes limits experimentation.
“Regulation makes you cautious, no one wants to be the first to get it wrong.” (Participant 9)

“You need to innovate but still wait for regulator approval.” (Participant 7)

“Technology moves faster than regulation, we’re using systems not yet guided by law.” (Participant 3)

The data reveals a delicate equilibrium between innovation and compliance assurance, where over-regulation risks creating *“compliance paralysis.”*

5.4.1.9.5. Evolving Regulatory Collaboration

Several participants noted improving dialogue between regulators and banks.

“The regulator is more consultative now they actually want to understand our systems.” (Participant 5)

“We’re seeing co-creation and early feedback, which helps alignment.” (Participant 11)

This cooperative shift marks progress toward a more sustainable compliance ecosystem.

The regulatory environment remains the strongest external driver of digital transformation, both enabling and constraining it. Regulation legitimises investment but imposes complexity that limits agility. As one participant summarised:

“Without regulatory pressure, digital transformation would still be a concept, not a reality.” (Participant 8)

5.4.1.10. Theme 10: Technology Adoption

This final theme synthesised participants’ overall experiences of adopting and embedding digital compliance technologies. Adoption is described as a continuous, institution-specific process of refinement rather than a one-time achievement.

5.4.1.10.1. Early Adoption and Institutional Readiness

Participants emphasised that readiness, infrastructure, leadership commitment and culture determines adoption success.

“The technology isn’t the problem, readiness is.” (Participant 2)

“When leadership drives adoption, it works; when left to compliance alone, it fails.” (Participant 9)

“Some teams were prepared; others still relied on spreadsheets.” (Participant 5)

Institutional maturity and executive alignment therefore underpin successful implementation.

5.4.1.10.2. Integration with Existing Systems and Processes

Integration challenges were repeatedly cited.

“Tools don't talk to each other, so you end up duplicating effort.” (Participant 8)

“Legacy system slows everything down.” (Participant 3)

“We built our own interface to connect data across systems, which change to everything.” (Participant 10)

Adoption is constrained when modern systems coexist with outdated infrastructure, highlighting the importance of interoperability.

5.4.1.10.3. User Adoption and Behavioural Adjustment

Human adaptation emerged as equally critical.

“The rollout was fast, but training lagged ,people didn’t understand the tool.” (Participant 7)

“Change management is underestimated; users need time to trust the system.” (Participant 12)

“When people saw how it made their jobs easier, they became its biggest advocates.” (Participant 9)

Behavioural readiness, not technology design, often determines utilisation success.

5.4.1.10.4. Demonstrated Benefits and Operational Improvements

Despite challenges, participants recognised clear benefits.

“Our reporting accuracy improved drastically, everything is tracked.” (Participant 1)

“Technology gives visibility across the compliance process.” (Participant 10)

“It’s easier to demonstrate compliance , evidence is instant.” (Participant 5)

Digital tools are thus credited for enhancing efficiency, transparency, and regulatory confidence.

5.4.1.10.5. Persistent Barriers and Lessons Learned

Adoption remains hindered by financial, vendor and leadership constraints.

“Licences and upgrades are costly, hard to justify.” (Participant 11)

“We rely too much on vendors; internal teams lack technical knowledge” (Participant 8)

“Momentum fades after implementation, sustaining change is the hardest part. (Participant 2)

Participants stressed that transformation must be treated as an evolving mindset rather than a finite project.

“Digital transformation isn’t a project; it's a continuous journey.” (Participant 9)

Technology adoption was described as moderately effective but fundamentally necessary. Despite uneven progress, digital tools have become integral to modern compliance. Success depends not only on the sophistication of the systems but also on the alignment of people, processes, and institutional will.

5.4.1.10.6. Conclusion for research question 1 findings

The findings for Research Question 1 show that digital compliance Technologies are recognised as valuable tools for enhancing regulatory effectiveness and efficiency. Participants noted improved accuracy, faster workflows and stronger monitoring capabilities. However, challenges such as system integration issues, false positives, and uneven user adoption continue to limit their full potential. The findings also reveal that human oversight remains vital, as technology cannot yet replace professional judgment and contextual understanding. Overall, digital tools are perceived as moderately effective and useful, but not yet transformative within compliance practice.

5.4.2. Results for Research Question 2

The aim of Research Question 2 was to examine the institutional pressures, behavioural factors, and operational conditions that enable or hinder the effective adoption and use of digital compliance tools by compliance professionals in banks.

This question extends the analysis of effectiveness by exploring the contextual and organisational factors that influence technology uptake. The study sought to explore and how structural and human elements such as leadership support, employee attitudes, organisational culture and technical infrastructure and how these collectively shape digital adoption outcomes.

Drawing on Institutional Theory and behavioural perspectives embedded within the Technology Acceptance Model, three major themes were identified through the analysis: Institutional, Behavioural, and Operational Factors. Each theme comprises subthemes that describe the nuanced enablers and barriers influencing adoption.

These are presented in the table below:

Table 3: Themes and Subthemes Addressing Research 2

Themes	Subthemes
Institutional Factors	• Regulatory Requirements: Drivers and Barriers • Organisational Culture and Internal Norms • Leadership Support and Endorsement
Behavioural Factors	• Employee Attitudes and Motivation • Training and Confidence Building • User Experience and Accessibility
Operational Factors	• Technical Infrastructure • Integration with Legacy Systems • Allocation and Prioritisation

5.4.2.1. Theme 1: Institutional Factors

5.4.2.1.1. Regulatory Requirements as Drivers and Barriers

Participants unanimously identified regulatory pressure as the most powerful driver of the digital transformation in compliance. Coercive mandates from SARB and the FIC compel institutions to accelerate digital implementation.

“Regulatory deadlines force us to move faster than we’re ready for.” (Participant 4)

“Sometimes we implement just to comply, not to optimise.” (Participant 9)

While regulatory scrutiny legitimises digital adoption, it can inadvertently undermine quality when urgency overtakes preparedness. Regulation's dual role as both enabler and constraint reflects the complex institutional context in which compliance innovation occurs.

5.4.2.1.2. Organisational Culture and Internal Norms

Culture emerged as a decisive influence on technology adoption. Institutions with adaptive, innovation-oriented culture progressed faster in digital integration, while risk averse or hierarchal cultures slowed transformation.

“Our bank is very conservative, people prefer what they know, so adoption takes longer,” (Participant 7)

“Innovation depends on the team, some are still paper-based others, experiment with tools. (Participant 2)

“Leadership and courage meant makes a huge difference; when trying is rewarded adoption improves.” (Participant 12

Cultural attitudes shape where the technology is viewed as a strategic and a compliance application. Where openness and experimentation are encouraged, digital transformation becomes embedded rather than imposed.

5.4.2.1.3. Leadership Support and Institutional Endorsement

Leadership emerged as the most consistent institutional enabler. Participants noted that visible executive involvement legitimises adoption efforts and sustains momentum.

“When executives champion a system, everyone gets on board.” (Participant 5)

“We've had tools fail simply because no one senior took ownership” (Participant 11)

“It's not just approval, leaders must participate in training and feedback.” (Participant 8)

Active leadership signals institutional commitment and motivates and alignment across departments. Conversely, passive endorsement leads to fragmentation and disengagement.

5.4.2.2. Theme 2: Behavioural Factors

5.4.2.2.1. Employee Attitudes and Motivation

Participants revealed that attitudes toward technology vary widely across age, tenure and exposure. While most recognised its value, anxiety about replacement and comfort with manual systems initially hindered engagement.

“Older staff trust manual methods more.” (Participant 1)

“Once you show how it saves time, resistance drops.” (Participant 3)

“People fear being replaced, but most come around when they see the benefits.” (Participant 10)

Positive experiences with early wins such as reduced administrative work helped shift perceptions from scepticism to acceptance.

5.4.2.2.2. Training, Support and Confidence Building

Effective, continuous training emerged as central to behavioural adaptation. Participants criticised generic or once-off training and praised hands-on, peer-led models.

“Training was too generic, people left not knowing how to use it for their job.” (Participant 9)

“Continuous training makes people confident; that’s when results improve.” (Participant 2)

“Peer-to-peer learning works best, people open up more informally.” (Participant 6)

Behavioural readiness improves when training builds practical confidence and when users see technology as a supportive partner rather than a threat.

5.4.2.2.3. User Experience and Accessibility

Participants emphasised usability as a determinant of behavioural adoption. Complex or poorly designed interfaces discouraged engagement.

“The system is too complicated, it feels like it was made by IT, not for compliance officers.” (Participant 5)

“It’s fine once you get used to it but it’s not intuitive.” (Participant 7)

Systems that are user-friendly and aligned to compliance workflows are more readily accepted and sustainably used.

5.4.2.3. Theme 3: Operational Factors

5.4.2.3.1. Technical Infrastructure

Infrastructure disparities were identified to fight as a major determinant after technology performance and trust.

“Bandwidth and downtime are big issues, it’s hard to rely on the system when it keeps crashing”. (Participant 11)

“Smaller banks don't have the same infrastructure, we may do.” (Participant 12)

“Automation works well here because our systems are cloud-based.” (Participant 3)

Robust infrastructure enables automation to deliver full efficiency benefits, whereas technical instability undermines confidence and usability.

5.4.2.3.2. Integration with Legacy Systems

Participants frequently cited integration issues as a bottleneck to operational efficiency.

“Most tools don’t talk to our old systems, data must be re-entered manually.” (Participant 4)

“We built interfaces to bridge old new, but it’s still clunky.” (Participant 10)

“You can't call something automated if you still double-check everything manually.” (Participant 6)

Integration challenges reflect the transitional stage of digital maturity in many banks, where new and legacy technologies coexist uneasily.

5.4.2.3.3. Resource Allocation and Prioritisation

Operational progress depends heavily on budget allocation and staffing.

