Gordon Institute of Business Science
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Antecedents to successful implementation of FinTech innovations in a South African bank

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ABSTRACT

The purpose of this study was to investigate the antecedents that facilitate the successful implementation of finance technology innovations. The research setting was delimited to innovations that need to be implemented within the context of a Johannesburg-based South African bank. The study was grounded on a model for a sustained corporate entrepreneurial strategy.

This was a qualitative methodology study employing the interpretivism paradigm philosophy, and an inductive process for exploratory research purposes. Data were collected through face-to-face semi-structured in-depth interviews and thematic analysis was followed to derive insights.

The findings indicate technology as an external and internal environment foundational condition. Furthermore, working on the advancement of technology is a fulfilling reward. On the other hand, unmanaged unhealthy internal competition is likely to derail the innovation implementation. A sample profile within a South African bank may present limitations for the generalisability of the findings.

The practical implications for managers are that they should allocate resources to the advancement of technology to attain an entrepreneurial strategy while minimising unhealthy internal competition.

The research contributes to the body of knowledge with the proposition to extend the model for sustaining a corporate entrepreneurial strategy. The proposal includes recognising technology as both external and internal transformational triggers. Secondly, technology is also an organisational antecedent.

KEYWORDS

FinTech, Corporate Entrepreneurship, Innovation, Strategy, Implementation

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.

Choene Rammutla

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CHAPTER 1. INTRODUCTION TO THE RESEARCH PROJECT

1.1. Introduction

The qualitative research, through an exploratory study approach, aims to investigate the antecedents for the successful implementation of FinTech innovations in a South African bank. The focus of the research is on the factors that influences successful implementation of the innovations conceived independent of the bank's business operations. The findings of the research phenomenon are described for academic and business benefit.

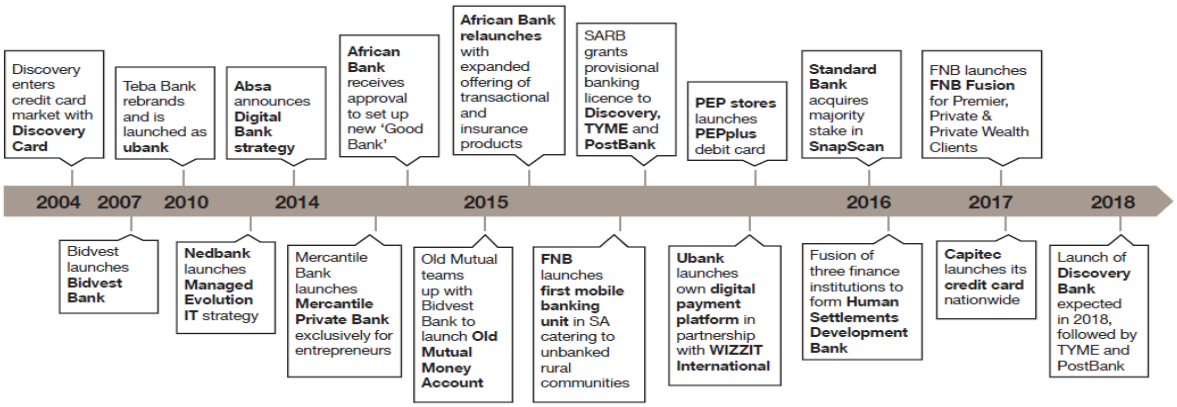
The remainder of the chapter describes the identified research problem and provides the rationale for the study. The chapter further provides compelling reasons why studying the problem contributes to business and theory.

1.2. Definition of research problem and purpose

For an organisation to continue creating value for shareholders, there is a need to continuously scan the environment and seize the opportunities that give them a competitive advantage (Beck, Chen, Lin, & Song, 2016). Thus the need to constantly change is a strategic imperative (Mintzberg, Ahlstrand & Lampel, 2005; Rafferty, Jimmieson & Armenakis, 2013; Gomber, Kauffman, Parker & Weber, 2018). The change in the banking sector is experienced both from product development and the introduction of new competition from non-traditional banking players (Coetzee, 2018).

The South African banking industry is one of the strategic economic sectors (South African Reserve Bank, n.d.), experiencing unprecedented change (Christensen, Raynor, & McDonald, 2015). The banking sector, together with real estate and business services, is ranked the second largest contributor to South Africa's GDP (STATS SA, 2019) indicating banks as strategic to South Africa's economy (Ifeacho & Ngalawa, 2014). The banking industry market structure is oligopoly and is dominated by Amalgamated Banks of South Africa Limited (ABSA), FirstRand, Standard Bank, and Nedbank with a varied offering of financial services and products (Beck, Chen, Lin, & Song, 2016; Ifeacho & Ngalawa, 2014).

Figure 1-1 below highlights the timeline of accelerated disruptions innovations in the sector. The timeline by PWC South Africa (2017) highlights recent trends in the South African banking landscape placing banks as the disruptors and also those being disrupted. The accelerated disruptions in the business environment have potential to result in new industries (Coetzee, 2018).



Source: (PwC South Africa, 2017)

Figure 1-1: Timeline of recent disruptions in the South African banking industry

Finance technology, FinTech, is a new industry (Coetzee, 2018) born out of accelerated disruptive innovations (Christensen et al., 2015). Coetzee (2018) further suggests that FinTech, as an external trigger, could disrupt banking as we know it. South African banks are not spared from these industry-wide disruptions (Ifeacho & Ngalawa, 2014) and failure of strategic response could lead eroding of shareholder value (Liao, Tseng, & Ho, 2015). Banks have chosen a strategic response to invest internally in stand-alone research and development (R&D) units (Coetzee, 2018; PwC South Africa, 2017). Coetzee (2018) further notes bank's investment in partnerships with FinTech companies as strategic response. Timm (2019) records that of the disclosed investments within the last seven years in South Africa for technology start-ups, 37% of the R508.1-million has been accounted for by FinTech companies.

Table 1-1: FinTech startups in strategic partnerships with banks

Bank	FinTech Partner	Strategic Focus

Bank	FinTech Partner	Strategic Focus
FirstRand	Selpal	Point-of-sale device and tech platform aimed at township businesses
Standard Bank	SnapScan	QR code payment
	Merchant Capital	Lending to small businesses
	Nomanini	e-Wallet and physical device
Nedbank	Atura	Chatbot for asset management
	Kari	Payments collection
	Entersekt	Authentication and mobile-security
Absa	Walletdoc	Facilitates the payment of accounts and bills

Source: Adapted from (Timm, 2019)

The creation of the strategic partnership with FinTech players or the stand-alone unit requires that the innovations are integrated into the bank's main technology architecture and operations (Adner & Kapoor, 2016; Lee & Shin, 2018; Perry-Smith & Mannucci, 2017; Liao, Tseng, & Ho, 2015). The implementation of these innovations into the main bank is elusive to technology leaders. This existence of the phenomenon was observed by the researcher in working for a South African bank and cited as a managerial challenge by the prominent audit firms (PwC South Africa, 2017; Ernst & Young LLP, 2018). This is also confirmed by various source (Klein & Sorra, 1996; Lee & Shin, 2018; Nicoletti, 2017; Anaya, Dulaimi, & Abdallah, 2015) in the literature.

Although innovation is both an operational and strategic imperative (Anaya, Dulaimi, & Abdallah, 2015), organisations primarily occupy themselves with business operations and the immediate need to satisfy the current customer (Coetzee, 2018). Implementation of innovations could threaten the sustainability of the very same operations (Ifeacho & Ngalawa, 2014) and a similarly has potential of enhancing the operating environment (Beck, Chen, Lin, & Song, 2016).

The problem requires further investigation for those factors that should be present in an organisational strategy and internal environment to build an innovation implementation ready organisation (Rafferty et al., 2013; Gomber et al., 2018).

