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The Role of Enterprise Business Architecture within the South African Banking Industry

By Ntsoko Phihlela, 406143

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Faculty of Commerce, Law, and Management
Wits Business School, Johannesburg, South Africa

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28 February 2025

Abstract

In the dynamic business environment of today, agility, cost efficiency, quality, and effective delivery are essential for success. This study explored the role of Enterprise Business Architecture (EBA) within the South African banking industry, focusing on how banking institutions perceived and utilized EBA to align organizational strategy development and execution.

The South African banking industry faced persistent challenges in aligning corporate strategy with execution often resulting in inefficiencies, delayed implementations, and cost overruns. The conceptual framework of this research was built on three primary theoretical foundations, namely: Strategic Alignment Theory, Business Process Management Theory, and Change Management Theory.

This study employed a quantitative research methodology, utilizing a deductive approach to test hypotheses. Data was collected through a structured online questionnaire distributed to professionals in the South African banking industry. The population consisted of professionals involved in or knowledgeable about Enterprise Business Architecture (EBA) practices and strategic business processes. Data analysis involved reliability tests, descriptive statistics, correlation analysis, and multiple regression analysis to examine relationships between variables.

The findings highlighted significant relationships between the predictor and predicted variables, emphasizing the importance of the bank's valuation of EBA and common knowledge of EBA practices in influencing the effectiveness of EBA use. Additionally, the alignment of strategy and IT capabilities and operational efficiencies were closely linked to the bank's valuation of EBA and the adoption of EBA practices.

The study concluded that EBA plays a crucial role in aligning business strategies with IT capabilities, improving operational efficiency, and enabling digital transformation within the South African banking industry. The adoption of EBA frameworks significantly enhances the effectiveness of strategy execution and operational processes in South African banks.

Keywords: Enterprise Business Architecture, Business Strategy, South African Banking Industry, Strategy Execution.

Declaration

I, Ntsoko Seja Phihlela, confirm that this research thesis titled: *The Role of Enterprise Business Architecture within the South African Banking Industry*. It is submitted in fulfilment of the requirements for the Master of Business Administration at Wits Business School, Parktown, Johannesburg.

I declare that:

- the above thesis is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete reference.
- I have not submitted this work, or part of it, for examination at University of the Witwatersrand for another qualification or at any other higher education institution.
- I have adhered to the ethical guidelines and policies of the University of the Witwatersrand.

Name: Ntsoko Seja Phihlela Signature: NS Phihlela

Signed at Silverlake, Pretoria East

On the 28th of February 2025

Dedication

I dedicate this study to God Almighty, who gave me the strength and courage to pursue this degree. This was just another dream and yet He made it possible.

To my late father, Samuel Phihlela, and mom, Mapula Phihlela, thank you for your love and support. You provided the foundation of my success.

To my darling husband, Thetha thank you for your unconditional love, your endless support and encouragement. I am blessed to have you in my life!

To my beautiful and lovely daughters, Bohlale, Katlego and Mbalenhle, I hope this inspires you to believe in yourself and achieve your dreams I love you and wish you the best.

To my family, friends and colleagues, thank you for your support and encouragement. I appreciate and thank God for you.

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List of Acronyms

4IR	- Fourth Industrial Revolution
BIAN	- Banking Industry Architecture Network
BPM	- Business Process Management
EA	- Enterprise Architecture
EBA	- Enterprise Business Architecture
FCSA	- Financial Sector Conduct Authority
FEAF	- Federal Enterprise Architecture Framework
GDP	- Gross Domestic Product
IT	- Information Technology
PA	- Prudential Authority
PWC	- PricewaterhouseCoopers
SARB	- South African Reserve Bank
TOGAF	- The Open Group Architecture Framework
UN/CEFACT	- United Nations Centre for Trade Facilitation and Electronic Business

CHAPTER 1: INTRODUCTION

1.1 Purpose of the Study

The primary purpose of this study was to explore the role of Enterprise Business Architecture (EBA) within the South African banking industry, with a particular focus on how banking institutions perceived and utilised EBA to align organisational strategy development and execution. The study investigated benefits and limitations of adopting EBA, specifically in terms of improving strategy execution and the overall effectiveness of business operations."

This research addresses a significant gap in the literature regarding the adoption and implementation of EBA frameworks in South African banks, particularly concerning its integration with strategic objectives. The research findings will provide practical insights and recommendations for future research and industry practices, contributing to a deeper understanding of how EBA can enhance strategic development and execution in South Africa's dynamic banking environment.

1.2 Background of the Study

Enterprise Business Architecture (EBA) serves as a critical framework for aligning business strategies with operational capabilities in the rapidly evolving South African banking sector. According to The Open Group Standard (2018), business architecture provides a comprehensive view of value delivery, capabilities, data assets, and enterprise structures, along with their interrelationships with corporate perspectives, approaches, products, legal frameworks, programs, and participants.

The global competitive landscape is characterized by rapidly changing markets and increasing customer demands that disrupt traditional business models (Friedman, 2007). In response, organizations must gain comprehensive insights into their operations while remaining agile enough to evaluate internal and external factors that drive innovation and competitiveness.

The South African banking industry faces unique pressures such as technological disruption, evolving customer expectations, and regulatory compliance, all of which necessitate a robust approach to strategic alignment. A study by The Standish Group reveals that approximately 70% of corporate change initiatives face significant challenges such as budget overruns, poor delivery outcomes, total failure, and delayed implementation due to a disconnect between strategy and execution (Semple, 2021). EBA presents an opportunity to address these issues and enhance these concerning statistics.

1.2.1 The Business Architecture Framework and Knowledgebase

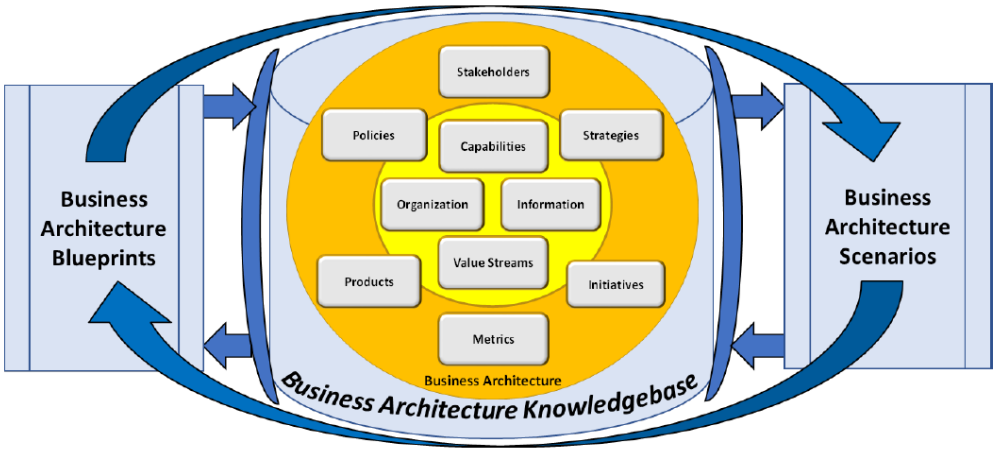

Figure 1:The Business Architecture Framework & Knowledgebase

The Business Architecture Framework provides a comprehensive structure for understanding and implementing EBA within organizations. Central to this framework is a business architecture knowledgebase, which is essential for capturing and managing various elements of business architecture, including capabilities, value streams, information and organizational structures.

Building a knowledgebase is critical for creating **business blueprints**, which are the visual representations of the organizational architecture. These blueprints aid in aligning strategic objectives with operational processes. Emphasis is placed on following a structured approach to EBA, enabling organizations to effectively plan, analyse, and execute their strategies (Bata, Lyndon, Schlamann, and Ulrich, 2020).

Value streams represent the end-to-end processes that deliver value to the stakeholders. These value streams are enabled by **capabilities**, which are the building blocks of the business, representing what the organization does to achieve its objectives. The relationship between value streams and capabilities is crucial for identifying areas of improvement to ensure that the organization's resources are effectively utilized.

The role of **information** in EBA underscores the importance of accurate and comprehensive information mapping to support decision making and strategic planning (Bata et al., 2020). **Organisational structures** in EBA provides a holistic view of the business ecosystem, including internal business units and external partners. Organizational mapping offers an

opportunity to understand the relationships and dependencies within the organization, facilitating better coordination and collaboration.

Other key aspects addressed by EBA include formulation and execution of strategies and the role of initiatives in driving strategic objective. The Business Architecture framework supports organizations in achieving strategic goals and enhancing overall performance (Bata et al., 2020).

The value of EBA lies in its ability to provide an abstract representation of an enterprise and its ecosystem. By serving as an effective communication and analytical framework, EBA translates strategy into actionable initiatives. EBA enhances an organization's capacity for transformational change by navigating complexity, reducing risk, enabling informed decision-making, aligning diverse stakeholders around a shared vision, and leveraging technology more effectively (Business Architecture Guild, 2020).

1.3 Research Problems

The South African banking industry continues to grapple with persistent challenges in aligning corporate strategy with execution. These issues often result in inefficiencies, delayed implementations, and cost overruns. Despite the increasing adoption of EBA as a framework designed to bridge the gap between strategy formulation and execution, there is limited empirical research investigating its effectiveness within this specific industry context.

According to a study by Thembela Khedama (2023), the South African banking sector has been slow to fully leverage big data analytics, which is crucial for aligning business strategies with operational execution. This underutilization of data analytics tools has led to inefficiencies and missed opportunities for enhancing business outcomes.

Furthermore, research by Molato Lucas Chalale (2023) highlights that a significant number of IT projects in the South African banking industry exceed their budgets and timelines, indicating a disconnect between strategic planning and execution. This misalignment often results in poor delivery outcomes and increased costs, underscoring the need for a robust framework like EBA to ensure better alignment and efficiency.

Additionally, the adoption of artificial intelligence (AI) in the South African banking sector faces numerous challenges, including resistance to change and a lack of skilled professionals. These challenges further complicate the alignment of corporate strategy with execution, as banks struggle to integrate new technologies effectively (Pretorius, 2024).

This study aims to address these gaps by critically analysing EBA's role in enhancing strategy execution within the South African banking sector. By investigating the perceptions of banking institutions regarding EBA's benefits and limitations, this research will provide valuable insights into how EBA can improve strategic alignment and operational efficiency.

1.4 Research Questions

- To what extent does the adoption of Enterprise Business Architecture (EBA) influence the alignment between business strategy and operational execution in South African banking institutions?
- What is the statistical relationship between the adoption of EBA and improvements in operational efficiency and cost optimization in South African banks?
- How significantly does EBA adoption contribute to digital transformation outcomes such as agility, risk management, and competitive positioning in the South African banking sector?