“There’s never enough budget for compliance tech, it competes with front-office priorities.” (Participant 9)

“We’re expected to innovate without additional resources, it’s unrealistic.” (Participant 1)

“When budgets were approved for upgrades, adoption improved dramatically.” (Participant 7)

Resource scarcity constrains implementation, while strategic investment correlates strongly with effective utilisation and system reliability.

Participants consistently described a pattern of conditional effectiveness where technology functions optimally only in environments with strong leadership, robust infrastructure and a culture of adaptability. Conversely, regulatory rigidity, weak communication, or underinvestment dilute potential gains. The findings suggest that digital transformation is not solely a technical process but a socio-organisational evolution requiring sustained coordination between people, systems and institutions.

5.4.2.3.4. Conclusion for research question 2

The findings for Research Question 2 indicate that successful adoption of digital compliance technologies is largely driven by institutional, behavioural and operational enablers. Supportive leadership, adequate training, and positive employee attitudes emerged as critical success factors. Conversely, complex regulatory demands and limited resources hinder adoption across several institutions. The results suggest that technology readiness must be matched with cultural and managerial alignment to sustain change. Ultimately, effective adoption depends on how well banks integrate people, systems and strategy within the broader compliance environment

5.4.3. Conclusion

This chapter presented the findings from twelve semi structured interviews conducted with compliance professionals across South African banks. The results offered a detailed understanding of how digital technologies are perceived, experienced and adopted with theme compliance and environments. Guided by the Technology Acceptance Model and Institutional Theory, the analysis revealed both the transformative potential and persistent constraints of digitalisation in regulatory compliance.

Findings from Research Question 1 indicated that digital compliance tools have enhanced efficiency, accuracy and traceability in regulatory processes. Participants described improvements in operational workflows, data visibility and audit readiness. However, these gains were moderated by recurring challenges such as high volumes

of false positives, limited system integration, escalating technology costs and concerns about job displacement. While automation has streamlined compliance monitoring, participants cautioned that it has also compressed reflection time, intensified workloads, and diminished the human interpretive space. Digitalisation is thus experienced as both an enabler of efficiency and a source of professional strain.

Results from Research Question 2 revealed that the success of digital compliance transformation depends largely on institutional, behavioural and operational conditions rather than on technology itself. Supportive leadership, open organisational culture and ongoing training emerged as critical enablers, whereas regulatory rigidity, fragmented infrastructure and insufficient resource allocation acted as primary barriers. Employees' attitudes and adaptability were found to mediate how effectively institutions translate technological capability into practical compliance value.

Collectively, the findings portray digital transformation as evolutionary, relational and context dependent. Digital tools are widely accepted as indispensable for meeting modern compliance demands, yet their impact is uneven and shaped by institutional maturity, behavioural readiness and operational alignment. The evidence suggests that technological adoption in compliance functions cannot be achieved through system deployment alone: it requires leadership vision, cultural adaptation and human capability building.

conclusion, digital compliance effectiveness in South African banks is moderate but maturing. Banks have moved beyond adoption toward incremental optimisation, reflecting an industry in transition from compliance automation to compliance intelligence. The next chapter interprets these findings through the lenses of Institutional Theory and the Technology Acceptance Model to explain how institutional forces, user perceptions and contextual realities collectively shape the trajectory of digital compliance transformation.

CHAPTER 6: DISCUSSION OF RESULTS

6.1. Introduction

This chapter discusses the study's findings concerning the research problem, research questions and literature review. This chapter aims to interpret, contextualise, and compare the results and findings in Chapter 5 within the literature reviewed in Chapter 2. The discussion integrates the theoretical framework and perspectives from Institutional Theory and TAM to explain how external regulatory pressures and internal behavioural and operational factors influence the effectiveness of digital technologies in supporting regulatory compliance within South African banks. The chapter elaborates on the emergent themes obtained from participants' narratives and provides an interpretive lens that connects the empirical results to the existing theory and practise.

6.2. Discussion of Results for Research Question 1

How do compliance professionals perceive and experience the effectiveness of digital compliance technologies in supporting regulatory compliance?

While there is extensive literature on digital transformation and financial technology adoption in banking (Douaihy & Rowe, 2023; Kshetri, 2021; Von Solms, 2021), research that specifically explores how compliance professionals experience and perceive the effectiveness of digital compliance technologies remains limited, particularly within the South African regulatory environment. Prior studies have predominantly focused on technological innovation and regulatory efficiency at an institutional level (Burdon & Sorour, 2020; Cele & Mlitwa, 2024), yet little is known about how these tools are operationalised and experienced by the individuals responsible for ensuring compliance. This gap underscores the importance of understanding how digital tools, such as automated reporting systems, transaction monitoring software, and compliance dashboards, influence the everyday effectiveness and professional practices of compliance officers.

Research Question 1 sought to explore how compliance professionals perceive and experience the effectiveness of digital compliance technologies in supporting regulatory compliance. This question is particularly relevant given the increased integration of AI-driven monitoring tools, RegTech platforms, and data analytics within compliance frameworks across South African banks. When examining these

technologies, the analysis drew upon the TAM to understand perceptions of usefulness and ease of use (Davis, 1989), and Institutional Theory to explain how coercive, normative, and mimetic pressures influence their acceptance and implementation (Burdon & Sorour, 2020). Probing questions explored participants' lived experiences, focusing on how they use, trust, and interpret digital systems in their compliance duties.

The analysis revealed ten high-level themes that inform Research Question 1: Digital Compliance Tools, Operational Efficiency, Regulatory Challenges, Cost of Technology, False Positives, The Human Element in Compliance, Job Security Concerns, Upskilling Needs, Regulatory Environment and Technology Adoption.

6.2.1. Theme 1: Digital Compliance Tools

The findings revealed that compliance professionals generally perceived digital tools as indispensable for improving accuracy and efficiency, yet their effectiveness remained contingent on system integration, data quality, and user adaptation. These insights align with Davis's (1989) TAM model, which posits that perceived usefulness and ease of use are pivotal in influencing technology acceptance. The effectiveness of these systems was often conditionally enhanced where institutional readiness, leadership support and adequate training were present, but constrained by fragmented legacy systems.

Institutional Theory helps explain this tension. Coercive pressures from regulators such as the SARB and the Centre FIC have compelled financial institutions to adopt digital solutions (Burdon & Sorour, 2020). However, as Douaihy and Rowe (2023) and Kshetri (2021) highlight, compliance-driven adoption often results in partial integration and limited innovation. This mirrors participants' observations that digital compliance tools strengthened procedural efficiency but failed to address interpretive dimensions of compliance. Similarly to Rodríguez-Espíndola et al. (2022), the study shows that technological advancement enhances administrative control but does not inherently improve ethical or contextual decision-making.

The results confirm the literature's argument that digital compliance systems, while critical enablers, are not substitutes for professional reasoning. As Von Solms (2021) and Ado et al. (2024) note, automation increases speed and consistency but must coexist with human oversight to ensure judgmental accuracy. The alignment

between perceived usefulness and institutional legitimacy thus determines how effectively technology translates into compliance value.

6.2.2. Theme 2: Operational Efficiency

Operational efficiency emerged as one of the strongest indicators of technological value. Participants reported improved response times, structured workflows, and enhanced traceability, confirming TAM's construct of perceived usefulness. These findings are consistent with Canhoto (2021), who found that RegTech solutions improve speed and auditability across compliance operations. However, participants also noted that automation increased work intensity and reduced time for reflection, echoing the concerns of Porfirio et al. (2024) that efficiency gains can compress strategic reasoning.

From an institutional standpoint, the persistence of manual oversight reflects normative pressures prioritising accuracy and accountability over blind reliance on systems (Burdon & Sorour, 2020). Similar to Ado et al. (2024), participants' hybrid use of automation and manual verification indicates that compliance in emerging markets remains a human–technology partnership rather than full automation. This confirms Cele and Mlitwa's (2024) argument that operational efficiency in South African banks is often achieved at the expense of reflective depth.

The discussion highlights that while digitalisation enhances operational visibility and control, it also alters work dynamics—shifting compliance from reflective oversight to procedural execution. The findings align with Von Solms (2021), who suggests that digital tools create procedural rigour but may constrain critical engagement. Hence, efficiency is achieved, but at a potential cost to professional reflection and judgment.

6.2.3. Theme 3: Regulatory Challenges

The findings revealed that regulatory volatility and interpretive complexity undermine the adaptability of digital systems. Compliance professionals noted that while technologies streamline data tracking and reporting, they struggle to accommodate continuous regulatory change. This aligns with Hashmi et al. (2015) and Douaihy and Rowe (2023), who asserted that in emerging markets, regulation evolves faster than institutional or technological adaptation.

Institutional Theory contextualises this as a coercive environment where compliance departments prioritise legitimacy over flexibility (Burdon & Sorour, 2020). The study supports Murinde et al. (2022), who described South African compliance frameworks as reactive rather than anticipatory, leading to frequent system recalibration. From a TAM perspective, constant system updates diminish perceived ease of use, while limited interpretive support reduces perceived usefulness.

Comparatively, international studies such as Campbell-Verduyn and Lenglet (2023) found that RegTech tools in developed economies better align with regulatory intent because of stronger collaboration between regulators and banks. In contrast, South African institutions remain caught between compliance enforcement and technological capacity. This misalignment, also highlighted by Von Solms (2021), results in systems that enforce compliance formally but not substantively, supporting participants' perception that "technology makes us faster, not necessarily wiser."

6.2.4. Theme 4: Cost of Technology

Cost was consistently described as a structural limitation to digital transformation. Participants' accounts mirrored Charoenwong et al. (2024), who observed that high financial barriers limit the scale and depth of RegTech implementation in emerging markets. Institutions incur significant expenses for licensing, integration, and vendor maintenance, often without measurable returns. These findings confirm Ado et al. (2024), who noted that compliance technologies rarely demonstrate clear ROI due to their preventive rather than profit-generating nature.