1.3. Objectives of the research

The objectives of the research are:

- To investigate the conditions in the organisation that set the rudiments for innovation implementation success.
- To investigate the elements of the strategy that usually lead to a highly successful entrepreneurial organisation.
- To determine how combinations of organisational conditions and strategic elements influence the implementation of finance technology innovations.

In realising the above objectives, the researcher aims to propose the levers that business leaders should primarily focus on to positively influence the outcome of FinTech innovation implementation efforts.

1.4. Background to the problem

It is agreed that technology innovations can bring about efficiencies, cost benefits and new ways of reaching the client (Del Giudice, Campanella & Dezi, 2016). When the value of these innovations is not harnessed it threatens the sustainability of organisations (Christensen, Hall, Dillon & Duncan, 2016; Teece, Peteraf, & Leih, 2016). Both Coetzee (2018) and Antons and Piller (2015) acknowledge the threat from new entrants and recommend that banks should establish partnerships with FinTech companies. A further review of the literature seems to suggest that these recommendations might be outdated as all the major banks have already started a journey of constant innovation through partnering with FinTech companies (PwC South Africa, 2017; Nicoletti, 2017).

Partnering with FinTech innovation companies is one thing; however, the incumbent organisation should effectively implement those innovations into business operations to realise the envisaged benefits (Perry-Smith & Mannucci, 2017). The literature is mute regarding the details needed to implement the finance

technology innovations within the bank (PwC South Africa, 2017; Ernst & Young LLP, 2018; Das, Verburg, Verbraeck & Bonebakker, 2018). Klein and Sorra (1996) argue that implementation failure is often cited for organisations failing to benefit from advances in technological innovations. The authors further highlight evidence that even though innovation is adopted, it does not necessarily guarantee that it will be implemented successfully.

This research seeks to understand the antecedents to the smooth implementation of FinTech innovations. Standard Bank is one such firm, regularly being quoted for their SAP programme as an example of the complexity involved in the implementation of technology conceived independently of the bank. Technology in large firms seldom operates in isolation (Lee & Shin, 2018); however, it has to find a way to share data and be operated within the realm of existing processes (Tornatzky & Fleischer, 1990; Liao, Tseng, & Ho, 2015)

Adner and Kapoor (2016) find that there is a gap in the literature regarding the implementation of new technologies for large firms. Lee and Shin (2018) attribute the complexity to the compatibility of new technology in the FinTech organisation and the challenges of integrating it with the legacy systems in a large firm. Those firms that want to integrate technology innovations may struggle to do so and thus there is the risk of negatively affecting the business operations and the customer experience.

The problem was selected based on its profitability and managerial implications. The need to retain stability in the operating environment and to offer innovative products creates complexity for management. Knowing the forces that set conditions for innovation implementation to thrive, leaders can be deliberate in influencing the outcomes of a change (Hinson & Osborne, 2014; Rafferty et al., 2013).

1.5. Purpose of the research

The purpose of this study is to investigate the antecedents for the successful implementation of FinTech innovations. The research will focus on a South African bank. The study aims to explore elements in the strategy and conditions in the organisation that facilitate the successful implementation of FinTech innovations.

The main research question is:

- What are the antecedents enabling the smooth implementation of FinTech innovations within South African banks?

The following sub-questions will assist in shaping the direction of the research:

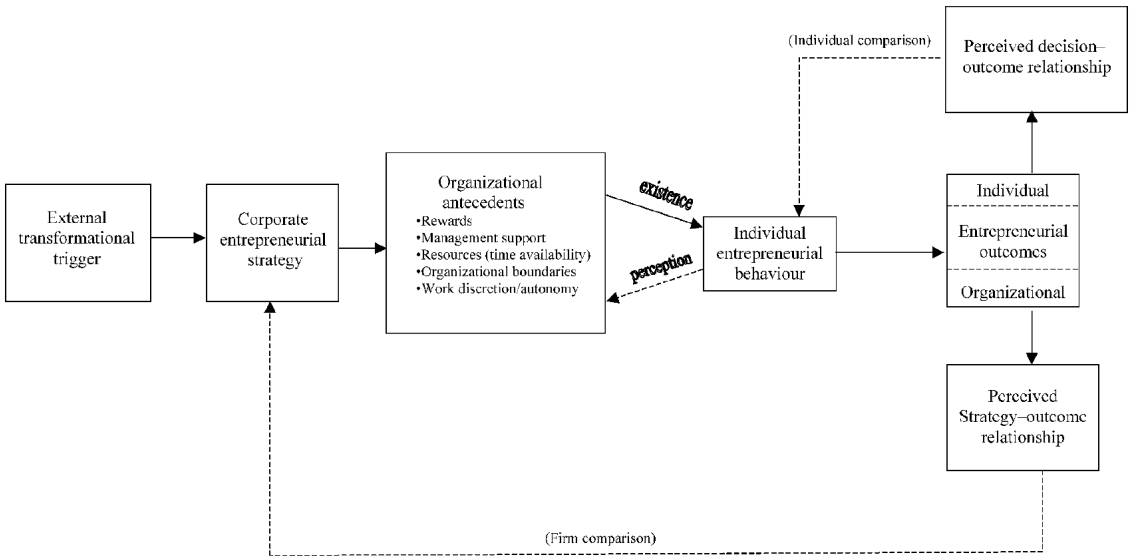
- Which conditions, when perceived to be present in the organisation, will lead to successful innovation implementation?
- Which strategic elements are perceived to lead to high innovation implementation success?
- Which combination of elements and conditions yields high finance technology innovations implementation?

1.6. Scope of the research

The study will focus on the banks' readiness to FinTech innovations by investigating the antecedents of implementation. FinTech companies are strategic partners to drive the business model and innovations that create value for shareholders (Coetzee, 2018; Ernst & Young LLP, 2018; PwC South Africa, 2017). The participants' scope is represented by leaders with strategic innovation implementation responsibilities. Innovations are core to the survival of companies.

1.7. Underpinning theory

Venkatesh and Davis' (2000) extension of the Technology Adoption Model (TAM2) and Tornatzky and Fleischer's (1990) seminal work on the technology-organisation-environment (TOE) framework will be explored for the theoretical grounding of the research. TAM2 proposes that the adoption of technology in the workplace is due to its perceived usefulness and ease of use, while TOE describes the factors and their likelihood to influence the adoption of technology. However, the research does not aim to interrogate technology adoption factors but it seeks to explore factors that lead to successful implementation.



Source: (Kuratko et al., 2004)

Figure 1-2: A model for sustained corporate entrepreneurial strategy

The research will be grounded on Kuratko, Hornsby and Goldsby (2004) 's exploratory model for sustained corporate entrepreneurship strategy. This was found to be fit for the purpose of this research because it describes the elements of the phenomenon starting from external environment triggers and corporate strategy which inform the organisational antecedents. The model suggests that rewards, management support, time availability of resources, organisational boundaries, and work autonomy are the antecedents. The perception of the existence of the antecedents influences entrepreneurial behaviour, which results in the outcome for the individual and the organisation.

The literature on innovation theory, corporate entrepreneurship, and strategy implementation will be used to formulate the data gathering process.

1.8. Contribution of the research

The research aims to contribute primarily to business and theoretical needs. The research is also positioned to make a contribution to government, regulators, and innovation laboratories.

The research is necessitated by the business need to comprehend the extent of the disruption in the environment (PwC Financial Services Technology, 2016;

Schueffel, 2016; Ifeacho & Ngalawa, 2014; Gomber et al., 2018; Coetzee, 2018). If business leaders do not understand the levers of the primary focus, their efforts in innovation implementation could lead to cost escalations and negatively affect the customer experience (Lee & Shin, 2018). The smooth implementation of innovation promises the organisation the benefits of being first to market, improvements in the service offering, and the creation of alternate revenue streams (Kuratko, Hornsby & Covin, 2014).