1.5 Research Objectives

The objectives of this research were to:

- Investigate the perceptions of banking institutions in South Africa regarding the role and effectiveness of EBA in organisational strategy development and execution.
- Analyse the key benefits and limitations associated with the adoption of EBA within these institutions.
- Evaluate how Enterprise Business Architecture (EBA) drives digital transformation in South African banks and to analyse its impact on enhancing agility, risk management, and competitive positioning.

1.6 Significance of the Study

This study holds significant importance for both academic and practical realms. Academically, it enriches the existing literature on EBA by offering insights into its role within the South African banking industry, a region where such research is scarce. Practically, the findings are intended to equip banking institutions with knowledge about the benefits and challenges of EBA implementation, guiding them in strategic decision-making processes that can enhance their operational effectiveness. Furthermore, by identifying best practices for EBA adoption, this study aims to support organizations in overcoming common pitfalls associated with corporate change initiatives, ultimately leading to improved performance metrics within the industry (Semple, 2021).

This research may be useful to organisations that are curious about the EBA discipline and the EBA practitioners who are currently working in different industries to appreciate and understand the competencies, challenges, and key gaps that need to be addressed to strengthen and continue to advocate, facilitate good principles, practices, and professionalism of the BA role in organisations.

1.7 Delimitations of the Study

The study focused exclusively on the South African banking industry, which may limit the generalizability of findings to other sectors or geographical regions. Additionally, the research employed a quantitative methodology grounded in a positivist paradigm, which may not capture qualitative nuances related to individual perceptions and experiences with EBA.

The scope was confined to examining perceptions from participants employed within South African banking institutions that had implemented EBA; thus, insights from organizations that had not adopted EBA were not included. Furthermore, while this study aimed to analyse both benefits and limitations of EBA, it primarily emphasized its impact on organizational strategy development and execution.

1.8 Assumptions

The study assumed that participants would represent a cross-section of individuals involved in EBA practices or knowledgeable in strategic business processes within the South African banking industry. This ensured clarity about the demographic focus and mitigated assumptions of generalized views. It was assumed that the respondents participated willingly and provided honest, accurate perspectives based on their own experiences and realities.

The data collected from respondents was expected to be accurate and reliable, reflecting their true perceptions and experiences with EBA in the South African banking industry. A minimum response rate of 200 participants was anticipated to yield statistically significant insights, though the final number was smaller.

It was also assumed that EBA had a measurable impact on business strategy development and execution, and this impact could be effectively assessed through the research methodology employed. While the findings from the sample primarily reflected the South African banking context, they were assumed to hold indicative relevance for other similar financial sectors globally.

1.9 Definitions of Terms

The definitions below provide the terms and outline the context used for the purposes of this study.

Table 1:Terms and Definitions

Term	Definition
Business Strategy	A **plan of action designed to achieve a long-term or overall aim,** guiding the direction and scope of an organization over the long term (Pearlson et al., 2019).
Enterprise Architecture	A **comprehensive framework used to manage and align** an organization's IT assets, people, operations, and projects with its overall business goals (TOGAF, 2020).
Enterprise Business Architecture	• EBA is **a discipline within enterprise architecture** that focuses on aligning an organization's business strategy with its operational processes, technologies, and resources (Ross et al., 2006). • EBA **provides a structured framework** for understanding and managing business capabilities, processes, and organizational goals, essential for maintaining competitiveness in the banking sector (Digital Adoption, 2024).

1.10 Chapter outline

Table 2: Chapter 1: Research Scope Outline

Chapter 1 Research Scope and Motivation	
Problem	There is unclear definition and implementation of business architecture roles in the South Africa banking industry.
Objectives	The objective of this study is to examine the: • perceptions of EBA in strategy development and execution. • benefits and limitations of EBA adoption. • role of EBA in driving digital transformation. • how EBA impacts business strategy within the South African banking industry.
Justification	Published research has preserved that EBA comprises of a single element that make up an enterprise IT architecture. In addition, there is misinterpretation or downplay of the EBA role as the request side and IT architecture as the fulfilment side. EBA is a tool that lessons the effort of integration of domains that are critical when dealing with complex business environments. There is need to clarity the role of EBA so that businesses can appreciate and understand the competencies, challenges, and key gaps that need to be addressed to strengthen and facilitate good principles, practices, and professionalism of the EBA role in organisations.
Expected Contribution	To clarity the role of EBA and its practicality to support business strategy development and execution.

This study involves an investigation of the role of EBA in the South African banking industry as described in the outline above. The dissertation consists of 5 chapters, and the remaining chapters follow a structured approach. The report is concluded by discussing the limitations of the study and outlining future research that can be carried out. The reference section provides a list of all references cited in the main body of the dissertation.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Enterprise Business Architecture (EBA) has emerged as a strategic discipline within enterprise architecture, offering a structured approach to aligning business strategy with operational capabilities. In the context of the South African banking industry characterised by rapid digital transformation, regulatory complexity, and competitive pressures EBA provides a framework for navigating organizational change and enhancing strategic execution. This chapter critically reviews the theoretical and empirical literature on EBA, focusing on its frameworks, strategic role, implementation challenges, and relevance to the South African banking sector.

2.2 Conceptualising Enterprise Business Architecture

EBA is a sub-discipline of enterprise architecture that focuses on the design and governance of business capabilities, value streams, and organizational structures to support strategic objectives (Ross, Weill, and Robertson, 2022). It provides a blueprint for translating high-level strategy into operational execution by mapping business functions, processes, and information flows (Kotusev, 2022). The Business Architecture Guild (2020) emphasizes that EBA enables organizations to visualize and manage complexity, improve decision-making, and foster alignment between business and IT domains.

In the South African banking context, EBA is increasingly recognised as a tool for enhancing agility, compliance, and customer-centric innovation (Van der Merwe and Dreyer, 2017). However, its adoption remains uneven, with varying levels of maturity across institutions (Sibiya, Matthee, and Van der Merwe, 2020).

EBA in the South African banking sector is instrumental in facilitating the integration of business and IT processes, enabling banks to respond effectively to rapid technological advancements, regulatory pressures, and evolving customer expectations (Van der Merwe and Dreyer, 2017). The holistic approach of EBA allows organizations to identify gaps between their current and desired states, guiding them through necessary change initiatives (Capstera, 2023).

The South African banking industry faces unique challenges such as economic volatility, high levels of competition, and the need for digital transformation. EBA serves as a roadmap for organizations to navigate these complexities by offering a clear view of their business operations and how they interact with technological solutions. Moreover, it emphasises

enhancing business agility and resilience, crucial for maintaining competitiveness in this sector (Sibiya et al., 2020).

2.4.1 EBA Methods and Framework

Several frameworks support the implementation of EBA, including The Open Group Architecture Framework (TOGAF), the Zachman Framework, and the Banking Industry Architecture Network (BIAN). TOGAF, for instance, provides a layered approach to enterprise architecture, with a dedicated business architecture domain that defines capabilities, roles, and processes (The Open Group, 2020). BIAN, tailored for the banking sector, promotes interoperability and standardization of IT services, enabling banks to reduce integration costs and enhance agility (SunTec Group, 2025).

In South Africa, the adoption of these frameworks is influenced by regulatory requirements, such as Basel III compliance, and the need for digital transformation (Dlamini and Naidoo, 2019). Lightweight EBA models have also been proposed to foster collaboration between business and IT teams, particularly in resource-constrained environments (Capstera, 2023).

2.4.2 Benefits of implementing EBA

The literature identifies several key benefits of EBA:

- **Strategic Alignment:** Ensures coherence between business goals and IT investments (Ross et al., 2022).
- **Operational Efficiency:** Streamlines processes and reduces redundancy (Van Belle, 2023).
- **Agility and Innovation:** Enhances responsiveness to market changes and supports digital transformation (Matthee and Tobin, 2023).
- **Risk Management:** Improves governance and compliance through structured oversight (Bernard, 2021).
- **Collaboration:** Breaks down silos and fosters cross-functional integration (Winter and Schelp, 2021).

These benefits are particularly relevant in the South African context, where banks face mounting pressure to innovate while managing operational risk and regulatory compliance.

2.4.3 Challenges in EBA

Despite its benefits, EBA implementation faces several challenges. Resistance to change, particularly in institutions with entrenched legacy systems, is a major barrier (Marimuthu, Arokiasamy, and Ismail, 2022). Organizational silos and unclear role definitions further complicate integration efforts (Ogundipe, 2023). Additionally, a shortage of skilled professionals and the high cost of implementation hinder widespread adoption (Mashaba and Sibanda, 2021).

Regulatory complexity adds another layer of difficulty. Banks must ensure that their EBA frameworks are flexible enough to adapt to evolving compliance requirements while maintaining strategic coherence (Tereshchenko, 2024). These challenges underscore the need for strong change management practices and continuous stakeholder engagement.

2.1 The Role of EBA in Strategy

EBA serves as a critical framework for aligning business strategies with operational capabilities in the South African banking sector. It facilitates the translation of strategic objectives into actionable plans, ensuring that all organizational levels are aligned toward common goals. By providing a structured approach to managing complexity and change, EBA enhances strategic governance and decision-making processes (van der Merwe, 2007).

In the South African banking sector, where digital transformation and compliance with regulatory requirements are critical, EBA serves as a foundational strategy enabler. It ensures that the bank's objectives, capabilities, and processes are interconnected, facilitating seamless execution of strategic initiatives (Mashiane and Monyai, 2021).

EBA ensures operational coherence by integrating business objectives with IT systems, thereby improving agility and responsiveness in a rapidly evolving banking environment (Ross et al., 2006). EBA allows banks to respond to these challenges by fostering collaboration between business and IT, as well as by improving strategic positioning (Ogundipe, 2021).

EBA plays a pivotal role in aligning business goals with technology, enabling banks to respond rapidly to changing customer demands, competition, and regulatory pressures. For instance, the South African Reserve Bank's increasing focus on operational resilience emphasizes the need for integrated architectures to manage systemic risks (Naidoo, 2022).

2.3.1 Strategy Development and Execution

EBA plays a pivotal role in bridging the gap between strategy formulation and execution. It enables organizations to define strategic goals, assess current capabilities, and design transformation roadmaps (Pearlson, Saunders, and Galletta, 2019). In the South African banking sector, where legacy systems and fragmented processes often hinder execution, EBA provides a structured mechanism for aligning initiatives with strategic intent (KPMG, 2020).