Institutional Theory frames this as coercive isomorphism, organisations invest in technology primarily to maintain legitimacy with regulators and stakeholders rather than for intrinsic efficiency (Burdon & Sorour, 2020). The findings also resonate with Douaihy and Rowe (2023), who found that digital compliance investment in African markets is largely reactive and regulator driven.

From the TAM perspective, high maintenance costs and limited perceived value undermine behavioural intention to use. When technology's benefits are intangible or administrative, perceived usefulness diminishes. However, as Porfirio et al. (2024) suggest, institutions that view technology as a strategic rather than compliance expense are more likely to achieve sustainable transformation. The study thus

supports the idea that cost perceptions must evolve from transactional expenditure toward strategic investment to realise the full potential of digital compliance.

6.2.5. Theme 5: False Positives

False positives were identified as one of the most persistent operational barriers. Participants reported that excessive, low-value alerts reduce efficiency and morale. This confirms Kshetri's (2021) and Douaihy and Rowe's (2023) findings that rule-based systems often generate "noise" rather than insight in high-volume regulatory environments. The issue reflects a broader limitation of early-stage RegTech: systems designed for detection often lack contextual intelligence, resulting in alert fatigue.

From the TAM perspective, false positives lower perceived ease of use and perceived usefulness because users must manually validate system errors, reducing trust in automation (Bankins et al., 2024). Institutionally, this reinforces normative dependency on human oversight, as professionals rely on interpretive reasoning to filter out system inaccuracies.

The study aligns with Cele and Mlitwa (2024), who observed that in South African banks, false positives reflect both technical and institutional immaturity and that tools imported from global markets are insufficiently localised to domestic compliance realities. Mitigation efforts through analytics and machine learning, as discussed by Rodríguez-Espíndola et al. (2022), are still maturing but indicate gradual movement toward intelligence-based compliance.

Overall, the persistence of false positives demonstrates that digital compliance tools in South African banks remain more procedural than cognitive. Their effectiveness depends on integrating adaptive learning models and improved data quality rather than volume-driven monitoring.

6.2.6. Theme 6: The Human Element in Compliance

Participants' reflections underscored that technology cannot replace human judgment, aligning with Von Solms (2021) and Balakrishnan and Dwivedi (2021), who assert that ethical accountability remains inherently human. The findings revealed that while automation enhanced accuracy, compliance professionals

retained ultimate interpretive authority, ensuring that ethical and contextual considerations guided decisions.

Institutional Theory situates this within normative legitimacy: regulators and institutions continue to assign responsibility to human actors, not systems (Burdon & Sorour, 2020). This normative expectation sustains trust and accountability in compliance outcomes. From TAM's standpoint, technology was perceived as valuable when it augmented rather than replaced professional expertise, a condition also noted by Marikyan et al. (2022).

The findings further confirm Bader and Kaiser's (2019) argument that compliance is most effective when technology complements rather than dictates professional reasoning. The study's evidence suggests that South African compliance culture values interpretive oversight, which strengthens institutional legitimacy and mitigates automation bias. Thus, while digitalisation accelerates workflows, human judgment continues to define the ethical and interpretive boundaries of compliance work

6.2.7. Theme 7: Job Security Concerns

Job security concerns emerged as a significant socio-behavioural implication of digital transformation. Participants expressed anxiety about automation reducing traditional roles and optimism about opportunities for professional reinvention. This duality mirrors the "automation paradox" described by Marikyan et al. (2022), where efficiency gains coexist with existential uncertainty. Similarly, Bankins et al. (2024) observed that redundancy fears often reflect organisational communication gaps rather than job loss.

Institutional Theory contextualises this anxiety as a response to coercive pressures: regulatory and industry imperatives push for automation without parallel investment in psychological assurance or reskilling (Burdon & Sorour, 2020). From the TAM perspective, perceived usefulness influences adoption intention: when professionals fear being replaced, even useful technology may be resisted. These findings corroborate Von Solms (2021), who found that trust and inclusion are essential to sustaining morale in digital compliance transitions.

However, participants also demonstrated resilience by reframing automation as an opportunity to acquire higher-order analytical and strategic skills, aligning with Cetindamar and Abedin (2021) and Porfirio et al. (2024). This adaptive mindset represents normative evolution within compliance professions: digital literacy now enhances rather than threatens professional legitimacy. The synthesis therefore highlights that job security concerns can be mitigated through transparent leadership communication, participatory change management, and structured career pathing.

6.2.8. Theme 8: Upskilling Needs

Upskilling emerged as one of the most potent enablers of technology acceptance. Participants acknowledged that digital transformation demands continuous learning in analytics, automation and digital communication, confirming Centindamar and Abedin's (2021) assertion that professional relevance now depends on digital literacy. This finding aligns with Von Solms (2021), who emphasised that hybrid expertise, combining regulatory, technical and analytical competence, is critical for sustainable compliance transformation.

From a TAM perspective, structured training improves perceived ease of use and confidence, while Institutional Theory interprets upskilling as a normative adaptation that legitimises digital competence within professional identity (Burdon & Sorour, 2020). The findings also support Porfirio et al. (2024) and Douaihy and Rowe (2023), who found that continuous learning, especially peer-driven or experiential, enhances confidence and fosters a culture of innovation.

However, access to learning opportunities was uneven. Consistent with Cele and Mlitwa (2024), participants indicated that banks with clear digital learning strategies showed stronger adoption outcomes than those relying on ad hoc training. This disparity underscores that institutional culture and leadership commitment are decisive in embedding learning ecosystems. Overall, the synthesis shows that upskilling transforms digital anxiety into empowerment, bridging the behavioural and institutional gap between compliance tradition and technological modernity.

6.2.9. Theme 9: Regulatory Environment

The regulatory environment was consistently described as the most dominant external driver of digital compliance transformation. Participants confirmed that the

SARB and FIC provide the coercive pressure that compels technological investment, reinforcing Burdon and Sorour's (2020) framework of institutional isomorphism. This aligns with Douaihy and Rowe (2023), who found that emerging-market regulators accelerate digitalisation by linking compliance legitimacy to technology-driven reporting standards.

While regulation catalyses digital adoption, it also constrains flexibility. Participants' frustration with rapidly evolving and complex frameworks supports Campbell-Verduyn and Lenglet's (2023) notion of the "illusion of control," where regulatory technology enhances procedural compliance but limits contextual understanding. TAM complements this view by showing that excessive regulatory rigidity undermines perceived usefulness, as professionals associate technology with obligation rather than empowerment.

Furthermore, the findings corroborate Cele and Mlitwa (2024), who found that overregulation can lead to "compliance paralysis," discouraging innovation and experimentation. Nevertheless, emerging collaborative approaches, where regulators increasingly consult with banks, reflect a maturing institutional ecosystem, echoing Avenyo et al. (2024). This shift signals a gradual move from coercive enforcement toward normative and mimetic collaboration, enabling more adaptive, learning-oriented compliance environments. Ultimately, the synthesis illustrates that regulation drives legitimacy but must evolve toward enabling innovation for sustained digital maturity.

6.2.10. Theme 10: Technology Adoption

Technology adoption emerged as both an outcome and a process, shaped by institutional readiness, leadership support, and behavioural trust. Participants acknowledged digital systems as essential for compliance efficiency yet described adoption as uneven and iterative. This reflects Matsepe and Van der Lingen's (2022) argument that readiness, rather than technology availability, determines adoption depth.

Institutional Theory explains adoption as a product of coercive, normative, and mimetic forces: banks adopt technology to comply with regulation, mirror competitors, and sustain legitimacy (Burdon & Sorour, 2020). However, without

internal alignment, adoption remains symbolic rather than substantive, consistent with Campbell-Verduyn and Lenglet's (2023) findings. The study confirms that strong leadership endorsement and cultural adaptability enhance adoption effectiveness, while weak governance structures hinder integration.

From the TAM perspective, adoption success hinges on perceived usefulness and ease of use. Consistent with Ado et al. (2024), participants who experienced early system success developed higher confidence and trust, while those facing integration and usability challenges reverted to manual oversight. These behavioural outcomes highlight the interdependence between institutional readiness and user perception.

In line with Rodríguez-Espíndola et al. (2022) and Kshetri (2021), adoption outcomes in South African banks reflect moderate digital maturity, technologies improve data accuracy and auditability but remain constrained by cost, vendor dependency, and legacy infrastructure. The synthesis thus supports the view that technology adoption in compliance functions is an ongoing institutional learning process, transitioning from compliance-driven implementation to strategic integration.

6.2.11. Conclusion for Research Question 1

The findings for Research Question 1 demonstrate that digital compliance technologies are perceived as valuable enablers of efficiency, accuracy, and monitoring in South African banks. However, their effectiveness is conditional on institutional readiness, cost sustainability, user adoption, and regulatory alignment. When interpreted through Institutional Theory, the results show that adoption is largely coercive driven by regulatory legitimacy rather than intrinsic innovation. From the TAM perspective, perceived usefulness and ease of use mediate behavioural engagement, reinforcing that human confidence and skill are critical to sustained effectiveness. Overall, digital tools enhance compliance processes but remain bounded by integration challenges, cost constraints, and human–institutional interdependencies.

6.3. Discussion of Results for Research Question 2:

What institutional pressures, behavioural, and operational factors enable or hinder the effective adoption and use of digital compliance tools by individual employees in banks?