The research contributes to theory by validating the completeness and applicability of the model for sustained corporate entrepreneurial strategy in the context of a South African bank. The limitations of the research will also set the basis for future research to contribute to entrepreneurial and innovation literature.

Listing some of the critical factors, Kuratko et al. (2004) indicate that there is scope for the model to be improved. The shortcomings and proposed course for the extension will be informed by themes that emerge inductively from the data. The theory from the themes will form the basis for recommendations.

1.9. Conclusion

This chapter introduced the research topic and problem. Through highlighting the need to understand the antecedents for smooth innovation implementation, a compelling case was made for the relevance of the research in business and academia. In conclusion, the research aims to identify those conditional forces that, when influenced, lead to a smooth implementation by banks of finance technology innovations conceived from a standalone innovation-focused unit.

The remainder of the document is organised as follows:

- Chapter 2: Theory and literature review

Synthesises the academic literature and discusses what research has been conducted for the topic and what has not been researched, and places the importance of this research as a gap in the academic literature.

- Chapter 3: Research questions and propositions

Clearly defines the research purpose and formulates the research proposition using the literature. The proposition supported by the literature will give a foundation for empirical evidence to the research.

- Chapter 4: Research methodology

Outlines the research approach and defends the methodological choices made as scientifically fit to aid the answering of the research questions.

- Chapter 5: Results

Presents the sample, the results, and a review of emergent themes of the research clustered around the research questions and proposition with sparse commentary.

- Chapter 6: Discussion of results

Presents a discussion of the results in terms of the research question, propositions, and the literature.

- Chapter 7: Conclusion

Highlights the main findings of the research, pulls the results together into a cohesive set of findings, and gives recommendations for future research and managerial implications.

The following chapter presents theory and literature review.

CHAPTER 2. THEORY AND LITERATURE REVIEW

2.1. Introduction

This chapter reviews the scholarly literature on the subject of corporate entrepreneurship, providing a critical analysis and positioning a gap for the research. Boote and Beile (2005) mention that amongst several objectives of a literature review process, the researcher should seek to set the context, provide a clear demarcation, and provide justifications for the decisions taken through the research process. In fulfilling the objective, this section provides a critical review of FinTech innovation implementation in a South African bank. The model for sustained corporate entrepreneurship (Kuratko et al., 2004) is used to ground the research. The section also provides a critical review of the finance technology literature as it relates to innovation implementation in South African banking.

2.2. Banks

2.2.1 South African banking sector

The South African Reserve Bank, launched in 1921, is the oldest central bank in Africa (South African Reserve Bank, n.d.). The Bank receives its mandate from, and is accountable to, the parliament of South Africa in terms of the Banks Act (No. 94 of 1990), or the Mutual Banks Act (No. 124 of 1993) and the regulations relating thereto. The South African banking system, through the Reserve Bank, is a member of international groups such as the G-20, the International Monetary Fund (IMF), the Bank for International Settlements (BIS), and the Committee of Central Bank Governors (CCBG) in the Southern African Development Community (SADC). These groups provide governance and oversight for the monetary system in the region and globally.

South Africa had its first commercial bank open in 1793 (South African Reserve Bank, n.d.). Currently, in South Africa, the banking sector is said to contribute 20% of gross domestic product (GDP) and banks employ more than 10% of the South African labour market (Ifeacho & Ngalawa, 2014). Banking is essentially strategic to South Africa's economic and social development.

The South African Reserve Bank notes on their website that its function is to protect the value of South Africa's currency (South African Reserve Bank, n.d.). This function is linked to the bank's role as banker to the government and manager of the country's banking system, making the bank the custodian of the depositors of money and the economy as a whole. Ifeacho and Ngalawa (2014) describe the banking sector in South Africa as having characteristics of an oligopolistic market structure with four banks responsible for a large percentage of the market share. Table 2-1 below provides a snapshot of South Africa's banking structure.

Table 2-1: South African banking sector distribution

Category	***Count***
Banks in Liquidation	2
Branches of Foreign Banks	15
Foreign Bank Representatives	30
Foreign Controlled Banks	5
Locally Controlled Banks	13
Mutual Banks	4
TOTAL	69

Source: (Adapted from South African Reserve Bank, n.d.)

The sector has a diverse set of traditional banking and specialist products. Ifeacho and Ngalawa (2014) state that South African banking products are built on the foundation of well-developed information and technology systems. The authors further make the point that the bulk of revenue for South African banks is primarily earned from interest on loans. The ability to allocate and utilise large sums of capital is still perceived as a key differentiator amongst banks (Del Giudice et al, 2016).

2.2.2 Transformational triggers in the banking environment

New competitors introducing a variety of products to the market have accelerated the innovations in the banking environment (Ifeacho & Ngalawa, 2014; Ferreira, Fernandes, Alves, & Raposo, 2015). Ifeacho and Ngalawa (2014) argue the competitiveness in the banking environment is the reason why the South African

banking environment has attracted large amounts of foreign direct investment, which started the cycle of disruption in the local financial services market.

Del Giudice et al. (2016) agree, and extend the argument to two other themes which triggered a transformation in the banking environment. Del Giudice et al. (2016) two triggers are the improvements in technological channels for delivering services to clients, and the stakeholders' demands for real time information, which vastly disrupted banking. The argument is consistent with Yunis, Tarhini and Kassar's (2018) analysis that the ability to record and interpret a vast amount of information in a global economy has fundamentally changed the banking environment. The banks are initiators of disruption as much as they are being disrupted, and as a result it introduces volatility in the environment.

Das et al. (2018) provide evidence that disruptions and volatility in the financial environment were introduced by the recent 2008 financial crisis. The entrance of new global players and non-traditional banking players shocked the system which forced banks to relook their strategies and initiate a series of disruptive changes (Ferreira, Fernandes, Alves, & Raposo, 2015). García-Sánchez, García-Morales, and Martín-Rojas (2018) sum the discussion by listing environment, stakeholders' roles, and technological skills as the sources of disruption, which if exploited successfully could lead to the emergence of innovations and profitability.

2.3. Finance Technology innovations

Schueffel (2016) argues that for more than 40 years the term 'FinTech' has been used in practice as well as in the literature, and there is no consensus as to what FinTech entails. The challenge to practitioners is that finance technology (FinTech) innovation is understood differently by stakeholders (Beck, Chen, Lin, & Song, 2016). For this research, FinTech is defined as 'new financial industry that applies technology to improve financial activities' (Schueffel, 2016). Schueffel (2016) mentions that much of the development around FinTech innovation is still to reach peak levels. Two years later, Lee and Shin (2018) suggested that FinTech is no longer 'hype' but has entered the maturity stage as the dominant force around the world.

Christensen et al. (2016) argue that researchers have long been recording innovation as a top priority and source of frustration for leaders. Kuratko et al. (2014) agree, and add that innovation is one of the important ways to match or surpass disruption in the global business environment. The disruption experienced due to technological innovation in the financial industry is unprecedented (Lee & Shin, 2018). However, disruption innovation theory literature is mute regarding the practicalities required to create products that customers are willing to buy (Christensen et al., 2016) and which can lead to sustainable profits.

2.4. Innovation theory and business models

Drucker (2014) describes innovation as a specific tool for entrepreneurs and how they exploit change as an opportunity for a different business or service. The description that something will be different is suggestive of an emergent phenomenon. Christensen et al. (2015) term this new phenomenon 'disruptive innovation'. The authors further mention that disruptive innovation seeks to create a new business model and give rise to new industries. DaSilva and Trkman (2014) describe a business model as being intrinsically connected with a representation of reality; a simulation of the real business world through a model. Business models simply mean a way of doing business.