2.3.2 Strategic Alignment and Fit

Strategic alignment theory posits that organizational performance improves when business and IT strategies are harmonised (Coltman et al., 2015). EBA facilitates this alignment by mapping strategic drivers such as customer experience, regulatory compliance, and innovation to business capabilities and IT systems (Gerow, Thatcher, and Grover, 2015). This alignment is particularly critical in banking, where digital transformation and risk management are top priorities (Naidoo, 2022).

In South Africa, regulatory compliance, such as adherence to the Financial Sector Regulation Act, necessitates alignment between business strategies and operational capabilities. EBA frameworks like TOGAF (The Open Group Architecture Framework) are widely used to ensure compliance while maintaining strategic agility (Sibanda et al., 2021).

2.3.3 Value Delivery and Competitive Advantage

EBA enhances value delivery by optimising resource allocation, improving service delivery, and enabling innovation. It supports performance measurement by linking strategic objectives to operational outcomes (Tamm et al., 2021). For example, Standard Bank's enterprise-wide architecture initiative enabled faster product launches and improved customer satisfaction (KPMG, 2020).

Effective implementation of EBA contributes to better risk management practices, ensuring that banks can navigate uncertainties while maximizing value creation (Trishan, 2022). Ultimately, the focus on value delivery through EBA supports sustainable growth and competitiveness in the South African banking industry.

2.2 South African Banking Industry

The South African banking sector is the largest in Africa, with combined assets totalling approximately R7 billion, equivalent to 110% of the nation's GDP (SARB, 2023; S&P Global Ratings, 2024). In January 2023, the country had 18 registered banks, 4 mutual banks, 5 cooperative banks, 12 local branches of foreign banks, and 30 foreign banks with approved local representative offices (SARB, 2023). The industry is highly concentrated, with the top five banks (ABSA, Capitec, First National Bank, Nedbank, and Standard Bank) holding 90% of the total banking assets (SARB, 2023).

Over the past decade, the sector has seen significant consolidation, with several banks decreasing from forty-one (41) in 2001 to eighteen (18) by the end of 2021. This consolidation has been overseen by the Financial Sector Conduct Authority (FCSA) and the Prudential Authority (PA) of the South African Reserve Bank (SARB, 2023). Business models in this sector are crucial for understanding how firms create and capture value (Baden-Fuller & Haeflinger, 2013).

Banks play a vital role in the economy by channelling funds from savers to borrowers, mitigating information asymmetries, reducing transaction costs, creating liquidity, and diversifying risk (Gorton and Winton, 2003; Goddard & Wilson, 2016). These roles are executed through various business models that evolve to adapt to market conditions, economic shocks, regulatory changes, and technological advancements (DeYoung and Rice, 2004; Bord and Santos, 2012). Recent studies continue to highlight the importance of these functions. For instance, Akims (2022) emphasizes the role of commercial banks in financial intermediation and economic growth, while Dominic, Joseph, and Sisodia (2024) discuss the banking sector's role in economic resurgence and resilience, particularly in the context of the COVID-19 pandemic. Additionally, Wilson, Nguyen, Sobiech, and Kgari (2025) provide evidence on the evolution and outcomes of bank business models in South Africa, illustrating how banks adapt to changing market conditions and regulatory environments.

2.4.1 Trends Impacting the SA Banking Institutions

The rise of the internet and online technologies has created numerous opportunities for business digitization and the development of new digital business models (Louw and Nieuwenhuizen, 2019). The Fourth Industrial Revolution (4IR) has further accelerated this transformation, fundamentally altering the global banking industry by dissolving traditional distinctions of products, markets, and customer bases (Pyun, Scruggs, and Nam, 2002). This evolution has unified financial systems worldwide (Mercieca, Schaek, and Wolfe, 2007).

Technological advancements have revolutionized the creation, delivery, reception, and utilization of financial products, enhancing convenience and economic efficiency, which positively influences consumers' adoption and continued use of international digital-only banks (Lee & Kim, 2020). Traditional banks face increasing pressures to grow and retain their customer base while meeting diverse customer expectations through digitalized services (Pallant, Sands, & Karpen, 2020). The continued adoption of innovative offline, online, and mobile value-added services is essential for consumer satisfaction, retention and business continuity (Goddard et al., 2007).

Selecting the right digital platforms and tools is critical for ensuring widespread user adoption, acceptance, and overall success (Louw and Niewenhuizen, 2019). However, adopting new technologies comes with inherent risks, particularly concerning cyber and information security. Early adopters who manage these risks effectively can place additional pressure on competitors to follow suit (Roberts et al., 2003). The emergence of non-traditional players in the financial services industry has created a 'marketplace without boundaries,' allowing these new entrants to challenge incumbents and continuously reshape the financial services landscape in South Africa (Camarante and Brinckmann, 2017).

2.3 Analytical Framework

2.5.1 Theoretical Framework

This study draws on three key theoretical frameworks:

- **Strategic Alignment Theory**: Emphasizes the integration of business and IT strategies to enhance performance (Coltman et al., 2015).
- **Business Process Management (BPM) Theory**: Focuses on optimising workflows to improve efficiency and adaptability (Dumas et al., 2018).
- **Change Management Theory**: Highlights the importance of structured change processes in achieving transformation (Al-Haddad and Kotnour, 2015).

These theories provide a robust foundation for analysing the role of EBA in strategy execution, operational efficiency, and digital transformation.

2.5.1.1 Strategic Alignment Theory

Strategic Alignment Theory emphasizes the importance of aligning business strategies with operational capabilities. According to Coltman, Tallon, Sharma, and Queiroz (2015), organizations that achieve strategic alignment can significantly enhance their performance outcomes. This theory posits that strategic alignment involves the integration of business strategy, IT strategy, organizational infrastructure, and processes. By ensuring these elements are in harmony, organizations can improve agility, enhance decision-making, and more effectively achieve their strategic objectives. In the context of EBA, strategic alignment is crucial for ensuring that the business architecture supports and enables the overall business strategy, leading to improved performance and competitive advantage (Gerow, Thatcher, and Grover, 2015).

The following hypothesis is proposed based on the strategy alignment variable:

1. **H1:** The adoption of EBA frameworks significantly improves the alignment of business strategies with IT capabilities in South African banks.
2. **H2:** Banks with higher levels of EBA adoption experience more effective translation of strategic objectives into operational processes.

2.5.1.2 Business Process Management (BPM) Theory

Business Process Management (BPM) Theory focuses on optimising business processes to improve efficiency and effectiveness. Dumas et al. (2018) describe BPM as a systematic approach to making an organization's workflow more effective, efficient, and adaptable to changes in the business environment. EBA serves as a framework for understanding and enhancing these processes, by mapping out and analysing business processes, EBA helps to identify areas of improvement, streamline operations, and ensure that processes are aligned with the organisation's strategic goals. This alignment not only enhances operational efficiency but also supports the organization's ability to respond to market changes and customer demands.

The following hypothesis is proposed based on the operational efficiency variable:

1. **H3:** The implementation of EBA is positively associated with increased operational efficiency and cost optimisation in South African banks.
2. **H4:** EBA adoption reduces process redundancy and enhances resource allocation efficiency.

2.5.1.3 Change Management Theory

Change Management Theory explores how organizations manage change effectively, particularly in response to external pressures like digital transformation. According to Al-Haddad and Kotnour (2015), successful changes management involves creating a sense of urgency, forming a guiding coalition, developing a vision and strategy, communicating the vision, empowering employees for broad-based action, generating short-term wins, consolidating gains, and anchoring new approaches in the organization's culture. EBA provides a structured approach to facilitate necessary changes in organizations. By offering a clear blueprint of the organization's current and future state, EBA helps to manage the complexities of change, ensures changes are aligned with strategic objectives, and supports the successful implementation of new initiatives (Cameron and Green, 2019).

The following hypothesis is proposed based on the digital transformation variable:

1. **H5:** EBA acts as a critical enabler for successful digital transformation in South African banks.
2. **H6:** The alignment of EBA with strategic drivers, such as technological innovation and regulatory compliance, enhances the competitive positioning of South African banks

2.5.2 Conceptual Framework

The conceptual framework below has been developed based on the literature review, and the theory was used to analyse results based on a defined hypothesis.

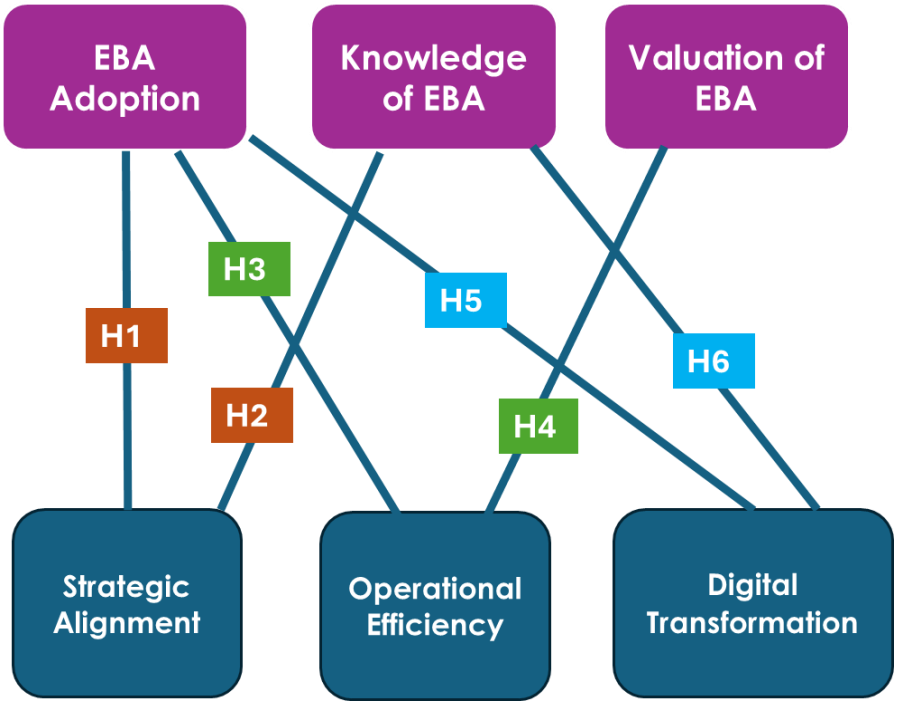

Figure 2: The Enterprise Business Architecture Conceptual Framework

The conceptual framework above highlights the connections between the adoption of EBA and its effects on the South African banks in relation to exploring this study. It is built on three primary theoretical foundations, each with its own set of hypotheses. At the core of this framework is the adoption of EBA by South African banks.