Existing literature widely acknowledges that organisational, behavioural and structural factors shape the adoption and utilisation of digital technologies (Centindamar & Abedin, 2021; Douaihy & Rowe, 2023; Matsepe & Van der Lingen, 2022). However, in the compliance context, especially within South Africa's evolving regulatory landscape, research examining how institutional pressures, behavioural factors, and operational enablers interact to influence digital compliance effectiveness remains scarce. Prior studies (Ado et al., 2024; Burdon & Sorour, 2020) have emphasised the role of coercive regulatory forces in driving technology adoption, yet few have explored how these external pressures translate into internal behaviours and operational practices among compliance professionals.

Research Question 2 aimed to identify the institutional, behavioural and operational factors that enable or hinder the effective adoption and use of digital compliance tools by compliance professionals in banks. This exploration builds upon the dual theoretical framework established in this study: Institutional Theory, which explains the external and structural drivers of adoption, and the Technology Acceptance Model (TAM), which elucidates the internal behavioural mechanisms influencing user engagement. Through this lens, the discussion synthesises how compliance professionals' attitudes, institutional support structures, leadership behaviour and technical infrastructure collectively shape the depth and sustainability of digital transformation in compliance functions.

From the analysis, three overarching themes were identified that address Research Question 2: Institutional Factors, Behavioural Factors, and Operational Factors.

6.3.1. Theme 1: Institutional Factors

Institutional factors emerged as the most decisive structural determinants of digital compliance adoption. These included regulatory requirements, organisational culture, and leadership commitment, all of which shaped how digitalisation was perceived and embedded. The findings reflect the essence of Institutional Theory, particularly coercive and normative isomorphism (Burdon & Sorour, 2020), which

describe how legitimacy pressures and shared professional norms influence organisational behaviour. Together with TAM, which highlights the role of perceived usefulness and ease of use (Davis, 1989), these frameworks clarify how external mandates and internal belief systems jointly determine adoption outcomes.

6.3.1.1. Regulatory Requirements as Drivers and Barriers

Participants consistently described regulatory pressure, particularly from the SARB and the FIC as both a catalyst and a constraint for digital transformation. This duality reflects findings by Douaihy and Rowe (2023), who observed that coercive compliance environments in emerging markets accelerate adoption but limit innovation. In this study, compliance professionals reported that digitisation was often implemented reactively, to satisfy audit and reporting expectations, rather than proactively for performance optimisation.

From an Institutional Theory perspective, this represents coercive isomorphism, where banks implement technology to signal legitimacy rather than achieve operational excellence (Burdon & Sorour, 2020). Similarly, Avenyo et al. (2024) argued that legitimacy-driven digitalisation leads to shallow adoption, with systems used symbolically rather than strategically.

In contrast, TAM interprets this behaviour as adoption driven by external obligation rather than internal belief in usefulness. When users perceive technology as an imposed requirement, their engagement is minimal. This echoes findings by Ado et al. (2024), who found that compliance-driven technology uptake in South African banks seldom produces sustained behavioural acceptance. Thus, while regulatory mandates drive digital adoption, they also risk producing compliance formalism, focusing on appearing compliant rather than achieving meaningful integration.

6.3.1.2. Organisational Culture and Internal Norms

Organisational culture profoundly shaped employees' willingness to adopt and effectively use digital tools. Participants working in innovation-oriented and collaborative environments expressed greater confidence and openness to experimentation, while those in risk-averse or hierarchical cultures experienced resistance and fear of error. This dynamic mirrors Von Solms (2021) and Kshetri

(2021), who highlighted that compliance cultures often privilege control over curiosity, hindering transformation.

Institutional Theory situates this within the normative pillar, where professional norms and shared beliefs about risk shape behaviour (Burdon & Sorour, 2020). A culture focused solely on procedural accuracy discourages digital innovation, as professionals fear deviation from traditional methods. Conversely, cultures promoting psychological safety where mistakes are treated as learning opportunities encourage acceptance of experimentation and technology (Bankins et al., 2024).
From a TAM lens, positive culture enhances perceived ease of use, as supportive peer environments reduce anxiety and improve confidence (Davis, 1989). This finding is consistent with Matsepe and Van der Lingen (2022), who found that cultural adaptability predicts successful technology implementation in South African banks.
Overall, the synthesis shows that organisational culture acts as the "social infrastructure" of digital transformation, enabling or inhibiting the internalisation of compliance technology.

6.3.1.3. Leadership Support and Institutional Endorsement

Leadership support emerged as the strongest institutional enabler of successful digital adoption. Participants repeatedly linked progress to visible executive sponsorship and alignment between strategic priorities and technological initiatives. This corroborates Porfirio et al. (2024), who emphasised that leadership engagement bridges the gap between institutional coercion and employee motivation.

Institutional Theory frames leadership as a norm entrepreneur and cultural translator (Burdon & Sorour, 2020). Executives who actively champion technology shift its perception from a regulatory imposition to an organisational opportunity. In contrast, absent leadership creates symbolic adoption, systems exist, but staff engagement remains shallow (Campbell-Verduyn & Lenglet, 2023).

TAM complements this by suggesting that leadership endorsement strengthens perceived usefulness, as employees interpret managerial support to validate technology's strategic value. Centindamar and Abedin (2021) further found that executive modelling where leaders use and promote digital tools themselves,

reinforces user confidence. These findings collectively affirm that institutional legitimacy and behavioural engagement converge when leadership actively endorses technology as integral to both compliance and performance.

6.3.2. Theme 2: Behavioural Factors

Behavioural factors represent the micro-foundations of adoption, capturing how individual attitudes, trust, and confidence translate institutional intent into practice. Participants' reflections revealed that behavioural adaptation is iterative, anchored in experience, self-efficacy, and perceived professional benefit. Integrating TAM and Institutional Theory clarifies that behavioural acceptance depends on perceived usefulness (TAM) and normative conformity within professional settings (Burdon & Sorour, 2020).

6.3.2.1. Employee Attitudes and Motivation

Attitudes toward digital technology varied along a continuum from skepticism to enthusiasm. Initially, many professionals were wary of automation due to fear of redundancy or lack of familiarity, reflecting early findings by Bankins et al. (2024) and Glikson and Woolley (2020). However, exposure and demonstrated benefits shifted perceptions toward cautious optimism over time.

In TAM terms, this behavioural shift corresponds to increased perceived usefulness and behavioural intention to use, which develop through positive reinforcement and observed task improvement (Davis, 1989). Institutionally, this transition represents a move from compliance-induced to conviction-driven adoption, an essential transformation for sustaining legitimacy (Burdon & Sorour, 2020).

Furthermore, this finding resonates with Douaihy and Rowe (2023), who found that employees' intrinsic motivation increases when digital systems are framed as empowerment tools rather than monitoring mechanisms. Thus, attitudes evolve as organisations reframe the narrative of technology from enforcement to enablement.

6.3.2.2. Training, Support, and Confidence Building

Training quality directly determined the extent of behavioural confidence and tool mastery. Participants differentiated between superficial, compliance-oriented training and practical, scenario-based learning. The latter approach was viewed as more

effective, reflecting Centindamar and Abedin's (2021) argument that experiential learning fosters stronger user competence and trust.

From a TAM lens, structured and continuous learning enhances perceived ease of use, reinforcing self-efficacy and reducing resistance (Davis, 1989). Institutionally, sustained capacity building demonstrates normative adaptation, embedding digital competence into professional identity (Burdon & Sorour, 2020).

The findings also align with Porfirio et al. (2024), who emphasised that peer mentoring and informal learning communities amplify knowledge retention and promote sustainable behavioural change. Participants who experienced leadership-supported learning ecosystems expressed higher engagement, confirming that human capability investment is a precondition for successful transformation.

6.3.2.3. User Experience and Accessibility

Usability and accessibility determine whether professionals engage with or avoid digital tools. Participants emphasised that intuitive design and alignment with existing workflows increased satisfaction and trust, while poorly configured interfaces eroded confidence. This aligns with Glikson and Woolley (2020), who found that system transparency and ergonomics shape user trust in digital platforms.

From a TAM perspective, ease of use and perceived enjoyment influence adoption more strongly than technical sophistication (Davis, 1989). Institutional Theory explains that usability influences normative legitimacy: when systems respect professional logic, users perceive them as credible extensions of their expertise (Burdon & Sorour, 2020).

The synthesis therefore underscores that technology adoption success depends not only on institutional pressure or technical quality, but on empathetic design that integrates user experience into compliance architecture.

6.3.3. Theme 3: Operational Factors

Operational enablers provide structural foundation for sustained adoption. Participants highlighted that technical infrastructure, system integration and resource allocation determine whether compliance technologies achieve intended outcomes.

Institutional Theory frames these as structural prerequisites for legitimacy while TAM interprets them as enablers of perceived usefulness and ease of use.

6.3.3.1. Technical Infrastructure

Infrastructure maturity emerged as a key differentiator of adoption success. Participants from well-resourced institutions reported smoother automation, faster workflows, and greater system reliability, echoing Matsepe and Van der Lingen (2022). Conversely, fragmented infrastructure and outdated software hindered integration and created inefficiencies.

Institutionally, this reflects structural inequality, and banks vary in digital readiness due to differing financial capacities and technological legacies (Burdon & Sorour, 2020). From a TAM perspective, weak infrastructure undermines user confidence and perceived reliability, leading to resistance. Rodríguez-Espíndola et al. (2022) confirm that infrastructural robustness correlates strongly with perceived usefulness, as system stability reinforces trust and engagement.

Thus, operational infrastructure forms the backbone of effective compliance transformation, translating institutional intent into practical reliability.

6.3.3.2. Integration with Legacy Systems

Integration challenges were one of the most persistent operational constraints. Participants described duplicated tasks and data fragmentation due to incompatible legacy systems. These findings echo Douaihy and Rowe (2023), who identified poor interoperability as a systemic weakness across emerging markets.