Lee and Shin (2018) argue that the disruption of business models of large firms is due to FinTech start-ups which promise to offers unique, niche, and personalised services to customers. García-Sánchez et al. (2018) see the disruption as an opportunity for large organisations to constantly look to exploit the changes in the technology landscape and create products to compete in existing and new markets. The developments of FinTech innovations seek to improve the customer's experience with financial services products (Schueffel, 2016). Lee and Shin (2018) note the following ways for large financial institutions to reposition their business models if they are to take advantage of FinTech innovations:

- Building the capacity internally, known as the insourcing business model.
- Outsourcing the innovation capabilities to partner organisations.
- A hybrid model combining the features of the outsourcing and insourcing models.

The insourced FinTech business model is described as a business model where organisations embed innovations in the firm's capabilities. Because the employees are contracted to the organisation and interact with the customer regularly, the organisations trust that employees will solicit the customer's jobs to be done (Christensen et al., 2016).

Antons and Piller (2015) highlight consensus in the literature, which suggests the need for organisation to partner with external players to drive internal innovation and increase profitability. Lee and Shin (2018) agree and provide detailed accounts of large banks moving from seeing FinTech start-ups as threats to exploring models to collaborate and benefit from the technology innovations. The challenges with the partnership model are similar to those experienced during mergers and acquisitions. One such challenge is that, in partnership, companies usually have a different set of structures and cultures. The start-ups tend to be more entrepreneurial with minimal bureaucratic structures (Drucker, 2014), whereas the large firms seem to be managing large and highly integrated legacy technology.

Though it seems technology in large banks could be an impediment, Lee and Shin (2018) argue that traditional banks have the advantage to compete because they have economies of scale and large capital resources. Depending on the strategy that the bank follows (Mintzberg et al., 2005), the bank has the advantage of the choice for deploying their financial resources, including for the purposes of research and experimentation.

The challenge for large banks is heightened as FinTech start-ups with competitive positioning that perceive regulation to be favourable are less likely to be collaborative (Lee & Shin, 2018). The start-up has a vision to one day be a dominant industry player. Christensen et al. (2016) state that disruptive innovation theory seeks to predict the behaviour for companies at risk of being disrupted, and yet remain competitive, by helping those companies to understand the threats posed by the new entrants. Where the outsourced model is deployed, the incumbent organisation environment shapes the perception of costs and sustainable profits related to entrepreneurial behaviours (Kuratko et al., 2014; Burcharth, Knudsen, & Søndergaard, 2014).

García-Sánchez et al. (2018) argue that to make profits in perpetuity, organisations need to reconfigure themselves to find relevance with customers as the environment changes. Lee and Shin (2018) argue that for companies to stay competitive, those in the financial industry should invest in capabilities that can take advantage of FinTech innovations. Das et al. (2018) add that innovation is a business imperative, and firms have responded by setting up processes and research and development units to explore new technology. What is not described is how those firms can improve their entrepreneurial culture and innovation implementation success rate.

Antons and Piller (2015) mention that companies and individuals are finding it challenging to sustain their entrepreneurial culture. Kuratko et al. (2014) provide evidence that innovative companies across the world are seeking ways to remain innovative in an environment that is continuously changing. Companies, individuals and entrepreneurial variables continue to change with the uncertainty in the internal organisation and external business environment. To improve the innovation success rate, Christensen et al. (2016) argue that innovative companies have structured processes run by subject matter experts.

Teece et al. (2016) argue that organisational structures should have the agility to respond quickly to the changing environment. In the same study, Teece et al. (2016) make the point that the characteristics of today's innovation economy make agility a business imperative. Many innovation processes are costly and fall short of promised benefits (Christensen et al., 2016; Teece et al., 2016). However, the literature does not explain when agility is desirable, the nature of its foundations, and how, if at all, it relates to strategy (Teece et al., 2016). It falls short of practicalities for large firms to have the agility to reconfigure infinitely.

The literature realised this shortcoming related to disruptive innovation theory and introduced the theory of 'jobs to be done' (Christensen et al., 2015; Christensen et al., 2016). The introduction of jobs to be done, as an innovation theory, means managers now have to reorganise their managerial tools and structures. Evidence in the literature suggests that creativity happens when humans in their diversity interrelate (Perry-Smith & Mannucci, 2017). To benefit from the promised benefits of FinTech innovations like lowered costs of financial transactions (Lee & Shin, 2018), leaders need to understand the antecedents that facilitate innovation

implementation. Adner and Kapoor (2016) provide antecedents for determining the pace of technology substitution and identify mechanisms for resolving technology competition.

2.5. Finance Technology as a theory

Advancements in technology have led to organisations digitising their processes and introducing new financial products (Das et al., 2018). The financial services sector is going through unprecedented change due to advancements in technological innovation. The technological innovations are recognised as fundamentally changing the financial services industry (Lee & Shin, 2018; Schueffel, 2016; Coetzee, 2018). Sources of innovation can be loosely categorised into new technology which is credited for disruption, and legacy technology which is referenced for an incremental approach.

Although uncertainty is everywhere regarding the potential of being disrupted by technology (Teece et al., 2016), the literature has placed more emphasis on new technology to assess firm level competitiveness. This has come at the expense of assessing how both the new and old technology give the firm a competitive edge (Adner & Kapoor, 2016).

Drucker (2014) recommends that one of the ways organisations can gear themselves for disruption is to cultivate an entrepreneurial culture. Teece et al. (2016) agree, and make the point that the criticality of an entrepreneurial culture is necessitated by the organisational need for greater agility as it leads to individuals doing the right things amid high levels of uncertainty. Kuratko et al. (2014) argue that this entrepreneurial culture flourishes in mature firms where individuals have a high level of autonomy.

Adner and Kapoor (2016) argue that not all firms are innovating forward. The authors further add that firms with legacy technology which still has a useful life often make efforts to slow down industry-wide disruptive innovations. The study did not consider non-technological social and economic factors that could shape the replacement of legacy technology (Adner & Kapoor, 2016). Social factors can affect innovation implementation negatively or positively and ought to be considered (Rafferty et al., 2013; Grégoire, Cornelissen, Dimov & Van Burg, 2015).

Experimentation and complex and interdependent issues need a framework that improves the chances of managers seizing the envisaged benefits (Teece et al., 2016).

Due to their experimental nature, FinTech innovation projects carry technical, economic and regulatory uncertainties (Lee & Shin, 2018; Gomber et al., 2018). The nature of experimentation is that success is not guaranteed, and secondly, failure can have significant financial and reputational implications. To understand the level of innovation in the internal organisation, Kuratko et al. (2014) introduce the diagnostic instrument for measuring employees' perceptions regarding antecedents to innovation. The instrument, however, falls short in providing mangers with actionable insights to positively influence the outcomes.

2.6. Finance Technology innovations in South African banks

Kuratko et al. (2014) argue that corporate entrepreneurship can bring about improved productivity levels and effectiveness in organisations in every industry. As such, Lee and Shin (2018) note that incumbent banks are investing in innovations internally, while others are forming collaborative ventures with FinTech start-ups. Managing uncertainty successfully in an economy undergoing rapid innovation is a business imperative and common managerial challenge (Teece et al., 2016).

Teece et al. (2016) argue that because change involves scarce financial resources, managers cannot disrupt and configure their firms continuously. Das et al. (2018) note that mature financial services firms focus their efforts on incremental improvements, as opposed to disruptive innovation. Del Giudice et al. (2016) agree and add that traditional banks have focused on continuous improvements by allowing small changes for maximum returns, refining their customer value proposition, and strengthening their market dominance.

The role of the customer is changing, which in turn forces the banks to transform (Del Giudice et al, 2016). In the recent past, new financial services providers have entered the banking market with new and innovative products (Ifeacho & Ngalawa, 2014; Beck, Chen, Lin, & Song, 2016). The authors further add that these new products have resulted in a shift in the power of the customer, forcing the traditional

banks to effectively transform. There are instances where banks and their FinTech partners focus the transformation efforts on extending the useful life of legacy technology because the collective is unable to overcome the disruptive technological innovations (Adner & Kapoor, 2016).