The framework demonstrates how EBA adoption impacts various outcomes, depicted by linkages between different elements. These connections illustrate how EBA adoption affects strategic alignment, operational efficiency, and digital transformation capabilities within South African banks. This structured approach will assist to analyse the influence of EBA adoption, emphasising the key areas where implementation is expected to enhance performance and provide a competitive edge in the banking sector.

2.5.3 Conclusion

The literature affirms that EBA is a critical enabler of strategic alignment, operational efficiency, and digital transformation in the banking sector. While South African banks have begun to adopt EBA frameworks, challenges such as resistance to change, skills shortages, and regulatory complexity persist. Nonetheless, the potential benefits ranging from improved agility to enhanced value delivery underscore the importance of EBA as a strategic tool. This review provides the theoretical and empirical grounding for the study's investigation into the role of EBA in the South African banking industry.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodological framework adopted to investigate the role of EBA in aligning strategy and execution within the South African banking industry. It presents the research philosophy, approach, strategy, design, sampling, data collection, and analysis methods. The chapter also revisits the conceptual framework and hypotheses, ensuring alignment with the study's objectives and theoretical foundations.

3.2 Research Philosophy

The study adopts a positivist research philosophy, which assumes that reality is objective and can be measured through observable phenomena (Saunders, Lewis, and Thornhill, 2019). Positivism is appropriate for studies that seek to test hypotheses and establish causal relationships using empirical data. In this context, the positivist stance supports the use of structured instruments and statistical analysis to examine the impact of EBA on strategic alignment, operational efficiency, and digital transformation.

Quantitative studies often involve controlled experiments, such as randomized control trials, which ensure unbiased and unfiltered explanations of cause-and-effect relationships (Florczak, 2014). Among the most widely used quantitative methods are surveys and correlational studies (Queiros et al., 2017).

To provide a comprehensive understanding of the quantitative research methodology employed in this study, Table 3, presents the advantages and disadvantages of various quantitative research methods. This table serves as a valuable reference for evaluating the strengths and limitations of the chosen research approach, ensuring a well-rounded analysis of the data collection and analysis techniques utilised in this research.

Table 3: Quantitative Research Advantages and Disadvantages

Method	Advantages	Disadvantages
Field experiments	• Conducted in natural settings • Suitable for large scale research • Subjects remain unaffected by observations	• Challenging to control variables • Hard to replace conditions • Potential ethical concerns
Simulation	• Examines complex systems • Reduces time frames • Evaluates 'what-if' scenarios	• Necessitates extensive field knowledge • Time-intensive and costly • May require specialized tools
Surveys	• Short development time • Inexpensive • Simplifies data collection and analysis • Broad reach and high representativeness	• Data reliability hinges on the quality of responses and survey design • Inflexible structure • Fails to capture emotions and behavioural changes
Correlational study	• Explores various domains • Easily calculates variable associations • No behaviour manipulation required	• Cannot infer direct cause-and-effect relationships • Potentially lacks validity • Fails to offer distinctive reasons for correlations
Multivariate analysis	• Uses various statistical tests • Explores multiple domains • Ensures technical rigor	• Complex techniques • Requires specialized software
Multivariate analysis	• Uses various statistical tests • Explores multiple domains • Ensures technical rigor	• Complex techniques • Requires specialized software

Quantitative research offers notable advantages, such as quick administration and evaluation, facilitated by sophisticated statistical software at relatively low cost. However, its major disadvantage is its detachment from human perception and beliefs (Choy, 2014).

This study employs a quantitative research methodology grounded in a positivist paradigm, using a deductive approach to test hypotheses. This approach is suitable for examining the relationships between EBA implementation and various organizational outcomes in the banking sector.

3.3 The Research Approach

The research process onion summarizes key aspects to consider and review before starting any research. Its layers aids to examine the researcher's philosophical orientation, chosen research approach, appropriate strategies, and data collection techniques (Saunders et al., 2019)

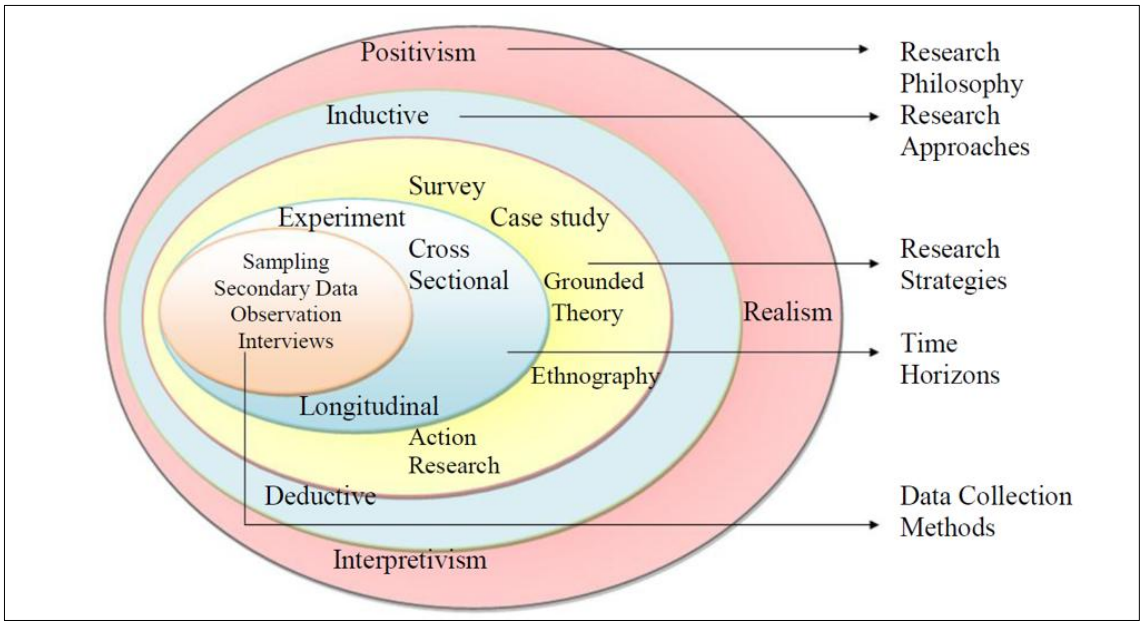

Figure 3: The Research Process Onion

A deductive research approach was employed, which involves testing existing theories through hypothesis-driven investigation (Bryman and Bell, 2015). Deduction is suitable when the research begins with a theoretical framework and seeks to validate or refute specific propositions. This study draws on Strategic Alignment Theory, Business Process Management Theory, and Change Management Theory to formulate hypotheses about the influence of EBA on organisational outcomes. The deductive approach ensures that the research is grounded in theory and guided by logical reasoning.

This framework provides a comprehensive understanding of the various layers and stages involved in the research process. The table below states the application of the onion process undertaken for the purpose of this study:

Table 4: Application of the onion process for this study

Research philosophy	The study adopts a positivist philosophy, focusing on objective measurement and observable phenomena related to EBA in the South African banking industry.
Research approach	A deductive approach is used, starting with a theoretical framework and testing hypothesis through empirical data collected via surveys.
Research strategy	The survey strategy involves distributing structured online questionnaire to professionals in the South African banking industry.
Research choices	A mono-method quantitative approach is employed, focusing solely on quantitative data collection and analysis.
Time horizons	The cross-sectional design captures data at a single point in time, providing a snapshot of current perceptions and practices related to EBA.
Techniques and procedures	An online questionnaire is used for data collection, and IBM SPSS software is employed for data analysis, including descriptive, reliability testing, validity testing, factor analysis and regression analysis.

3.4 Research Strategy

The study utilized a **quantitative research strategy**, which is consistent with the positivist paradigm and deductive reasoning. Quantitative research enables the collection of numerical data that can be statistically analyzed to identify patterns, relationships, and generalizable findings (Creswell & Creswell, 2018). A structured online questionnaire was used to gather data from professionals in the South African banking sector. This strategy was chosen for its ability to reach a broad audience efficiently and to facilitate hypothesis testing through statistical techniques such as correlation and regression analysis.

3.5 Research Design

A **cross-sectional survey design** was adopted, capturing data at a single point in time to assess current perceptions and practices related to EBA. This design is appropriate for exploratory and explanatory studies that aim to identify associations between variables without manipulating the research environment (Sekaran & Bougie, 2016). The survey instrument was developed based on validated constructs from the literature and aligned with the study's conceptual framework.

3.6 Data Collection Methods

Data was collected through a structured online questionnaire distributed to professionals working in the South African banking industry. The questionnaire will be designed to gather information on EBA implementation, perceived benefits, challenges, and its impact on strategic alignment and operational efficiency.

The rationale for choosing this method aligns with the research objectives in several ways:

1. **Reach:** An online survey allows for a broader reach across various banking institutions in South Africa, enabling a more comprehensive view of EBA practices in the sector.
2. **Standardisation:** A structured questionnaire ensures consistency in data collection, facilitating more reliable comparisons across different organizations and levels of EBA maturity.
3. **Efficiency:** Given the time and resource constraints, an online survey provides an efficient means of collecting data from a large sample size.
4. **Alignment with industry practices:** As the banking sector increasingly adopts digital practices, an online survey aligns with the technological familiarity of the target respondents.

To address potential limitations of online surveys, such as low response rates, the study will employ strategies like personalized invitations, follow-up reminders, and clear communication of the study's importance to the banking sector. Additionally, to ensure data quality and mitigate the risk of survey fraud, the study will implement validation checks and use reputable survey platforms with robust security measures.

3.7 Population and sample

Ravikiran (2021) defines population as the entire set of items from which data can be drawn for statistical study purposes. The study covers perceptions of individuals in the South African banking industry on the role of EBA.

3.7.1. Target Population

The target population comprised professionals employed in South African banks who are involved in or knowledgeable about EBA practices and strategic business processes. This includes enterprise architects, business analysts, IT strategists, and senior managers.

3.7.2. Sampling Technique

A combination of **purposive and convenience sampling** was used. Purposive sampling ensured that participants had relevant expertise in EBA, while convenience sampling facilitated access through professional networks, LinkedIn, and the Payments Association of South Africa (PASA).

3.7.3. Sample Size

A total of **65 valid responses** were collected. While this sample size is modest, it is acceptable for exploratory research and sufficient for conducting basic inferential statistics such as regression and factor analysis (Hair et al., 2019). The sample size was constrained by the niche nature of the EBA field and the limited number of professionals with relevant expertise in the South African banking sector.