Institutional Theory interprets this as path dependence, where institutions inherit outdated systems and continue to operate them due to legitimacy inertia (Burdon & Sorour, 2020). Within TAM, integration complexity undermines perceived ease of use when professionals must navigate multiple disconnected systems; engagement and satisfaction decline (Ado et al., 2024).

This synthesis reinforces that sustainable adoption requires new tools and integrated ecosystems that unify compliance data, workflows, and decision-making processes.

6.3.3.3. Resource Allocation and Prioritisation

Participants consistently noted that insufficient budgets and limited technical personnel impede effective digitisation. Compliance technology often competes with profit-generating priorities, leading to underinvestment. This aligns with Cele and Mlitwa (2024), who found that resource scarcity remains a systemic constraint in South African compliance modernisation.

Institutionally, this demonstrates the legitimacy paradox; compliance receives rhetorical support but inadequate operational resources (Burdon & Sorour, 2020). From a TAM lens, underfunded systems lower perceived usefulness, as employees associate them with inefficiency and instability.

However, participants also recognised that well-funded, cross-functional initiatives yielded visible performance gains, confirming Kshetri's (2021) observation that strategic resourcing amplifies digital capability. Hence, resource allocation is both a technical and cultural signal: it communicates whether leadership truly values compliance transformation or merely performs it symbolically.

6.3.4. Proposed Conceptual Framework: The Digital Effectiveness Model

Building on the integration of Institutional Theory and TAM, this study proposes a conceptual framework, the Digital Compliance Effectiveness Model, to demonstrate how digital compliance effectiveness emerges from the interaction between institutional, organisational and individual dynamics identified in this research. The framework was developed inductively from the empirical results/findings in Chapter 5 and synthesised with the theoretical constructs and literature reviewed in Chapter 2.

The Model provides a multi-level view that explains how compliance professionals in South African banks experience, interpret and optimise digital technologies while facing evolving regulatory pressures. It illustrates the study's central argument: that effectiveness in digital compliance is not determined by technology alone but by the alignment of institutional legitimacy, organisational capacity and human adaptability.

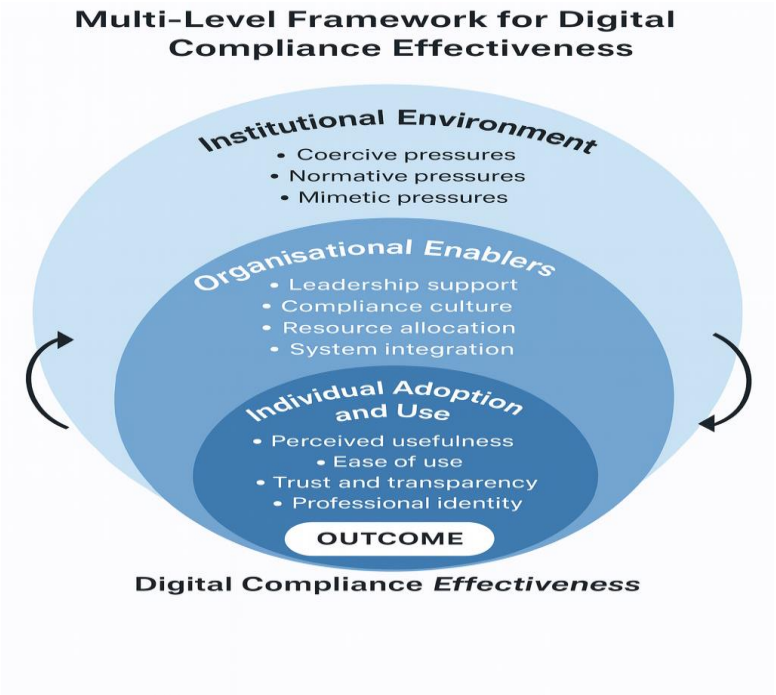

Figure 3: The Digital Compliance Effectiveness Model

Source: (author's own interpretation, 2025)

This is a multi-level framework integrating Institutional Theory and TAM to explain the interaction between institutional pressures, organisational enablers, and individual behavioural factors in determining digital compliance effectiveness in South African banks.

The Model comprises three interrelated layers that collectively determine the perceived and actual effectiveness of digital compliance technologies in banks:

6.3.5. Institutional Environment (Macro-Level)

At the outer layer, the model locates Institutional Theory as the explanatory lens for understanding the external pressures that drive digital compliance adoption. These include coercive pressures from regulators and global standard-setters (such as FATF and Basel Committee), normative pressures from professional and industry expectations within the compliance field and mimetic pressures from peer institutions seeking legitimacy through digital transformation.

These forces explain why South African banks adopt digital compliance tools primarily as a legitimacy-seeking response rather than purely for operational efficiency. As discussed in Chapter 2, this reflects the argument by Burdon and

Sorour (2020) and Douaihy and Rowe (2023) that institutional conformity often shapes organisational strategy. However, this study extends their view by showing that institutional legitimacy alone does not ensure practical effectiveness and that it must translate external compliance obligations into meaningful internal adoption.

6.3.6. Organisational Enablers (Meso-Level)

The second layer represents the organisational systems and structures that influence the translation of institutional pressures into effective operational practises. Drawing on the findings of Chapter 5, this layer includes leadership support, compliance culture, resource allocation, and system integration as key enablers of successful digital compliance implementation.

A strong technical infrastructure was identified as necessary but insufficient for success. Leadership engagement and cultural reinforcement emerged as the most decisive factors in sustaining behavioural change and system optimisation. This aligns with Von Solms (2021) and Matsepe and Van der Lingen (2022), who emphasised that digital transformation succeeds when leadership drives cultural alignment and continuous capacity building.

The Model posits, therefore, that organisational enablers serve as a translational bridge between macro-level institutional demands and micro-level user experiences. Where leadership is disengaged or resource allocation is uneven, the feedback loop between regulators, systems, and users breaks down and undermines both legitimacy and operational impact.

6.3.7. Behavioural and Perceptual Factors (Micro-Level)

At the core of the model lies the individual level which draws from TAM to explain how compliance professionals perceive and engage with digital tools in their daily work. This dimension incorporated perceived usefulness, ease of use, trust, transparency and professional identity.

The findings revealed that even when tools are technically sound, user perceptions of trustworthiness and fairness significantly influence adoption and sustained use. This supports the arguments of Ado et al. (2024), Bankins et al. (2024), and Glikson and Woolley (2020), who emphasise that perceived reliability and explainability shape behavioural intention in compliance environments.

However, this study extends TAM by introducing the concept of a behavioural legitimacy gap, which occurs when institutional or organisational imperatives to adopt technology outpace individual acceptance and confidence. This gap manifests in limited usage, manual workarounds and hesitation to rely fully on automated outputs, even when adoption is formally achieved.

The behavioural level, therefore, underscores that human discretion and digital trust are pivotal to compliance effectiveness. Digital tools are most effective when professionals view them as complementary to their expertise and when their use enhances rather than constrains their professional judgement.

6.3.8. Feedback Loops and Continuous Learning

The Model also introduces feedback loops between all three layers, and this signifies that effectiveness is a dynamic process rather than a static outcome. Institutional expectations shape organisational strategies, which in turn influence user perceptions and adoption. Conversely, user experiences and compliance performance data feed back into organisational learning and regulatory dialogue.

This feedback mechanism reflects the adaptive nature of regulatory technology in emerging markets and reinforces Institutional Theory's iterative dimension (Burdon & Sorour, 2020). It also captures the TAM principle that user experience informs future acceptance cycles. By incorporating feedback as a design element, the Model depicts compliance effectiveness as an evolving equilibrium between regulation, technology and human behaviour.

6.3.9. Outcome: Digital Compliance Effectiveness

At the core of this is the outcome, Digital Compliance Effectiveness, which has been defined in this study as the extent to which digital technologies enable compliance professionals and institutions to meet regulatory obligations efficiently, accurately and sustainably.

The findings in Chapter 5 showed that effectiveness is achieved when: institutional pressures are balanced by organisational readiness, leadership fosters trust, training and resource alignment and users perceive digital tools as transparent, supportive and enabling.

Therefore, digital compliance effectiveness represents not only technological success but also institutional credibility and behavioural sustainability.

6.3.1.0. The Framework's contribution

The Model contributes to academic theory and practise in several ways: it bridges the macro-micro-level theories, integrating Institutional Theory and TAM into a single model for understanding digital compliance effectiveness, it introduces the novel concept of a legitimacy gap, expanding Institutional Theory to include user-level dynamics, and it offers a contextual model tailored to emerging markets, acknowledging the constraints of regulatory fragmentation, resource disparities and evolving compliance cultures and it provides a practical roadmap for banks regulators to evaluate readiness and alignment across institutional, organisational and behavioural levels when implementing RegTech solutions.

By conceptualising digital compliance as a multi-layered system of interactions, the Model advances both theoretical discourse and managerial practise. It further underscores that sustained regulatory compliance in the digital era depends not on technology alone but on the harmonisation of external legitimacy, internal alignment and user trust.

6.3.11. Conclusion for Research Question 2

The second research question highlights that adoption effectiveness is shaped by the interaction of institutional, behavioural, and operational dimensions. Strong infrastructure and positive employee attitudes facilitate uptake, yet inconsistent leadership support and rigid regulatory demands restrict sustainable implementation. Institutional pressures drive adoption for legitimacy, whereas behavioural enablers determine continued use and trust. Effective digital compliance therefore relies on alignment between structural capacity, organisational culture, and professional confidence. Ultimately, technology succeeds when embedded within supportive governance, adequate resourcing, and a culture that values both innovation and accountability.

6.4. Conclusion

This chapter synthesised the study's findings with the theoretical framework and literature review to explain how compliance professionals in South African banks

perceive and experience the effectiveness of digital technologies in supporting regulatory compliance.