Firms that continuously do well are successful with the innovation of new products and the commercialisation thereof (García-Sánchez et al., 2018). For entrepreneurship to thrive, the corporate environment has to be conducive. Kuratko et al. (2014) list five dimensions for a conducive entrepreneurial environment:

- Top management support.
- Work discretion/autonomy.
- Rewards/reinforcement.
- Time availability.
- Organisational boundaries.

2.7. Antecedents to implementation

2.7.1 Corporate entrepreneurial strategy

The external and internal factors like regulation, competition and government policies in the business environment initiate the review of the bank's innovation and entrepreneurial strategy (García-Sánchez et al., 2018). An understanding of corporate entrepreneurship and innovation in banks is a business imperative, particularly the use of technology as the key enabler of enterprise strategies and for exponential wealth creation (Yunis et al., 2018).

In an ever changing and fast paced economic environment, firms need to change quickly for sustainability (García-Sánchez et al., 2018). If banks are slow to react to the changing business landscape, they risk losing a competitive edge and eroding shareholder value (Das et al., 2018). Strategic level and implementation-specific issues are attributed for their influence on organisational performance (Liao, Tseng, & Ho, 2015) and individual satisfaction (Bradford & Florin, 2003). Petrou,

Demerouti and Schaufeli (2018) propose that employees with more autonomy and flexibility for amending their responsibilities can positively facilitate innovation idea implementation.

2.7.2 Organisational antecedents

Entrepreneurial strategy is hard to implement across the organisation because entrepreneurship is usually synonymous with minimum structure and focus (Kuratko et al., 2014). Because financial resources are scarce, agility should be prioritised when the business case benefits outweigh the opportunity costs (Teece et al., 2016). Entrepreneurial managers should understand how to deploy the financial capital of the firm and technical expertise for the benefits of their stakeholders (Sonenshein, 2014). Financial capital and its benefits are elements that should be measured to ensure that resources are allocated to value-adding activities. Kuratko et al. (2014) argue that measuring the existence of the entrepreneurial elements in the organisation, as perceived by the employees, is a managerial challenge.

Organisations need to develop dynamic capabilities to be able to realise the point at which managers can trade off efficiency for agility to benefit the firm (Teece et al., 2016). However, the authors do not offer the managers strategic options for implementation. Christensen et al. (2016) propose that business leaders understand the problems facing their customers and provide innovative solutions given their circumstances. The authors assume that a corporate entrepreneurial culture exists and is successful. It is still a managerial challenge to understand internal capabilities that when controlled correctly can yield favourable results.

Petrou et al. (2018) argue that sharing of information can be a great tactic to influence teams to rally behind a common goal. García-Sánchez et al. (2018) agree and argue that the sharing of strategic information needed to successfully carry out the implementation is a necessity. Managers should clearly communicate the existence of the elements as it cannot be taken for granted that solutions to identified customer problems will automatically translate to implementation.

Dynamic capabilities of the firm that lead to agility will be weakened if the strategy of the firm and its resulting technology implementation is not competitive (Teece et al., 2016). Large firms' strategy implementations are faced with the challenge of

simultaneously managing legacy technology while introducing emergent technology. This challenge is further heightened by sectorial technology interactions. Adner and Kapoor (2016) argue that interactions among diverse ecosystem participants shape technology innovation implementations. The same authors recommend that firms should consider the differential impact of the ecosystem when analysing the pace at which new technology replaces legacy technology.

Yunis et al. (2018) argue that to benefit positively from innovation and gain a competitive advantage in the market, companies should harness relationships between innovation implementation supporting factors. Bradford and Florin (2003) identify the varying preconditions which interdependently influence outcomes at a user and organisational level. The authors single out complexity of the system, training, competitive pressure, and top management support as necessary conditions that influence the organisation's adoption of new solutions. Del Giudice et al. (2016) find that the culture of innovation in the organisation is a key determining factor for a bank's sustainable profitability.

Investment in technology innovations and the implementation of resulting solutions require a culture that promotes transformational leadership and corporate entrepreneurship (Yunis et al., 2018). García-Sánchez et al. (2018) agree and add that for innovation implementation to thrive in organisations, there has to be a culture of entrepreneurship, motivation, processes and reward structures. The organisational culture that promotes collaboration across different subgroups and functional silos can be a factor to influence entrepreneurial behaviour and innovation implementations (Antons & Piller, 2015).

The strategy, firm positioning, and appetite for risk should inform the managerial choice about the type of agility suitable for their firm (Teece et al., 2016). Designing and communicating the antecedents to entrepreneurial behaviour will improve innovation success levels across the firm (Kuratko et al., 2014; Sonenshein, 2014). Banks with legacy technology need a well-crafted strategy if they are to successfully implement new technology innovations and business models (Lee & Shin, 2018). A corporate entrepreneurial strategy gives the organisation an edge over the competition and protects shareholder value (García-Sánchez et al., 2018).

2.7.3 Entrepreneurial behaviour

Antons and Piller (2015) argue that one of the highly cited reasons for the failure to implement innovation is the resistance from individuals believing the invention was not from within their tribe and thus will not embrace it. That reasoning discourages collaboration (Alexiev, Volberda, & Van den Bosch, 2016) and inclusivity which García-Sánchez et al. (2018) argue are key if ideas are to result in successful entrepreneurial activity that leads to user satisfaction. User satisfaction is a necessary condition for the adoption of an enterprise-wide solution on a large scale (Bradford & Florin, 2003; Burcharth, Knudsen, & Søndergaard, 2014) which will lead to sustained shareholder value.

Finance technology innovations lead to the emergence of new technologies and improved client offerings that were lacking in the traditional banking sector (Das et al., 2018). The literature on corporate entrepreneurship strategy particularly, as it relates to technology innovation, is still in the immature stage (Yunis et al., 2018). Employees in banks are expected to carry out innovation implementations; however, little guidance is provided to steer them to success (Petrou et al., 2018). Petrou et al. (2018) further add that knowledge on how employees can successfully implement these innovations is critical at the time when organisations are facing unprecedented disruption.

Technology innovation is not the goal in itself; however, the goal is to increase shareholder value through corporate entrepreneurship activity (Yunis et al., 2018). Given autonomy to influence their responsibilities during the lifecycle of innovation, the employees can complement their managers during uncertainty or when management is inadequate (Petrou et al., 2018). The nature of the structure that takes the form and shape of those that conceived it could introduce challenges as the organisation evolves and diverse people join the organisation (Antons & Piller, 2015).

Ideas and innovations that are disruptive are necessary if organisations are to sustain their profitability (Das et al., 2018), although ideas alone are worth nothing if they are not implemented successfully to yield the envisaged benefits and give value to the shareholders (Perry-Smith & Mannucci, 2017). Bradford and Florin

(2003) highlight that the implementation mistakes of enterprise-wide strategic solutions can be costly and complex.

There is consensus in the literature that company objectives (Liao, Tseng, & Ho, 2015) and the strength of the competition influence the performance of the organisation (Bradford & Florin, 2003). García-Sánchez et al. (2018) argue that firms with active entrepreneurship and innovation strategies will have a better market share compared to their rivals.

Integration of models and theories across disciplines such as organisational theory and strategic management is fundamental to having a holistic understanding of how managers can profit from new technologies (Bradford & Florin, 2003; Sonenshein, 2014). When an employee has the autonomy to co-create their responsibilities as part of the entrepreneurial activity in the organisation, the result is a highly engaged employee (Petrou et al., 2018).

The literature on technology implementation in various sectors is vast; however, the knowledge to successfully roll out FinTech projects is still elusive (Yunis et al., 2018). The banking sector is part of the knowledge economy with intangible products, and as such, the measure of efficiency is often a challenge (Ifeacho & Ngalawa, 2014). The literature describing the strategic and organisational conditions for banks to successfully implement financial technology innovations is still in its infancy, particularly due to the disruptive nature of innovations (Das et al., 2018).