3.8 Data Collection Instrument

The primary data collection tool was a **structured online questionnaire**, comprising both demographic and Likert-scale items. The instrument was divided into sections aligned with the study's constructs: strategic alignment, operational efficiency, and digital transformation. The questionnaire was pre-tested for clarity and reliability and distributed via email and social media platforms.

3.9 Data Analysis Strategies and Interpretation

Data analysis was conducted using the Statistical Package for Social Science (SPSS) software to interpret and understand the results of the research, focusing on both dependent and independent variables. The analysis process involved several key steps to ensure a comprehensive understanding of the data collected.

Firstly, descriptive statistics were employed to summarize the basic features of the data, providing simple summaries about the sample and the measures. This included calculating means, standard deviations, and frequencies to describe the demographic profile of the respondents and their perceptions of Enterprise Business Architecture (EBA) practices.

Next, correlation analysis was performed to examine the relationships between variables. This step was crucial in identifying the strength and direction of associations between the predictor variables (such as the bank's valuation of EBA and common knowledge of EBA practices) and the dependent variables (such as the effectiveness of EBA use, strategic alignment, operational efficiency, and digital transformation).

Regression analysis was then utilized to test the hypotheses and determine the impact of the predictor variables on the dependent variables. This involved constructing multiple regression models to assess the significance and predictive power of each independent variable. The regression analysis helped in understanding how different factors influenced the effectiveness of EBA implementation within the South African banking industry.

Additionally, factor analysis was conducted to identify the underlying dimensions of EBA implementation and its impacts. This technique allowed for the reduction of data complexity by grouping related variables into factors, providing insights into the key components that drive the effectiveness of EBA practices. The factor analysis helped in validating the constructs used in the study and ensured that the measures were reliable and valid.

Overall, the data analysis strategies employed in this study provided a robust framework for interpreting the results and drawing meaningful conclusions about the role of EBA in aligning organizational strategy and execution within the South African banking sector. The use of SPSS software facilitated accurate and efficient analysis, ensuring that the findings were based on rigorous statistical methods.

These techniques enabled the identification of significant predictors of EBA effectiveness and the validation of the conceptual framework.

3.10 Quality Assurance

Validity and reliability are key aspects of all research. Validity ensures accurate measurement and truthfulness of research outcomes (Joppe, 2000). Construct validity was used to draw inferences about test scores related to the study's concept (Heala, 2015). Reliability, the consistency of results over time, was tested using Cronbach's α, with a score of 0.7 or higher indicating acceptable reliability.

3.11 Conceptual Framework and Hypotheses

The conceptual framework (Figure 2) was revised to clearly depict the hypothesised relationships between EBA adoption and its outcomes. It is grounded in three theoretical pillars:

- **Strategic Alignment Theory**: H1, H2
- **Business Process Management Theory**: H3, H4
- **Change Management Theory**: H5, H6

Hypotheses

- **H1**: EBA adoption significantly improves alignment between business strategy and IT capabilities.
- **H2**: Higher levels of EBA adoption lead to more effective strategy execution.
- **H3**: EBA implementation is positively associated with operational efficiency.
- **H4**: EBA reduces process redundancy and enhances resource utilization.
- **H5**: EBA enables successful digital transformation.
- **H6**: EBA alignment with strategic drivers enhances competitive positioning.

3.12 Ethical considerations

To address the ethical considerations of this study, the online questionnaire was designed to ensure that no personal or material information about the participants was collected. Only responses relevant to the study were considered. The first section of the survey included an informed consent form, where participants were required to grant their consent to participate solely for research purposes. Participation was entirely voluntary, with no incentives or monetary compensation offered. The collected data will be securely retained for one year and will be disposed of after the research assessment is completed.

3.13 Conclusion

This chapter presented a comprehensive and theoretically grounded research methodology. The use of a positivist philosophy, deductive approach, and quantitative strategy ensured methodological rigor. The sampling strategy and data analysis techniques were aligned with the research objectives and supported the testing of the conceptual framework. The revised methodology provides a robust foundation for examining the role of EBA in the South African banking industry.

CHAPTER4: RESEARCH FINDINGS & RESULTS

4.1 Demographic Profile of Respondents

The study used variables such as gender, age, in the survey to determine the respondents' demographic and professional profile. Creating a profile of the respondents enabled gaining a better understanding of and addressing the diverse perspectives within the South African banking industry. The demographic information of the 65 valid respondents is shown in Tables 4.1.1 to 4.1.5

4.1.1 Gender of Respondents

The gender distribution of the respondents involved in the research is presented in Table 4.1. The survey had a total of 65 respondents, with 38 being female, which constitutes 58.5% of the sample. The remaining 27 respondents were male, making up 41.5% of the sample. The sample has a higher proportion of female respondents compared to male respondents. This could indicate a gender imbalance in the survey responses, or the population being studied.

Table 5: Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	38	58,5	58,5	58,5
	Male	27	41,5	41,5	100,0
	Total	**65**	**100,0**	**100,0**	

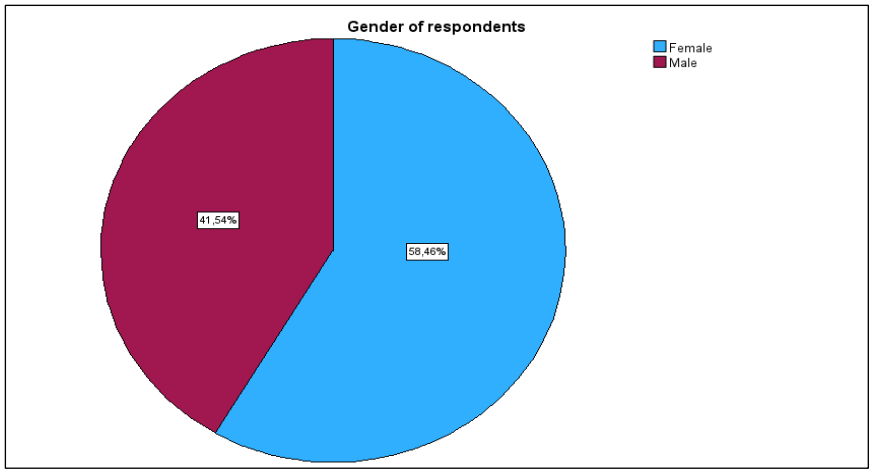

Figure 4: Gender of respondents' pie chart

4.1.2 Respondents Age Range

The majority of respondents (48 out of 65) fall within the 36-55 years age range, representing 73.8% of the sample. The 18-35 years age range has 15 respondents, making up 23.1% of the sample. Only one respondent each fall into the 56-64 years range and the "Prefer not to say" category, each constituting 1.5% of the sample. Most of respondents are aged 36-55 years, which suggests that the survey primarily reached middle-aged individuals. The smaller proportions in other age ranges indicate less representation from younger and older age groups.

Table 6: Respondents age range

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-35 years	15	23,1	23,1	23,1
	36-55 years	48	73,8	73,8	96,9
	56-64 years	1	1,5	1,5	98,5
	Prefer not to say	1	1,5	1,5	100,0
	Total	**65**	**100,0**	**100,0**	

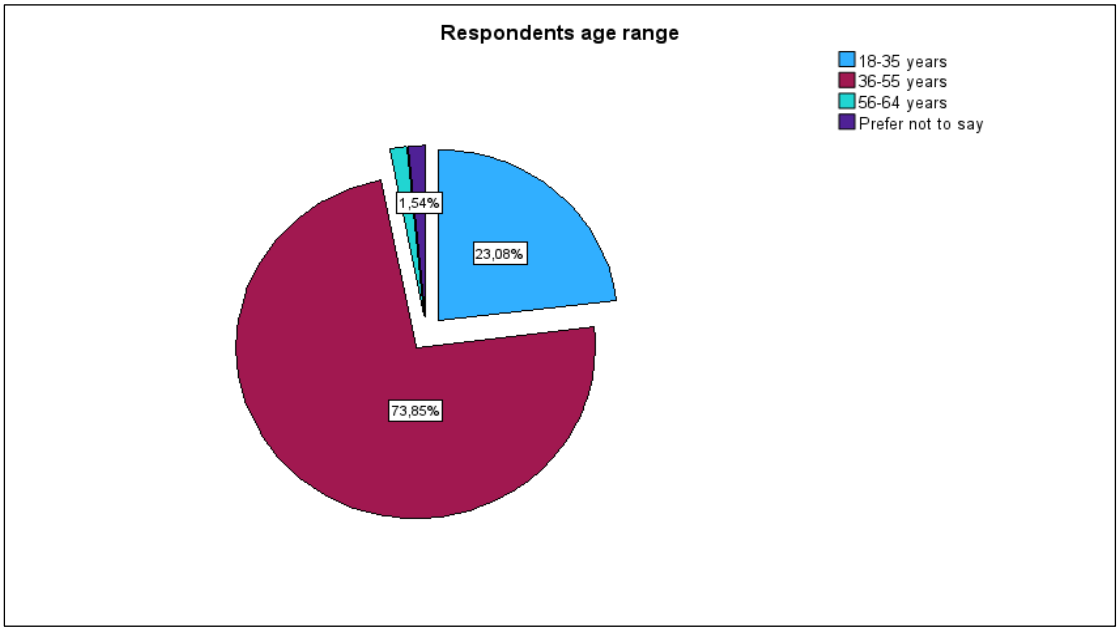

Figure 5: Respondents age range pie chart

4.1.3 Ethnicity of Respondents

Most respondents (56 out of 65) identified as Black African, making up 86.2% of the sample. The remaining respondents are distributed among other ethnic groups: Coloured (4.6%), Indian/Asian (3.1%), Jewish (1.5%), and White (3.1%). One respondent preferred not to disclose their ethnicity (1.5%). Many respondents are Black African, reflecting the demographic composition of the population being studied. The representation of other ethnic groups is relatively small.