For research question 1, the results revealed that compliance professionals view digital technologies as moderately effective, valued for improving efficiency and regulatory responsiveness, yet constrained by trust issues, limited transparency and concerns over automation. These perceptions affirm TAM's emphasis on perceived usefulness and ease of use, while extending it to include trust and legitimacy as additional behavioural drivers.

For research question 2, the study demonstrated that institutional, behavioural and operational factors are interdependent. Strong infrastructure and training support, adoption but coercive regulatory pressures and inconsistent leadership weaken optimisation. Institutional Theory explains these outcomes as the result of external legitimacy pressures overriding internal alignment.

Collectively, the findings confirm that digital compliance effectiveness is contextual, relational and multi-layered. In South Africa's regulatory environment, technology serves as both a compliance and a legitimacy mechanism and its success ultimately depends on how well it integrates human judgement, institutional expectations and regulatory demands.

The next chapter, Chapter 7: Conclusion and Recommendations, will consolidate the above insights into a summary of the research objectives, theoretical and practical contributions, policy recommendations and future research direction.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1. Introduction

This chapter concludes the study by integrating insights from all the preceding chapters and presents the key findings, theoretical and practical contributions, limitations and recommendations for future research. Chapter 1 introduced the study and provided the background and rationale for examining the effectiveness of digital compliance technologies within South African banks. It outlined the research problem, objectives and questions that guided the study, emphasising the growing intersection between regulation, technology and compliance practise.

Chapter 2 reviewed the literature on digital transformation, regulatory compliance, and technology adoption. It highlighted gaps in existing research and established the link and relevance of Institutional Theory and TAM as the study's guiding theoretical lenses.

Chapter 3 formulated the research questions and linked them to the conceptual framework, demonstrating how the study sought to explore compliance professionals' lived experiences and perceptions of digital technology effectiveness.

Chapter 4 outlined the qualitative methodological approach, detailing the interprevist research design, sampling strategy, data collection and thematic analysis procedures that ensure rigour and credibility.

Chapter 5 presented the empirical findings structured according to key themes and subthemes that address the two research questions, while Chapter 6 discussed these findings concerning the literature and theoretical framework. The discussion integrated the empirical evidence with theory, demonstrating how institutional pressures, organisational enablers and individual adoption factors collectively shape the effectiveness of digital compliance technologies.

This final chapter synthesises these insights to present the overall conclusions of the research. It articulates the principal findings, theoretical and practical contributions, study limitations and recommendations for future research and professional practise.

7.2. Purpose of the study

The primary purpose of this study was to examine how digital compliance technologies are experienced and perceived by compliance professionals in South

African banks and to explore the enablers and barriers that shape their effectiveness. By focusing on the lived experiences, the research sought to bridge the gap between organisational adoption and individual-level effectiveness, thereby addressing the broader question of why technological compliance progress remains modest despite substantial investment and regulatory pressure.

The study aimed to achieve two objectives: to explore how compliance professionals perceive the effectiveness of digital technologies in achieving regulatory outcomes and to identify the institutional, organisational and behavioural factors that facilitate or hinder the effective adoption of these technologies.

The purpose was therefore both analytical and developmental and this was to generate insights that can inform and support governance, leadership and regulatory practises in the digital compliance landscape in South African banking.

7.3. Principal Research Conclusions

The study confirms that while South African banks have widely adopted digital compliance tools, their perceived effectiveness is moderate. The findings demonstrate a consistent pattern of functional adequacy but strategic underperformance, affirming that adoption does not equate to effectiveness. This reflects the complex interplay of institutional pressures, behavioural perceptions, and operational realities identified in the literature (Burdon & Sorour, 2020; Douaihy & Rowe, 2023; Kshetri, 2021).

7.3.1. The Digital Compliance Paradox

The findings reveal that South African banks are caught in a Digital Compliance Paradox: they are compelled by regulatory and reputational pressures to adopt RegTech solutions; however, they struggle to convert these technologies into sustainable operational efficiencies. From an Institutional Theory perspective, this aligns with the notion of coercive pressures where regulatory bodies such as SARB and FATF create conditions that drive adoption primarily for legitimacy and compliance visibility (Burdon & Sorour, 2020; Douaihy & Rowe, 2023; Murinde et al., 2022).

At the behavioural level and as described by TAM, effectiveness depends on users' perceptions of usefulness and ease of use (Davis, 1989). The findings show that

while compliance professionals recognise the necessity of digital tools, they express limited trust in their outcomes and uncertainty about their implications for professional roles. This supports literature that digitalisation often enhances procedural compliance but fails to fully replace human judgment and interpretive reasoning in decision-making (Porfirio et al., 2024; Von Solms, 2021).

Consequently, digital adoption serves symbolic legitimacy rather than strategic transformation, mirroring what Kshetri (2021) and Ado et al. (2024) described as legitimacy-driven adoption in emerging economies.

7.3.2. Perceived Effectiveness and Operational Friction

The study found that digital compliance tools perform well in managing regulatory complexity, enhancing reporting accuracy, and supporting professional upskilling, but less effectively in reducing false positives, workload duplication, and manual review processes. This reflects a pattern of technical competence but operational friction, consistent with Rodriguez-Espindola et al. (2022) and Sturgeon (2021), who observed that digital tools often improve visibility without simplifying workflow.

Half of the participants described digital compliance systems as moderately effective, citing persistent inefficiencies and limited system calibration. These findings suggest that although the technological infrastructure is sound, the optimisation and integration phases remain underdeveloped. Similarly to Cele and Mlitwa (2024) and Matsepe and Van der Lingen (2022), this points to a gap between technology capability and strategic alignment, where digital tools exist, but operational design and leadership engagement lag.

7.3.3. Institutional and Leadership Constraints

The study found that strategic misalignment and leadership inconsistency undermine digital compliance effectiveness despite sufficient technical infrastructure. Leadership commitment, sustainable funding and coherent governance were uneven across institutions. This resonates with Burdon and Sorour's (2020) argument that regulatory and institutional duality in emerging markets produces competing pressures: one oriented toward legitimacy and the other toward efficiency.

Continuous regulatory updates from the SARB and FIC, intended to enhance compliance standards, have produced a reactive implementation cycle, as banks prioritise short-term adherence over strategic innovation (Douaihy & Rowe, 2023;

Murinde et al., 2022). The result is a fragmented compliance landscape where digital systems are implemented to demonstrate conformity rather than to achieve sustained performance improvement.

7.3.4. The Human Factor

A central conclusion of the study concerns the human and psychological dimension of technology adoption. Job insecurity, limited communication about automation and exclusion from technology design processes have generated uncertainty and anxiety among compliance professionals. Despite generally positive attitudes toward digitisation, many employees feel detached from the design and decision-making processes governing digital transformation.

From a TAM perspective, this reflects the importance of perceived usefulness and ease of use in shaping behavioural intention (Davis, 1989). However, as Bankins et al. (2024) and Cetindamar and Abedin (2021) observed, adoption success also depends on training, trust and leadership support. Where these enablers are weak, technology adoption remains partial and prone to workarounds that compromise system effectiveness.

These findings affirm that South African banks have achieved symbolic compliance: digital systems satisfy external regulatory expectations but do not deliver internal optimisation. These findings also echo Burdon and Sorour's (2020) concept of institutional duality, where formal compliance systems are maintained to signal legitimacy while underlying behavioural and operational inefficiencies persist.

Digital transformation in compliance, therefore, remains legitimacy-driven rather than performance-driven, constrained by institutional pressures, operational silos, and behavioural apprehension. To achieve substantive transformation, banks must bridge the divide between institutional legitimacy and technological effectiveness, aligning system design with human engagement and strategic intent (Cele & Mlitwa, 2024; Douaihy & Rowe, 2023; Kshetri, 2021).

7.3.5. Theoretical Contribution

This study contributes to academic and practical knowledge in three key ways:

7.3.5.1. Contribution to Theory

This research bridges Institutional Theory and the Technology Acceptance Model (TAM) to create a dual theoretical lens that explains both the macro-level institutional pressures driving the adoption of digital compliance tools and the micro-level behavioural responses of individuals engaging with these technologies. Institutional Theory helps explain why banks adopt digital compliance tools, often in response to coercive pressures, such as regulatory scrutiny, FATF directives and reputational legitimacy concerns. TAM illuminates how individual professionals perceive and interact with these technologies within their organisational contexts.

This dual approach advances current academic discourse by illustrating that adopting compliance technology is not merely a technical or operational decision, but a social and institutional act to preserve legitimacy under regulatory pressure. In doing so, the study bridges a critical gap between the adoption and effectiveness perspectives of RegTech in the banking sector (Ado et al., 2024; Cele & Mlitwa, 2024; Douaihy & Rowe, 2023; Porfirio et al., 2024).

Moreover, this study refines TAM by incorporating influencing factors such as perceived job security and fear. The findings reveal that perceived job insecurity negatively influences the relationship between perceived usefulness and behavioural intention. In regulatory environments, fear of redundancy or replacement becomes a stronger predictor of technology acceptance than perceived ease of use. This adds a psychological and emotional dimension to TAM, making it more contextually relevant to compliance-driven, risk-averse environments such as financial institutions in emerging markets.

Finally, the study extends Institutional Theory into an emerging market context, demonstrating that under constrained governance and institutional capacity conditions, coercive pressures can foster a “compliance theatre,” where digital adoption is pursued primarily for reputational survival rather than functional improvement. This contextual adaptation provides a richer understanding of how institutional legitimacy-seeking behaviour manifests in developing economies, thereby deepening the theoretical understanding of RegTech adoption beyond the global north narrative.

7.5.3.2. Contribution to Business Practise

From a business perspective, this research offers a practical and evidence-based framework for enhancing digital compliance effectiveness in the banking sector. By analysing the lived experiences of compliance professionals, it reveals how banks can better align digital tools with employee needs, regulatory expectations and strategic objectives (Cetindamar & Abedin, 2021).