2.8. Implementation of FinTech innovation

2.8.1 Success in innovation implementation

The last 20 years have seen many researchers explore various topics in the field of technology implementation (Bradford & Florin, 2003). Success in innovation implementation can be influenced by a variety of factors, both in the internal organisation's control and in the external business environment (Das et al, 2018; Alexiev, Volberda, & Van den Bosch, 2016). Perry-Smith and Mannucci (2017) argue that innovators must have influence, negotiation acumen and credibility to rally the support of decision-makers.

Perry-Smith and Mannucci (2017) argue that the innovator's delivery history and credibility is a baseline of the reception of the implementation of their future innovation. García-Sánchez et al. (2018) agree and add the condition that if the innovator is deemed to have a successful history of implementations, they are more likely to receive the needed support for future implementations.

To successfully implement the innovation, the required people must believe in the innovator's vision (Perry-Smith & Mannucci, 2017). To be successful, innovators should articulate the need and benefits for change to stakeholder with the aim of soliciting stakeholder buy-in (Petrou et al., 2018). Perry-Smith and Mannucci (2017) agree and state that the support of decision-makers is critical for the correct allocation of resources needed to implement the innovation. García-Sánchez et al. (2018) argue that organisation leaders should possess the technical skills necessary to be entrepreneurial.

Entrepreneurial success lies on the foundation of collaboration across functions (Alexiev, Volberda, & Van den Bosch, 2016) and partnering with external stakeholders (Sonenshein, 2014). Further, the innovators should ensure they consider the contributions of stakeholders and even allow stakeholders to define their roles in the change (Petrou et al., 2018).

2.8.2 Barriers to innovation implementation

The advancement and connectedness of the economy has led to a rapid increase of uncertainty in the business environment (Alexiev, Volberda, & Van den Bosch, 2016). Business leaders are hungry for levers they can control as a catalyst for innovation activity in the organisation's internal environment (Kuratko et al., 2014). The dynamic capabilities framework (Teece et al., 2016) can help guide managers concerning when and how to manage under uncertainty (Sonenshein, 2014). Teece et al. (2016) illustrate the point that the ability to manage uncertainty will result in cost benefits and reduced risk, and lead to organisational agility.

Lee and Shin (2018) argue that technology integration has been identified as a managerial challenge for the FinTech innovation ecosystem. Operations managers need to recognise the need to continue serving the current customers while at the same time being innovative (Anaya, Dulaimi, & Abdallah, 2015). Innovations promise to reduce costs and improve the customer's experience with the product

(Beck, Chen, Lin, & Song, 2016). For operations managers, sometimes the new technology innovation efforts create solutions that extract value and extend the useful life of legacy technology (Adner & Kapoor, 2016).

When organisations experience disruptive change, entrepreneurial managers can seize the benefits of the dynamic capabilities to achieve the organisational strategy (Teece et al., 2016). However, this can mean doing away with entrenched practices (Burcharth, Knudsen, & Søndergaard, 2014). During a period of uncertainty, doing the right things is more important than doing things that primarily seek to gain operational efficiency (Anaya, Dulaimi, & Abdallah, 2015).

Sometimes doing the right thing means replacing legacy technology with innovative products. The replacement of legacy technology with the new technology can be influenced by the quality of the firms' diverse strategic choices and investments (Adner & Kapoor, 2016). The challenge for managers is to find a way to successfully implement the innovation without disrupting the customer experience. If the team responsible for the legacy technology is not persuaded on the innovation, they are likely to work against the implementation of new technology as it is a potential threat to their environment (Perry-Smith & Mannucci, 2017).

Having a thriving corporate entrepreneurship practice, dynamic capabilities and organisational agility can give the firm a competitive advantage on technology transitioning (Drucker, 2014; Grégoire et al., 2015; Hinson & Osborne, 2014; Kuratko et al., 2014). Kuratko et al. (2014) add that companies which promote and nurture entrepreneurship behaviour and share knowledge widely have a high innovation adoption success rate. Petrou et al. (2018) note that change communication is not a universal solution to innovation implementation; however, the authors note that there is consensus in the literature that clarity in change communications is a critical factor to influence stakeholder buy-in.

Incumbent banks are developing competitive strategies to avoid being disrupted by FinTech start-up entrepreneurs (Lee & Shin, 2018; Nicoletti, 2017). Though they provide a list of barriers to entrepreneural strategy implementation, Das et al. (2018) also recognise that the literature is limited regarding barriers to the successful implementation of innovation within banks. The very same argument

indicates the need for the research of antecedents to smooth innovation implementation.

2.9. Summary of elements, conditions and their literature sources

Table 2-2 below provides a summary of the discussed conditions facilitating innovation and the literature sources cited.

Table 2-2: Summary of literature conditions for implementation

Condition	Element/Condition	Literature
Transformational triggers	Competition, Technology, Information, Customer, Regulation	(Ifeacho & Ngalawa, 2014; Del Giudice et al., 2016; Yunis et al., 2018; Ferreira et al., 2015)
Entrepreneurial strategy	Technology, Customer experience, Partnership, Culture	(García-Sánchez et al., 2018; Lee & Shin, 2018; Drucker, 2014; Kuratko et al., 2014; Antons & Piller, 2015; Burcharth et al., 2014)
Rewards	Profits, Shared Value	(García-Sánchez et al., 2018; Das et al., 2018)
Management support	Budget, Relationships	(Teece et al., 2016; Bradford & Florin, 2003)
Resource time availability	Skills, Interactions	(Christensen et al., 2016; Perry-Smith & Mannucci, 2017)
Flexible organisational boundaries	Agility, Competitiveness, Structure, Information	(Teece et al., 2016; Adner & Kapoor, 2016; Nicoletti, 2017; Grégoire et al., 2015)
Work discretion and autonomy	Entrepreneurial, Co-create	(Drucker, 2014; Yunis et al., 2018; Hinson & Osborne, 2014; Petrou et al., , 2018)

2.10. Conclusion

This chapter provided a critical analysis of the literature reviewed on corporate entrepreneurship. The discussion was grounded on the model for sustaining corporate entrepreneurship. The review provided an argument for investigating the antecedents to successful implementation of finance technology innovations. The following chapter presents the research questions for this study.

CHAPTER 3. RESEARCH QUESTIONS AND PROPOSITIONS

3.1. Introduction

This chapter presents the research questions forming the basis of this study. The questions have been formulated using the literature synthesised in the preceding chapters. The objective of these questions is to ground the investigation to uncover the antecedents enabling the smooth implementation of FinTech innovations within South African banks. Answering the questions will contribute to the theory of corporate entrepreneurial strategy. Furthermore, leaders will be enabled to harness the finance opportunities presented by technological improvements.

3.2. Research question 1

Which conditions when perceived to be present in the organisation will lead to innovation implementation?

Although organisation have various internal antecedents to influence innovation implementations (Teece et al., 2016), managers don't always know the levers that yield a maximum result with the least amount of effort (Das et al., 2018). This question, therefore, sought to understand the condition which when influenced would lead to innovation implementation success.

3.3. Research question 2

Which strategic elements are perceived to lead to high innovation implementation success?

Perception of organisational response to transformational triggers influences innovation implementation (Drucker, 2014; Rafferty et al., 2013; Gomber et al., 2018). It is for this reason that the research seeks to understand the triggers which are perceived to lead to successful innovation implementation.

3.4. Research question 3

Which combination of elements and conditions yield high entrepreneurial behaviour?

During the times of high uncertainty, entrepreneurial behaviour particularly in mature firms is perceived to be a business imperative (Kuratko et al., 2014) and said to give the firms an advantage over the competition (García-Sánchez et al., 2018). It is for this reason that this question seeks to understand a combination of elements and conditions that when yields the maximum results with minimum effort.