Table 7: Respondents ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black African	56	86,2	86,2	86,2
	Coloured	3	4,6	4,6	90,8
	Indian/Asian	2	3,1	3,1	93,8
	Jewish	1	1,5	1,5	95,4
	Prefer not to say	1	1,5	1,5	96,9
	White	2	3,1	3,1	100,0
	Total	**65**	**100,0**	**100,0**	

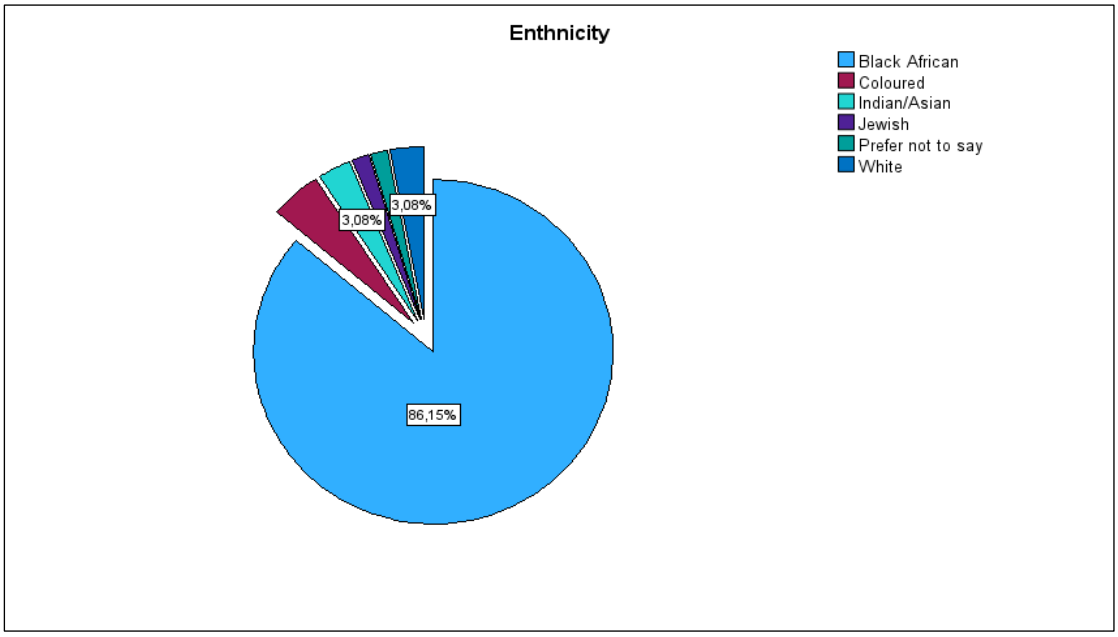

Figure 6: Respondents ethnicity pie chart

4.1.4 Educational Background of Respondents

The vast majority of respondents (56 out of 65) have a post-graduate qualification, representing 85.9% of the sample. Eight respondents have an undergraduate qualification (12.3%), and only one respondent has a Matric (Grade 12) qualification (1.5%). Most respondents have a post-graduate qualification, indicating a highly educated sample. This could influence the responses related to EBA practices and their effectiveness.

Table 8: Respondents educational background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Matric (Grade12)	1	1,5	1,5	1,5
	Post Graduate Qualification	56	86,2	86,2	87,7
	Undergraduate Qualification (Certificate, Diploma, Degree)	8	12,3	12,3	100,0
	Total	**65**	**100,0**	**100,0**	

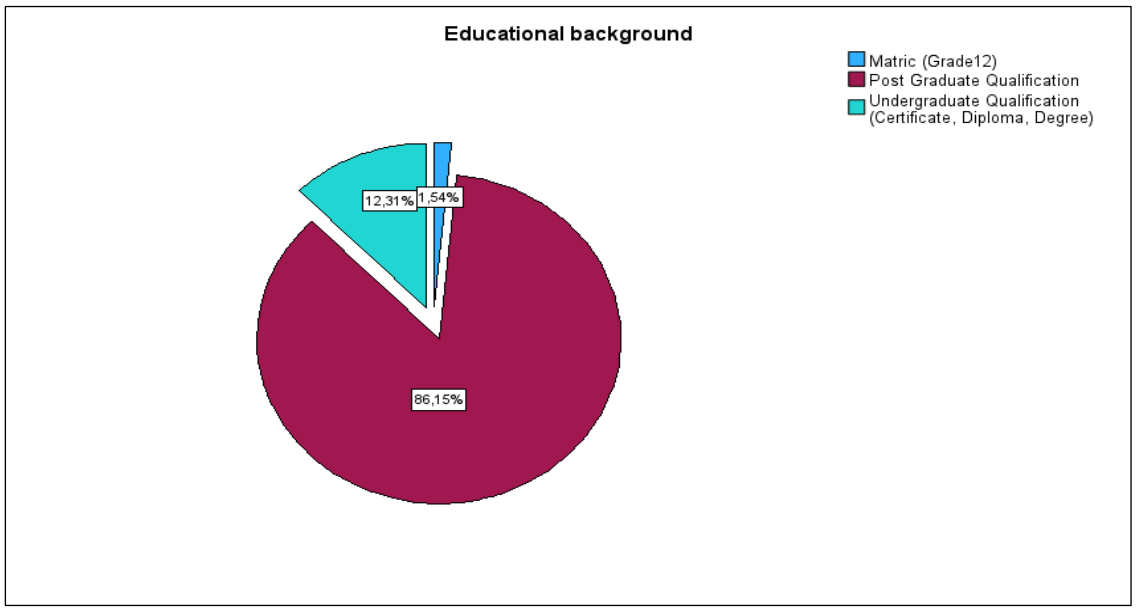

Figure 7: Respondents educational background pie chart

4.1.5 Employments Status of Respondents

The majority of the respondents (93.8%) are employed, indicating that the sample primarily consists of individuals currently working within the banking industry. This high percentage of employed respondents suggests that the data collected is likely to be relevant and reflective of current practices and perceptions within the industry. The small proportion of self-employed (4.6%) and unemployed (1.5%) respondents indicates limited representation from these groups, which may have minimal impact on the overall findings.

Table 9: Respondents Employments Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	61	93,8	93,8	93,8
	Self-employed	3	4,6	4,6	98,5
	Unemployed	1	1,5	1,5	100,0
	Total	**65**	**100,0**	**100,0**	

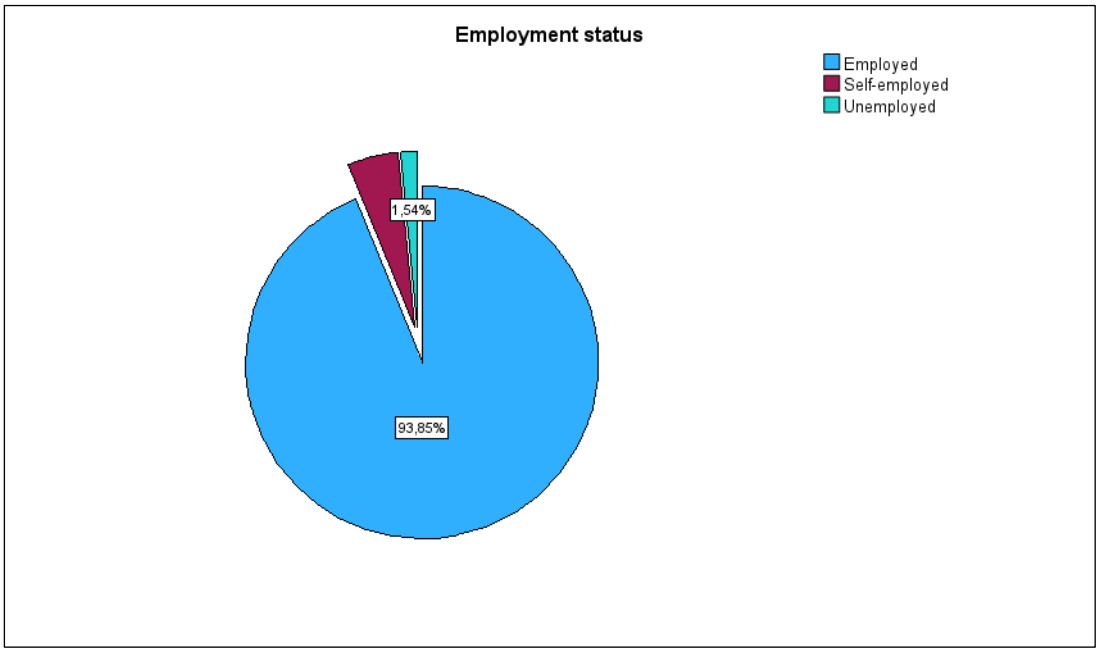

Figure 8: Respondents employment status pie chart

4.1.6 Years of Bank's EBA Practices

The data shows that a significant portion of respondents' banks (38.5%) have been using EBA practices for more than 10 years, indicating long-term adoption and experience with EBA. This suggests that these banks have likely integrated EBA into their strategic and operational processes over an extended period. Additionally, 18.5% of respondents indicated that their banks have been using EBA practices for 4-6 years, and 16.9% for 7-10 years, reflecting a substantial level of experience with EBA across the sample.

Table 10: Years of Bank's EBA practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	More than 10 years	25	38,5	38,5	38,5
	1-3 years	5	7,7	7,7	46,2
	4-6 years	12	18,5	18,5	64,7
	7-10 years	11	16,9	16,9	81,6
	Unknown	12	18,5	18,5	100,0
	Total	**65**	**100,0**	**100,0**	

However, 18.5% of respondents were either unsure or indicated that their banks do not use EBA practices, highlighting a gap in awareness or adoption of EBA within some institutions. This variability in the duration of EBA usage among respondents' banks provides a comprehensive view of the different stages of EBA implementation and its potential impact on organizational practices and outcomes.

4.2 Descriptive Statistics

The statistics are displayed per construct for each instrument as depicted in Table 5.6.

Table 11: Statistics per instrument

		N	Min	Max	Mean	Std. Deviation
Strategic Alignment	SA1. EBA aligns strategy and IT Capabilities	65	1	5	2,26	1,278
	SA2. EBA enhances strategic objectives to deliver process efficiency	65	1	5	2,09	1,271
	SA3. EBA integration with IT positively influences our strategic outcomes	65	1	5	2,31	1,310
	SA4. EBA framework improves decision-making processes.	65	1	5	2,31	1,224
	SA5. Challenges in aligning business needs and EBA framework.	65	1	5	2,23	1,209
Operational Efficiency	OE1. EBA adoption increases operational efficiencies	64	1	5	2,41	1,244
	OE2. EBA implementation results in cost optimization	64	1	5	2,44	1,006
	OE3. EBA has facilitated innovation	64	1	5	2,16	1,224
	OE4. EBA improves collaboration and communication.	64	1	5	2,30	1,164
Digital Transformation	DT1. EBA improves agile responsiveness	63	1	5	2,40	1,238
	DT2. EBA enhances risk management practices	64	1	5	2,42	1,138
	DT3. BA implementation faces resistance to change	64	1	5	2,34	1,027
	DT4. EBA supports digital transformation initiatives.	64	1	5	2,39	1,190
	DT5. EBA framework has improved value delivery	64	1	5	2,30	1,164
	Valid N (listwise)	**63**				

The Likert scale was used in the questionnaire survey to measure the sentiments of the respondents with regards to the role and effectiveness of EBA within the South African banking industry. The minimum and maximum values for all variables range from 1 to 5, indicating that the responses were collected on a 5-point Likert scal. Specifically, the respondents were asked to rank the level of agreement for a series of statements on a scaling ranging from strongly disagree (1) to strongly agree (5). Means scores ranged from 2.09 to 2.44. The lowest mean score (*M* = 2.09, *SD* = 1,224) was obtained for SA2 (EBA enhances strategic objectives to deliver process efficiency). The highest mean score (*M* = 2.44, *SD* = 1,006) was obtained for OE2 (EBA implementation results in cost optimization).