The study highlights the risks of adopting digital solutions for symbolic compliance rather than genuine effectiveness in South Africa's heightened regulatory scrutiny following FATF greylisting. It underscores that adoption without functionality creates vulnerabilities such as regulatory sanctions, reputational harm and financial loss. Accordingly, the insights generated here can guide banks, regulators and policymakers in designing and implementing digital compliance systems that are operationally efficient, behaviourally acceptable and institutionally legitimate.

7.3.5.3. Contribution to the Broader Body of Knowledge

This study enriches the growing body of RegTech and digital compliance literature by contributing a contextually grounded framework that integrates institutional and behavioural perspectives. It provides a theoretical foundation for future research exploring the intersection of regulatory compliance, technology adoption, and institutional legitimacy in emerging economies. Beyond academia, the findings also support the broader goal of strengthening the integrity of South Africa’s financial system, fostering compliance capacity and promoting sustainable governance practices across the financial sector.

7.4. Research Recommendations

The findings suggest several practical and policy recommendations for the banking sector, regulatory bodies and leadership teams.

7.4.1. Strategic and Operational Optimisation

Banks should institutionalise a post-deployment calibration after every RegTech rollout. This period should focus on refining data quality, tuning algorithms and reducing false positives based on user feedback. Such iterative improvement will ensure digital systems evolve beyond compliance and deliver measurable efficiency gains.

7.4.2. Leadership Commitment and Governance

Strong, visible leadership is essential to overcoming the current strategic incoherence. Senior executives should take accountability for RegTech effectiveness and embed performance indicators that link leadership evaluation to measurable outcomes such as false positives and satisfaction. This approach will realign digital compliance as a core strategic asset rather than a technical obligation.

7.4.3. Human Capital and Change Management

Given the pervasive job insecurity and anxiety among compliance professionals, banks must adopt an augmentation-first approach that positions technology as a support mechanism, rather than a replacement for human expertise. Transparent communication strategies should emphasise that digital tools are intended to eliminate repetitive tasks and enhance the analytical value of compliance roles. This framing will help transform resistance into ownership.

7.4.4. Training and Professional Development

Training should extend beyond tool operation to emphasise critical judgement, ethical interpretation and the human oversight of algorithmic outputs. This will reinforce the irreplaceable role of professional judgement in compliance decision-making while strengthening confidence in human-machine collaboration.

7.4.5. Regulatory Recommendations

Regulators such as SARB, FSCA and FIC should prioritise regulatory stability by issuing principles-based guidance that allows technological consistency over time. Moreover, supervisory assessments should move beyond adoption metrics to reward optimisation by recognising institutions that demonstrate reductions in false positives and improvements in system accuracy. Finally, regulators should mandate greater transparency around algorithmic decision-making and workforce impact, ensuring that digital transformation aligns with ethical and human-centric standards.

7.5. Practical and Policy Implications

7.5.1. Implications for Banks and Compliance Leaders

For the banks, the results underscore that digital compliance tools deliver value only when embedded in supportive organisational systems. Senior leaders need to go

beyond purchasing technology and actively cultivate digital trust, skills and leadership.

7.5.2. Strategic Alignment

Leadership must integrate digital compliance objectives into the broader compliance strategy rather than treating them as separate technology projects.

7.5.3. Capacity Building

Continuous training and skills development should accompany new technology implementation. As demonstrated in Chapter 5, confidence and competence among users directly influence effectiveness.

7.5.4. Trust and Transparency

Efforts should be made to explain algorithmic processes and ensure that outputs are auditable and regulator ready. This will reinforce both user and institutional trust.

7.5.5. Inclusive Design

Compliance professionals should be involved in the development and testing phases of digital tools to ensure practical usability and contextual fit.

Overall, organisational readiness must include not just technical infrastructure but also cultural and leadership readiness: the soft infrastructure that determines whether digital transformation succeeds.

7.5.6. Implications for Regulators and Supervisory Bodies

From a policy perspective, regulators have a crucial role to play in shaping digital compliance outcomes. The study indicates that regulatory uncertainty, fragmented standards and evolving supervisory expectations hinder technology optimisation.

To enhance sector-wide effectiveness, regulators should: provide clear, adaptable digital compliance guidance that evolves with technological innovation, encourage public-private collaboration to co-develop RegTech standards that balance innovation with regulatory integrity, promote digital literacy initiatives for both regulators and industry practitioners to ensure consistent interpretations of digital reporting standards, incorporate SupTech in ways that support transparency and data sharing, creating a feedback loop that improves both compliance monitoring and tool development.

A proactive and innovative, stance will reduce the compliance uncertainty observed in this study and promote mutual trust between banks and regulators.

7.6. Limitations of the Study

Despite the thoroughness of the research design, certain limitations must be acknowledged:

Firstly, the qualitative cross-sectional nature of the study limits generalisability. The insights reflect a snapshot in time and may evolve as technology and regulation mature. Secondly, the contextual relation to South African banks experiencing unique pressures of FATF greylisting means that the findings most apply to similar emerging markets rather than universal contexts. Thirdly, reliance on self-reported data may introduce bias as participants could portray institutional performance more favourably. While triangulation mitigated this risk, future mixed-method approaches could enhance validity.

7.7. Suggestions for Future Research

Future research could extend this study in several ways: Quantitative validation of the proposed relationship between perceived job security and technology acceptance constructs could statistically substantiate the psychological mechanisms identified here. Comparative case studies between banks with varying optimisation levels could empirically measure the cost and organisational impact of the compliance theatre. Longitudinal studies could assess how institutional pressures evolve post-greylisting and whether the Digital Compliance Paradox persists once external scrutiny stabilises. Cross-sectional research could explore whether similar legitimacy-driven adoption patterns exist in other regulated industries, such as insurance or telecommunications.

7.8. Conclusion

The study concludes that the effectiveness of digital compliance technology in South African banks is constrained not by technical capacity but by strategic misalignment and human insecurity. The institutional compulsion to appear compliant has led to rapid adoption without adequate optimisation, resulting in costly and symbolic performance cycles.

For South African banks to progress from compliance theatre to genuine technological integration, they must embrace a paradigm shift that unites technology, leadership and human capital under a coherent governance vision. Regulators must also evolve their supervisory frameworks to reward substantive optimisation rather than mere adoption.

Ultimately, the future of compliance lies not in algorithms alone but in the empowered professional who can critically interpret, challenge and complement them. As the findings of this study demonstrate, digital transformation succeeds only when institutional legitimacy and human capacity advance together. Therefore, the next chapter for the South African banking sector must be one of strategic coherence, empowered compliance professionals and authentic digital effectiveness.

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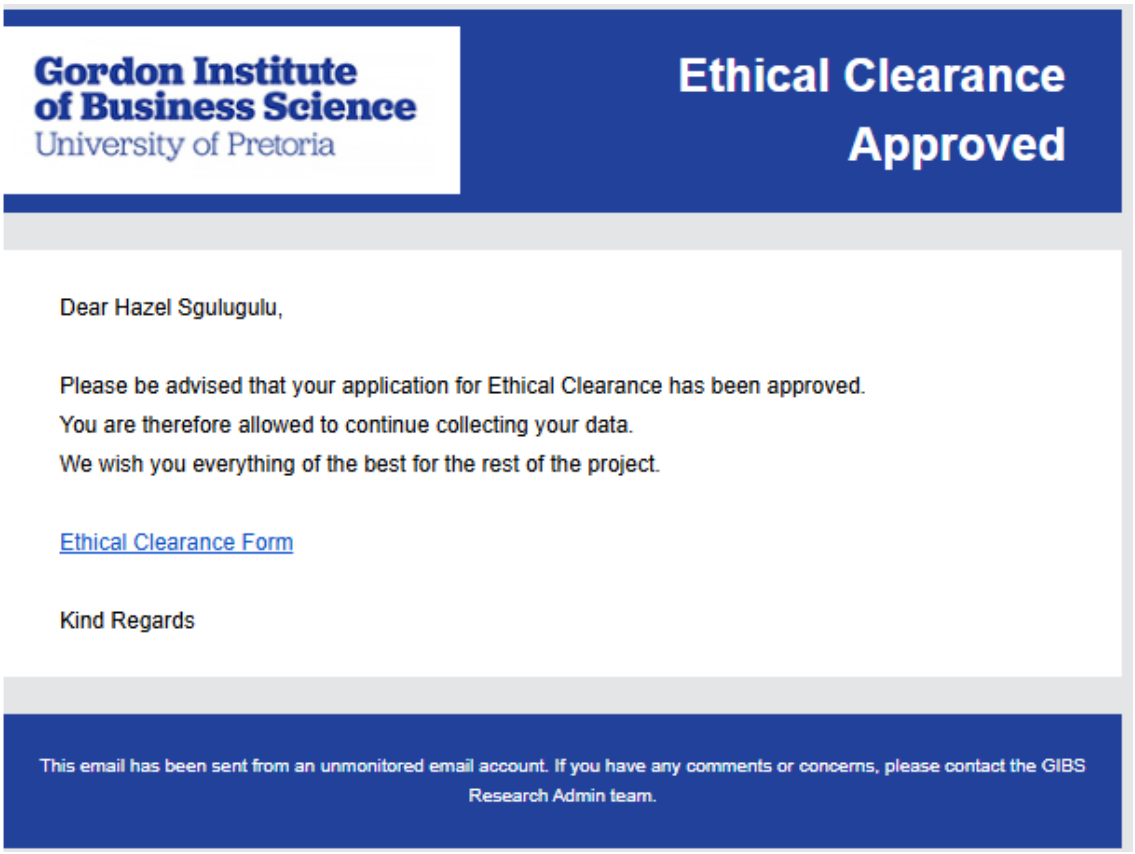
Appendices

Appendix 1 – Ethical Clearance Approval



Gordon Institute of Business Science
University of Pretoria

Ethical Clearance Approved

Dear Hazel Sgulugulu,

Please be advised that your application for Ethical Clearance has been approved.
You are therefore allowed to continue collecting your data.
We wish you everything of the best for the rest of the project.