3.5. Conclusion

This chapter has presented the research questions that form the basis of the study. Answering the questions will provide practitioners with the tools necessary to maximise their resource allocations relating to innovation implementations and sustained shareholder value. The following chapter presents the methodology used for the research.

CHAPTER 4. RESEARCH METHODOLOGY

4.1. Introduction

This section presents the choice of methodology and approach followed to answer the research questions presented in Chapter 3. The process of how the data were analysed is presented as grounded in the literature. Furthermore, considerations for ethics, validity, reliability and limitations of the study are also presented.

4.2. Choice of methodology

This study followed the interpretivism paradigm philosophy. Saunders and Lewis (2018:109) argue that interpretivism philosophy allows the researcher to adopt an empathetic stance and understand differences between humans as social actors. Using the interpretivism philosophy, the researcher asks 'why' questions for various elements of the construct to build theory (Than & Than, 2015).

In line with the interpretivism philosophy choice, the research approach followed an inductive process. Saunders and Lewis (2018:113) describe the inductive process as a research approach that analyses collected data to build theory. The theory is an outcome of the induction process which starts with specific observations. Saunders and Lewis (2018) place the emphasis of the process on a deep understanding of the research context.

As a mono method methodical choice, in-depth interviews for data collection and thematic analysis as a data analysis method were proposed. Saunders and Lewis (2018) describe a mono method as a single data collection technique and a corresponding analysis procedure. This methodological choice was made because of the primarily single method to data collection and it lends itself correctly with the interpretivism philosophy (Than & Than, 2015).

The purpose of the research design is exploratory. Exploratory studies are useful for finding out what is happening and for clarifying the precise nature of the problem (Saunders & Lewis, 2018). The exploration taken by the research was to uncover in-depth the conditions best suited for a FinTech innovation business model. Both the literature and evidence from subject matter experts were explored. Exploratory

studies are flexible and allow the researcher to immerse themselves deeply in the topic.

A case study strategy was employed to examine conditions that when present in a bank would lead to a successful implementation of FinTech innovation. A case study was appropriate because it allows for in-depth descriptive questions that aid the researcher to develop a deeper understanding of the research issue (Yin, 2018). Furthermore, descriptive questions aid in a descriptive analysis which was undertaken to process the data retrieved from the interviews with the participants. The descriptive analysis was used to offer simple synopses on the measures. The case study is bound by place and time (Creswell, Hanson, Plano & Morales, 2007).

A cross-sectional time horizon sufficed for the GIBS MBA research project which was required to be completed in a specified short period. Saunders and Lewis (2018:130) describe cross-sectional studies as the study of a particular topic or phenomenon at a particular point in time. The cross-sectional design requires that data are collected from respondents at one period in time, known as a snapshot, say Saunders and Lewis (2018).

A semi-structured interview was employed. Semi-structured interviews were chosen because the FinTech innovation implementation literature has not yet reached maturity and the researcher aimed to uncover in-depth knowledge from the practitioners (Rubin & Rubin, 1995). Encouraging practitioners to share their deep knowledge will likely result in the emergence of new theory.

4.3. Population

Saunders and Lewis (2018) define the population as the complete set of cases or group of members. The population of the study comprises all the banks registered and operating in South Africa. As a country, South Africa has one best financial systems in the world, often referred to as the first world comparative. For this reason, South Africa is fertile ground for research relating to finance technology innovations within banks.

South African banks were selected for their strategic importance in the economy. Furthermore, banks are going through unprecedented change due to technological advancements. With the increase of competition in the environment, large banks

would benefit from taking advantage of this technology. South African banks' head offices are clustered in Gauteng, within the City of Johannesburg municipality.

Banks are typically arranged by function with the autonomy to address a specific strategic need. The functions are referred to as business units. Business units can be distributed across different regions. Within the business units, further division into front office, middle office and back office type activities are common. The South African Reserve Bank (SARB) maintains a list of types of banks registered and operating in South Africa (South African Reserve Bank, n.d).

4.4. Unit of analysis

For the context of this research, the unit of analysis is the business technology department in the investment bank. For a case study research design, the unit of analysis is at the level of an event, programme, activity, or more than one individual (Creswell et al., 2007). The narrowed scope was selected to focus departments with accountable for innovation implementation (Ferreira et al., 2015). Middle and senior management were interviewed as participants representatiing the bank.

4.5. Sampling method and size

This research used a homogeneous purposive sampling strategy. A homogenous purposive sampling strategy has a defined set of common pre-identified characteristics which help the researcher include or exclude a participant (Saunders & Lewis, 2018). The research participants comprising the sampling had the following characteristics:

- The respondent has strategic leadership and technology innovation responsibilities.
- The leader must have collaborated to implement and integrate innovation conceived outside their business unit, or
- The leader must have collaborated to have their innovations implemented by incumbent business units outside of their own.

For the context of this research, the researcher proposes one banking group. A choice of one bank is necessary to eliminate bias due to culture and different

strategic drivers. A sample of 10 to 15 participants with a focus on the day-to-day operations, active innovation implementation, and technology leadership in the bank was purposively selected and interviewed. The preference was to interview the heads of the business units, chief information officer, heads of technology, enterprise-level architects, and members of the executive team as representatives of the bank or organisation.

The acceptable sampled size in qualitative research is influenced by saturation. Saturation is a point at which new information about the phenomenon emerging from additional data does not significantly change the direction of the discussion (Guest, Bunce & Johnson, 2006). Creswell et al. (2007) recommends three to five respondents per unit of study to reach acceptable academic saturation for a case study research. Figure 4-1 below provides a visual description of new codes created during the process coding of interviews transcripts. The solid vertical blue bars are the new codes as noted by the researcher after each transcript coding in Atlas.ti. The red dotted lines show a decline of the rate at which new codes were being created. The figure demonstrates that saturation was reached at interview five.