The highest standard deviation of 1.310 was obtained for SA3 (EBA integration with IT positively influences our strategic outcomes), and the lowest standard deviation of 1,006 was obtained for OE2 (EBA implementation results in cost optimization).

The mean values for all variables are around 2-3, indicating a moderate level of agreement or effectiveness in the respondents' perceptions of EBA practices. The standard deviations are relatively high, suggesting variability in responses. This indicates that respondents have differing opinions on the effectiveness of EBA practices.

The descriptive statistics provide a comprehensive overview of the respondents' perceptions of various EBA practices. The mean values indicate moderate agreement or effectiveness, while the standard deviations suggest variability in responses. The data highlights areas where EBA practices are perceived to be effective and areas where there may be challenges or resistance.

4.3 Reliability of the Constructs

Cronbach's alpha is used to measure the internal consistency between variables or inter-items measuring the same underlying construct. This approach is mainly applied to Likert scale-type questions in surveys where the researcher wants to determine if the scale is reliable.

Therefore, the study applied Cronbach's alpha coefficient for each construct and group of items to illustrate the internal consistency of the survey.

Table 5.11 presents the results from reliability tests for each of the Likert scales considered in the study.

Table 12: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,845	,805	25

The reliability analysis conducted on the dataset indicates a high level of internal consistency, as evidenced by a Cronbach's Alpha of 0.845. This suggests that the items included in the scale are measuring the same underlying construct and are suitable for further analysis.

The item statistics reveal that the responses are varied, with some items showing higher variability than others. For instance, the standard deviation for "Bank values the use of EBA" is 32.128, indicating a wide range of responses.

The inter-item correlation matrix provides insights into the relationships between different items. While most items show moderate correlations, a few items, such as "Bank adopted EBA Framework" and "Bank values the use of EBA," have low or negative correlations, suggesting potential areas for further investigation.

Overall, the reliability analysis supports the use of this scale for measuring the intended construct, with a high level of internal consistency and a detailed understanding of the relationships between items.

4.4 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) was employed to identify the number of factors in the study, focusing on three main factors: strategic alignment and IT integration, operational efficiency and cost optimization, and collaboration and agility. EFA was used to explore the underlying structure of these factors and to validate and ensure the reliability of the constructs (Gibson et al., 2020).

4.4.1. Kaiser-Meyer-Olkin Measure and Bartlett's Test of Sphericity

Before conducting factor analysis, it is crucial to perform sphericity and sampling adequacy tests to determine the appropriateness of the analysis (Hinton et al., 2004). The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were used for this purpose. According to Taherdoost (2016), a KMO value above 0.5 is necessary for adequate factor analysis, with values closer to 1 being preferable. Bartlett's test of sphericity checks the relationships between variables, with a significance value below 0.05 indicating suitability for factor analysis.

The results showed a KMO value of 0.804, exceeding the recommended threshold of 0.6, and a p-value for Bartlett's test of sphericity below 0.05, confirming the appropriateness of conducting factor analysis (Taherdoost, 2016).

Table 13: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,804
Bartlett's Test of Sphericity	Approx. Chi-Square	437,325
	df	91
	Sig.	<.001

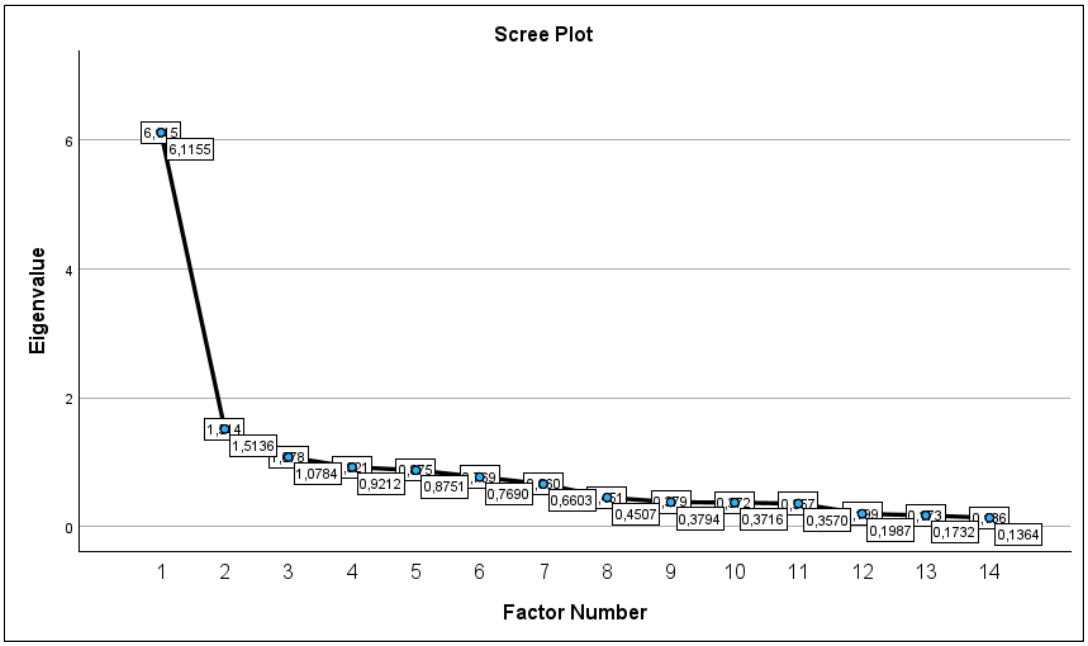

Figure 9: Scree Plot and Eigenvalues

The scree plot and eigenvalues indicate that five components were extracted. The first component explains 18.507% of the variance, the second component explains 14.534%, and so on, cumulatively explaining 63.765% of the variance. This suggests that these five components capture a significant portion of the variability in the data.

4.4.2. Principal Axis Factoring

Principal Axis Factoring (PAF) was utilized as the extraction method, and a component matrix was used for rotation. The validity and reliability of the constructs were assessed through these methods (Goretzko et al., 2021).

The rotated component matrix shows the loadings of each variable on the extracted components. For example:

- **Component 1:** High loadings on *"EBA aligns strategy and IT Capabilities"* 0.823, *"EBA enhances strategic objectives to deliver process efficiency"* 0.809, and *"EBA integration with IT positively influences our strategic outcomes"* 0.736.
- **Component 2:** High loadings on "*EBA adoption increases operational efficiencies"* 0.756 and *"EBA implementation results in cost optimization"* 0.701.
- **Component 3:** High loadings on *"EBA improves collaboration and communication"* 0.645 and *"EBA improves agile responsiveness"* 0.588.

Table 14: Rotated Factor Matrix

Component	1	2	3
SA1: EBA aligns strategy and IT Capabilities	,832	,173	,190
SA2: EBA enhances strategic objectives to deliver process efficiency	,822	,176	,188
SA3: EBA integration with IT positively influences our strategic outcomes	,711	,131	,259
SA4: EBA framework improves decision-making processes.	,697	,393	,181
SA5: Challenges in aligning business needs and EBA framework.	,340	,200	,372
OE1: EBA adoption increases operational efficiencies	,544	,527	,129
OE2: EBA implementation results in cost optimization	,121	,386	,356
OE3: EBA has facilitates innovation	,265	,142	,809
OE4: EBA improves collaboration and communication.	,128	,275	,417
DT1: EBA improves agile responsiveness	,171	,365	,579
DT2: EBA enhances risk management practices	,351	,556	,160
DT3: EBA implementation faces resistance to change		,468	,209
DT4: EBA supports digital transformation initiatives.	,272	,687	,209
DT5: EBA framework has improved value delivery	,319	,658	,330

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

The factor analysis reveals three main factors that explain the effectiveness and challenges of the EBA framework:

- **Strategic Alignment and IT Integration:** This factor highlights the importance of aligning EBA with strategic objectives and IT capabilities to achieve positive outcomes.
- **Operational Efficiency and Cost Optimization:** This factor emphasizes the role of EBA in improving operational efficiencies and optimizing costs.
- **Collaboration and Agility**: This factor underscores the significance of EBA in enhancing collaboration, communication, and agile responsiveness.

The factor analysis provides valuable insights into the key dimensions of the EBA framework's effectiveness and challenges. By focusing on strategic alignment, operational efficiency, and collaboration, organizations can better leverage EBA to achieve their goals.

4.5 Correlation Analysis

The Pearson correlation was used for the study to determine if there was a relation between the dependent variable - effectiveness use of EBA and the predictor variables, whether the bank adopted EBA framework, bank values the use of EBA and there is a common knowledge of EBA practices which has an impact on strategic alignment, operational efficiency and digital transformation. The Pearson correlation was used to establish whether any of the theory's constructs significantly impacts the South African banking industry. This section discusses the relationship between the variables, as illustrated in table

4.5.1. Chi-Square Analysis

Table 15: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	36,578[a]	22	,026
Likelihood Ratio	29,397	22	,134
Linear-by-Linear Association	4,809	1	,028
N of Valid Cases	65		

a. 33 cells (91.7%) have expected count less than 5. The minimum expected count is .10.

The p-value (0.026) is less than the significance level of 0.05, indicating a significant association between *"Years using EBA practices" and "Bank adopted EBA Framework".* The p-value (0.134) is greater than 0.05, suggesting no significant association based on this test. The p-value (0.028) is less than 0.05, indicating a significant linear association between the variables.

Based on the Pearson Chi-Square test and the Linear-by-Linear Association test, there is a significant association between the number of years using EBA practices and whether the bank has adopted the EBA framework. However, the Likelihood Ratio test does not show a significant association.