Ethical Clearance Form

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

Appendix 2 - Informed Consent Form

I am currently a student at the University of Pretoria's Gordon Institute of Business Science, where I am completing my research in partial fulfilment of an MBA.

I am researching the effectiveness of digital technology in enhancing regulatory compliance within South Africa's banking sector. The interview is expected to last approximately one hour and will help us understand how compliance professionals perceive, interact and use digital tools to achieve their organisation's compliance outcomes. Your participation is voluntary, and you can withdraw at any time without penalty. Confidentiality will be strictly maintained throughout the research process and any information you provide will be securely stored and accessible only to the researcher, supervisor and research committee. No names of individuals or organisations will be reported, and all data will be stored without any personal or organisational identifiers.

If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher's Name: Hazel Sgulugulu **Research Supervisor's Name**: Ngwako Sefoko

Email: 24080536@mygibs.co.za **Email:** nsefoko@gmail.com

Phone: 078 603 8995 **Phone:**

Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

Appendix 3 – Interview Guide

Study Title: The Effectiveness of Digital Technology in Enhancing Regulatory Compliance in South African Banks

Researcher: Hazel Sgulugulu

Supervisor: Dr Ngwako Sefoko

Programme: Master of Business Administration (MBA) – Gordon Institute of Business Science (GIBS)

Date:

1. Introduction & Consent

Thank you for granting permission to participate. I'm conducting a study as part of my MBA research to explore the effectiveness of digital technology in enhancing regulatory compliance in South African banks.

The interview will take approximately 45 to 60 minutes. Please note that your participation is voluntary and all responses will be treated confidentially. You are allowed to withdraw at any time. Do I have your permission to record this interview for purposes of transcription and analysis?

2. Background and Context

2.1. Can you briefly describe your current role and your responsibilities within the bank?

2.2. How long have you been working in this area (e.g. compliance, risk, audit, IT related to compliance)?

2.3. What kinds of digital tools or systems do you currently use in your compliance work (e.g., monitoring tools, regulatory reporting systems, analytics platforms)?

3. Perceived Effectiveness of Digital Technologies

3.1. In your experience, how effective are these technologies in helping you meet your compliance obligations?

3.2. Have these tools improved your efficiency or accuracy? If so, how?

3.3. Do you think the use of digital tools has had any impact on reducing instances of non-compliance? Can you give an example?

3.4. Are there tasks that are now easier or more difficult because of these technologies?

4. Strategic and Operational Relevance

4.1. How well do you think the digital compliance tools align with the bank's compliance strategy?

4.2. Are the tools flexible enough to support changing or evolving regulatory requirements?

4.3. Do you believe these technologies support a more proactive approach to compliance?

5. Enablers and Barriers

5.1. What factors have helped you use digital tools effectively (e.g., training, support, system design)?

5.2. Have you experienced any challenges with the tools or systems? (e.g., usability, integration issues, lack of relevance)

5.3. How would you describe the level of support from management or IT when issues arise?

6. Institutional Pressures and Cultural Factors

6.1. To what extent do external regulatory bodies or policies influence the use or implementation of digital tools?

6.2. Are you aware of any peer pressure or industry norms that affect how your institution uses digital compliance systems?

6.3. How does your department or team culture support or resist the use of digital technologies?

7. Future Outlook and Reflections

7.1. If you could change or improve one thing about your current digital compliance systems, what would it be?

7.2. Where do you see the biggest opportunity for digital tools to improve compliance outcomes?

7.3. Is there anything else you would like to share about your experiences with digital compliance tools

8. Closing

8.1. Is there anything else you would like to add regarding your experience or views on digital technology and compliance?

8.2. Thank you for participating in this study. Have a great day or evening.

Appendix 4: List of Codes

This section presents the final codes and themes that emerged from the thematic analysis of 12 semi-structured interviews with compliance professionals in South African banks. The codes were developed inductively and refined iteratively in Atlas.ti. during the coding and analysis stages. Each code reflects a significant meaning unit drawn from participants' lived experiences of the effectiveness and adoption of digital technologies for regulatory compliance.

Codes were grouped into two categories aligned with research questions:

Perceptions and experiences of effectiveness – Research Question 1 (RQ1)

Institutional, behavioural and operational factors influencing adoption – Research Question - Research Question 2 (RQ2)

RQ 1 – Perceptions and Experiences of Effectiveness

Theme	Code ID	Code Label	Definition/Description	Example Evidence/Quotation	Groundedness (# of quotes)
T1	DCT01	Digital Compliance Tools	Technologies (e.g., RegTech, AI monitoring, automated reporting) used to meet compliance requirements. Reflects perceived functionality, integration, and usefulness.	Our digital tools have streamlined monitoring and reporting, reduced manual labour and improved accuracy.	27
T2	OE02	Operational Efficiency	Improvement in compliance workflows, turnaround times, and data accuracy due to technology.	What used to take two days can now be done in a few hours	25
T3	RC03	Regulatory Challenges	Difficulties in meeting evolving regulatory demands despite digital support; includes gaps between system capacity and regulatory expectations.	The tools are useful, but they don't always communicate well with legacy systems	22
T4	CT04	Cost of Technology	Financial implications and return on investment of compliance tools; perceived cost-effectiveness.	We have spent millions on digital compliance technology, but it has not addressed our pain points	20
T5	FP05	False Positives	System inaccuracies generating unnecessary alerts, undermining efficiency and credibility.	We get too many false alerts s more work instead of less	23
T6	HEC06	Human Element in Compliance	The role of human judgment, decision-making, and ethical interpretation in a tech-enabled environment.	Technology helps, but we still rely heavily on human judgment for final decisions	21

T7	JSC07	Job Security Concerns	Anxiety and perceived threat of job loss due to automation in compliance functions.	There's fear that AI will make compliance analysts redundant	18
T8	UN08	Upskilling Needs	Continuous learning and adaptation prompted by digitalisation; capacity-building efforts.	The tools push us to learn new skills and stay relevant	19
T9	RE09	Regulatory Environment	Influence of the external regulatory context on the use and performance of digital compliance tools.	Digital tools help us keep up with frequent regulatory changes	24
T10	TA10	Technology Adoption	Integration and acceptance of digital tools within compliance operations and employee workflows.	Adoption is going well; we've made progress, but training is still needed	26

RQ2 – Institutional, Behavioural and Operational Factors Influencing Adoption

Theme Category	Code ID	Code Label	Definition/Description	Illustrative Quotation	Groundedness (# of quotes)
Institutional Pressures	**RP01**	**Regulatory Requirements**	**Coercive pressures from regulators affecting adoption and flexibility of compliance tools.**	**Regulators want everything automated but offer little clarity on expectations.**	**23**
	OC02	Organisational Culture	Norms and shared values shaping attitudes toward innovation and technology use.	Our bank encourages innovation, but compliance still feels old-school	
	LS03	Leadership Support	Commitment and advocacy from senior management for digital transformation.	Leadership support is inconsistent; some units drive it, others resist	
Behaviours	**EA04**	**Employee Attitudes**	**Staff openness and confidence in adopting and using digital tools.**	**Most of us are excited to use new systems once trained**	**28**
	TS05	Training and Support	Quality and accessibility of capacity-building initiatives for compliance teams.	The training sessions were helpful, but we need ongoing refreshers	
	UX06	User Experience (UX)	System usability, interface design, and perceived ease of use.	User-friendly tools make compliance tasks faster and less stressful	
Operational Factors	**TI07**	**Technical Infrastructure**	**Robustness of IT architecture supporting digital compliance tools.**	**Our systems are well integrated infrastructure is in the problem (D4)**	**25**
	IS08	Integration with Existing Systems	Seamless connectivity between new digital	Integration was smooth; data flows easily	

			tools and legacy compliance systems.	between systems	
	RA09	Resource Allocation	Availability of financial, human, and time resources for technology implementation and maintenance.	We have the tech, but not enough staff or time to use it optimally	

Summary of Code Relationships

Category	Primary Enablers	Primary Hindrances
Operational	Technical Infrastructure (TI07), Integration with Systems (IS08)	Resource Allocation (RA09)
Behavioural	Employee Attitudes (EA04), Training & Support (TS05), UX (UX06)	-
Institutional	Organisational Culture (OC02)	Regulatory Requirements (RP01), Leadership Support (LS03)

Coding Structure (Atlas ti. Export View)

Parent Node 1: Effectiveness Perceptions

├── Digital Compliance Tools

├── Operational Efficiency

├── Regulatory Challenges

├── Cost of Technology

├── False Positives

├── Human Element in Compliance

├── Job Security Concerns

├── Upskilling Needs

├── Regulatory Environment

└── Technology Adoption

Parent Node 2: Adoption Influences

├── Institutional Pressures

│ ├── Regulatory Requirements

│ ├── Organisational Culture

│ └── Leadership Support

├── Behavioural Factors

│ ├── Employee Attitudes

│ ├── Training and Support

│ └── User Experience

└── Operational Factors

├── Technical Infrastructure

├── Integration with Existing Systems

└── Resource Allocation

Coding Reliability

Coding Process:

Manual open coding – axial coding – theme consolidation in Atlas.ti.

Consistency Checks:

Codes were reviewed twice to ensure alignment with the Technology Acceptance Model (TAM) and Institutional Theory constructs

Final Themes:

10 Themes under RQ1 and 9 codes retained under RQ2 retained after saturation