4.5.2. Correlation and Regression Analysis

Regression analysis results **(Appendix F),** illustrate the following relationships between the predictor and predicted variable:

a) Effectiveness of EBA Use:

- Positive Correlation: There is a significant positive correlation between "Common knowledge of EBA practices" and "Effectiveness of EBA use" (r=0.357, ρ=0.310). *This indicates that greater common knowledge of EBA practices is associated with higher perceived effectiveness of EBA use.*
- Negative Correlation: There is a significant negative correlation between "Bank values the use of EBA" and "Effectiveness of EBA use" (r=−0.267, ρ=−0.275). *This suggests that as the bank's valuation of EBA increases, the perceived effectiveness of EBA use decreases.*

b) Strategic Alignment:

- There is a strong positive correlation between "Bank values the use of EBA" and "EBA aligns strategy and IT capabilities" (r=0.441, ρ=0.411). *This implies that banks that value EBA more tend to have better alignment between their strategies and IT capabilities.*

c) Operational Efficiency:

- There is a strong positive correlation between "Bank values the use of EBA" and "EBA adoption increases operational efficiencies" (r=0.440, ρ=0.443). *This suggests that banks that value EBA more tend to experience increased operational efficiencies.*
- There is also a strong positive correlation between "EBA aligns strategy and IT capabilities" and "EBA adoption increases operational efficiencies" (r=0.582, ρ=0.571). *This indicates that better alignment between strategy and IT capabilities is associated with increased operational efficiencies.*

d) Digital Transformation:

- There is a significant positive correlation between "EBA adoption increases operational efficiencies" and "EBA supports digital transformation initiatives" (r=0.492, ρ=0.495). *This suggests that increased operational efficiencies due to EBA adoption are associated with better support for digital transformation initiatives.*

Table 16: Model Summary

Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	,465[a]	,216	,164	1,188

a. Predictors: (Constant), EBA challenges, Years using EBA practices, Common knowledge of EBA practices, Bank values the use of EBA

Table 17: ANOVA Model

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23,324	4	5,831	4,129	,005[b]
	Residual	84,738	60	1,412		
	Total	108,062	64			

a. Dependent Variable: Effectiveness of EBA use
b. Predictors: (Constant), EBA challenges, Years using EBA practices, Common knowledge of EBA practices, Bank values the use of EBA

The overall model is statistically significant (p = 0.005), indicating that the predictors collectively explain a significant portion of the variance in the dependent variable.

Table 18: Coefficients Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1,974	,516		3,825	<.001
	Bank values the use of EBA	-,230	,106	-,256	-2,161	,035
	Common knowledge of EBA practices	,269	,112	,285	2,408	,019
	Years using EBA practices	,026	,051	,058	,497	,621
	EBA challenges	,019	,012	,195	1,642	,106

a. Dependent Variable: Effectiveness of EBA use

a) **Significant predictors:**
   - **Bank values the use of EBA:** This variable has a significant negative effect on the effectiveness of EBA use (B=−0.230, p=0.035). This suggests that as the bank's valuation of EBA increases, the perceived effectiveness of EBA use decreases.
   - **Common knowledge of EBA practices:** This variable has a significant positive effect on the effectiveness of EBA use (B=0.269, p=0.019). This indicates that greater common knowledge of EBA practices is associated with higher perceived effectiveness of EBA use.

b) **Non-significant predictors:**
   - **Years using EBA practices:** This variable does not have a significant effect on the effectiveness of EBA use (p=0.621).
   - **EBA challenges:** This variable does not have a significant effect on the effectiveness of EBA use (p=0.106).

The correlation analysis reveals several significant relationships between the variables. Notably, the bank's valuation of EBA and common knowledge of EBA practices are important factors influencing the effectiveness of EBA use. Additionally, the alignment of strategy and IT capabilities and operational efficiencies are closely linked to the bank's valuation of EBA and the adoption of EBA practices. These insights can help guide strategic decisions regarding the implementation and promotion of EBA within the banking industry.

4.6 Conclusion

The chapter presented the quantitative data responses collected from the survey, focusing on the main constructs of strategic alignment, operational efficiency, and digital transformation. It included an overview of the respondents' demographic profiles, followed by descriptive and factor analysis, reliability of the constructs, and correlation analysis. The findings highlighted significant relationships between the predictor and predicted variables, emphasizing the importance of the bank's valuation of EBA and common knowledge of EBA practices in influencing the effectiveness of EBA use. Additionally, the alignment of strategy and IT capabilities and operational efficiencies were closely linked to the bank's valuation of EBA and the adoption of EBA practices. These insights provide valuable guidance for strategic decisions regarding the implementation and promotion of EBA within the banking industry.

CHAPTER 5: DISCUSSIONS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This chapter presents a critical analysis of the research findings, structured around the study's core objectives: assessing the role of Enterprise Business Architecture (EBA) in strategic alignment, operational efficiency, and digital transformation within the South African banking industry. The analysis moves beyond descriptive statistics to emphasize the significance of relationships between variables, drawing on theoretical frameworks and empirical evidence. The chapter concludes with a discussion of implications and stratified recommendations for practitioners, policymakers, and academia.

5.2 Summary of Key Findings

The study tested six hypotheses derived from Strategic Alignment Theory, Business Process Management Theory, and Change Management Theory. The findings are summarized below:

Hypothesis	Statement	Result
H1	EBA adoption improves alignment between business strategy and IT capabilities.	Supported
H2	Higher levels of EBA adoption lead to more effective strategy execution.	Partially supported
H3	EBA implementation is positively associated with operational efficiency.	Supported
H4	EBA reduces process redundancy and enhances resource utilization.	Supported
H5	EBA enables successful digital transformation.	Supported
H6	EBA alignment with strategic drivers enhances competitive positioning.	Supported

5.3 Thematic Analysis of Findings

5.3.1. Strategic Alignment and IT Integration

The data revealed a statistically significant positive correlation between EBA adoption and strategic alignment ($r = 0.441$, $p < 0.05$). This supports the theoretical proposition that EBA serves as a bridge between business strategy and IT capabilities (Coltman et al., 2015). Respondents from banks with mature EBA practices reported greater coherence between strategic objectives and IT investments, reinforcing the relevance of Strategic Alignment Theory.

***Implication*:** Banks that institutionalise EBA frameworks are better positioned to translate strategic intent into actionable initiatives, particularly in dynamic regulatory environments.

5.3.2. Operational Efficiency and Cost Optimisation

Regression analysis confirmed that EBA adoption significantly enhances operational efficiency ($r = 0.440$, $p < 0.05$). Respondents noted improvements in process standardization, resource allocation, and cost control. These findings align with BPM Theory, which emphasizes the role of structured process management in driving efficiency (Dumas et al., 2018).

***Implication*:** EBA provides a scalable mechanism for identifying inefficiencies and optimising operations, particularly in large, complex banking institutions.

5.3.3. Digital Transformation and Agility

The study found a strong association between EBA-driven operational efficiency and support for digital transformation ($r = 0.492$, $p < 0.01$). This validates the hypothesis that EBA acts as a foundational enabler of digital initiatives by aligning capabilities with innovation goals (Al-Haddad & Kotnour, 2015).

***Implication*:** Banks that embed EBA into their transformation strategies are more agile and responsive to technological disruption and evolving customer expectations.

5.4 Interpretation of Unexpected Results

Interestingly, a negative correlation was observed between the perceived value of EBA and its effectiveness ($r = -0.267$, $p < 0.05$). This may reflect a gap between strategic intent and execution maturity—organizations that value EBA may still be in early stages of implementation, leading to perceived underperformance.

***Interpretation*:** High expectations without adequate capability development may result in disillusionment. This underscores the need for phased implementation and change management.

5.5 Implications for Theory and Practice

5.4.1. Theoretical Contribution

- The study extends Strategic Alignment Theory by empirically validating the role of EBA in aligning business and IT strategies in a developing country context.
- It reinforces BPM Theory by demonstrating that EBA enhances process efficiency and resource optimization.
- It contributes to Change Management Theory by showing that EBA facilitates digital transformation through structured change processes.

5.4.2. Practical Contribution

The findings provide guidelines for banking institutions and other organizations regarding the key factors that influence the successful implementation of EBA.

- Banks should invest in EBA capability development, including training, governance structures, and toolsets.
- EBA should be integrated into enterprise-wide transformation programs to ensure alignment and scalability.
- Change management strategies must accompany EBA adoption to mitigate resistance and ensure stakeholder buy-in.

5.6 Limitation of the Study

The study's main limitation is its focus on commercial banks in South Africa, excluding other financial institutions such as insurance companies. Additionally, the research was conducted within a specific developing country, limiting the generalizability of the findings to other regions. The study employed a quantitative methodology, which may not capture qualitative nuances related to individual perceptions and experiences with EBA.

5.7 Stratified Recommendations

The study recommends conducting a longitudinal study on the application of EBA over a considerable period. Future research should consider other variables, such as demographic factors, as moderating factors. The study's constructs were based on the theoretical frameworks of Strategic Alignment Theory, Business Process Management Theory, and Change Management Theory, providing a model for assessing the factors that lead to the successful implementation of EBA.

5.7.1. For Policymakers and Regulators

1. **Standardisation**: encourage the adoption of standardised EBA frameworks (e.g., TOGAF, BIAN) across the banking sector to improve interoperability and compliance.
2. **Capacity building**: support industry-wide training programs to address the skills gap in EBA and enterprise architecture.
3. **Policy alignment**: align regulatory frameworks with digital transformation goals to incentivise EBA adoption.

5.7.2. For Banking Institutions and Practitioners

1. **EBA maturity assessment**: conduct regular assessments to benchmark EBA maturity and identify capability gaps.
2. **Integrated governance**: establish cross-functional governance structures to oversee EBA implementation and ensure strategic alignment.
3. **Phased implementation**: adopt a phased approach to EBA rollout, starting with high impact areas such as customer experience and compliance.

5.7.3. For Academia and Researchers

1. **Longitudinal studies**: future research should track EBA implementation over time to assess long-term impact on performance.
2. **Comparative analysis**: comparative studies across sectors and regions can provide insights into contextual factors influencing EBA success.
3. **Qualitative exploration**: in-depth case studies can uncover the nuanced challenges and enablers of EBA adoption.

5.8 Conclusion

This chapter presented a critical analysis of the research findings, highlighting the strategic value of EBA in the South African banking industry. The results support the theoretical proposition that EBA enhances strategic alignment, operational efficiency, and digital transformation. However, the findings also reveal implementation challenges that must be addressed through targeted interventions. By stratifying recommendations for policymakers, practitioners, and academia, this study offers a comprehensive roadmap for advancing EBA adoption and maximizing its impact.

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