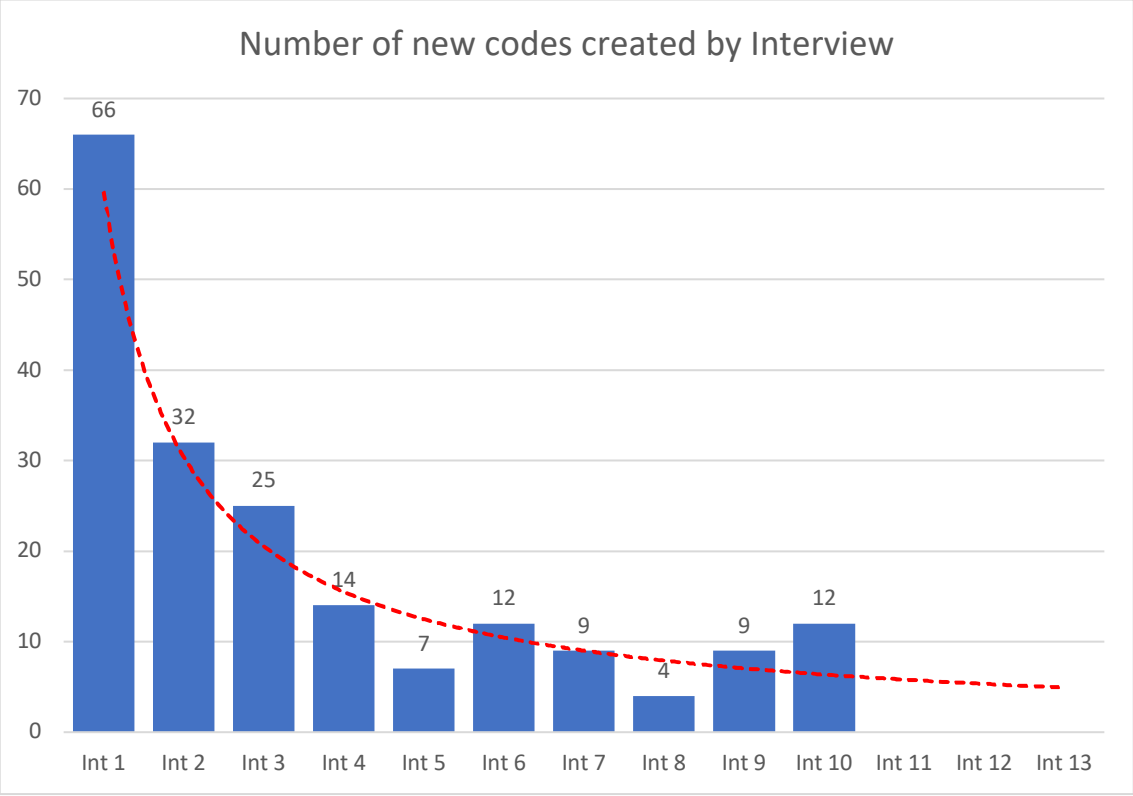


Figure 4-1: Demonstration of data saturation

4.6. Measurement instrument

In designing the semi-structured interview, the researcher ensured that all the research questions were considered. The instrument was created using the research questions and guidance from a model for sustainable entrepreneurial strategy (Kuratko et al., 2004). It was then tested with the first participant and calibrated. The calibration aimed to ensure that the framing of questions elicited the relevant response without ambiguity. Appendix 3: Interview Schedule shows the resulting interview plan that was used to guide the data gathering process.

Saunders and Lewis (2018) propose that after two or three steps the instrument will be academically acceptable. However, the researcher found a single step to suffice. The researcher found that the participant understood the questions without asking for clarification or rephrasing. Secondly, the interview duration was timed to be 35 minutes.

The research instruments used for this study were the interview plan, a digital tape recorder, pen, and paper notebook.

4.7. Data gathering process

Primary data were gathered through face-to-face semi-structured interviews. The researcher expected to spend four hours setting up the interview plan. The plan contained topics to address the key constructs of the research. The interview plan aimed to provide minimal structure for the researcher and not to prescribe specific questions. The immersed researcher will probe deeper to get the maximum insight possible (Rubin & Rubin, 1995).

An appointment was booked with the identified research participants. Only when the participants had signed the GIBS consent forms, could the data collection take place. The researcher expected to spend one hour booking appointments with participants. The interviews took place at the premises of the participating bank and lasted for between 27 and 45 minutes. The primary interview was booked for one hour at one sitting. About 15 to 30 minutes was then reserved for the future should there be a need for further clarification during the research project.

After each interview, the researcher prepared the recording for transcription work. In step one of the transcription, the researcher used online software solution called Otter.ai. The software is cloud-based and works though the internet. In this step the research received the transcription report from the software and listened to the audio recordings while making corrections for occasions when the software mis-transcribed. The transcription and validation process took an average of three hours per 40 minutes of interview recording.

In addition to the recorded interview, the researcher noted the nonverbal cues and other observations. This included notes about the bank's premise, the actual venue where the interview was taking place, and any other thing that stood out from the environment. Notes about the respondent's reaction, behaviours and attitude during the interview were also noted. In total, 13 interviews were successfully conducted and their data recorded.

The researcher learned the following from GIBS MBA lectures as best practices for conducting a semi-structured interview:

- Create a natural environment.
- Encourage conversational competence.
- Encourage openness and depth.
- Get the facts and basic descriptions.
- Ask difficult questions.
- Tone down the emotional level.
- Close while maintaining contact.

4.8. Analysis approach

Deductive analysis is one of the three types of analysis for qualitative research described by Hsieh and Shannon (2005) and it is used when the existing theory is incomplete. FinTech is a recent phenomenon and the literature on its implementation is in the infancy stage. Deductive analysis is appropriate, particularly when the nature of the interview is semi-structured and the researcher

wants to extend or validate the current theory by allowing for a new theory to emerge (Eisenhardt, 1989). The current theory that was being put to test for possible extension was the model for sustaining corporate entrepreneurship. This is a recent theory which extends the theory of innovation and individual motivation.

Thematic analysis was followed to translate the primary data into new insights. Braun and Clarke (2006) define thematic analysis as a method for minimally organising, identifying, analysing, and describing data patterns set in rich detail. Thematic analysis offers the data abstraction needed to maintain the anonymity of the respondents. The authors further argue that thematic analysis offers an accessible and theoretically flexible approach to qualitative data analysis beyond psychology.

The process of analysis starts when the researcher goes through the transcriptions, noting down and summarising the interview. It continues as the researcher creates code and categories. To improve efficiency, the above-mentioned process was followed using the Atlas.ti software. Data analysis was conducted for a period of one or two months.

The process allowed the researcher to create codes from data. The researcher looked for a short phrase that captured the essence of a portion of data. See Appendix 6: Atlas.ti codebook for a list of codes produced. Braun and Clarke (2006) recommend that the codes should be exhaustive, consistent, and should not lose meaning. The codes were then grouped into categories.

Categories group the related codes together (Saunders & Lewis, 2018). In this step, the researcher continued to build a narrative to describe the data. The narrative from the categories then emerge as themes. Braun and Clarke (2006) describe themes as important data elements that relate to the research question. The researcher then analysed the themes to look for patterns of new insights for theory building.

4.9. Quality controls – including validity/trustworthiness

To ensure validity and credibility of the data collection and analysis process (Morse, Barrett, Mayan, Olson & Spiers, 2002) and therefore the results, the researcher endeavoured to do the following:

- GIBS student guidelines and MBA research green pages were adhered to at all times.

- The interview had a clear agenda, expected duration and provided contact information, including for escalations. GIBS consent forms were attached.

- The researcher used two audio recording devices for redundancy and strove for factual accuracy.

- A paper notebook was used for notes. No electronic devises like a cell phone, tablet or laptop were used for notes.

- The transcription was done by an independent third party; however, accountability for completeness is with the researcher.

- Atlas.ti software was used to ensure data abstraction, maintain anonymity, and eliminate bias.

- The audio recording and the audit trail for all communications were stored in a secure place at a location provided by the university.

4.10. Limitations

The qualitative methodology proposed for this study has various limitations. The researcher is aware of the following limitations:

- The nature of a qualitative design is such that the results from the sample cannot be generalised to the population; one can only make inferences about settings of similar characteristics.

- The small sample size was decided upon with the assumption that academic saturation would hold for this research. Had the saturation point not been reached, the researcher had not made plans to continue with more data collection.

- The sample profile comprised primarily middle managers and senior managers with innovation responsibilities. Their views could be different to those of the people responsible for implementing the innovations.

- There is a case to consider that the views represent those of the bank; however, there is a case to include other views like academia and those that works in the start-up environment that partner with banks.

- With thematic analysis, a sense of continuity and contradiction, which might be revealing through any one individual account, is not maintained (Braun & Clarke, 2006).

- The researcher works for the bank and has vested interests in the outcome of the research. This could come with unconscious bias.

4.11. Ethical considerations

Prior to collecting the data, the researcher submitted the application for ethics approval to GIBS's ethics committee for consideration. See Appendix 5: Ethical clearance for the communication from the Ethics Committee regarding permission to continue with the data gathering process. Only when the approval was granted could the interview meetings be scheduled and the data collected. The participants were also informed of the process and were required to give consent to being interviewed for research purposes. The consent letter that was provided to the participants can be found in Appendix 2: Consent letter.

4.12. Conclusion

This section presented the choice of methodology necessary for the collection of information and data for the purpose of coming to a logical conclusion that will aid in answer the research question. The limitations with the approach that was applied to maintain the objectivity and credibility of the research were also discussed.

In conclusion, the research is a qualitative study using the semi-structured interview for data collection and the thematic process for data analysis. The following chapter presents the collected results of the data collection.

CHAPTER 5. RESULTS

5.1. Introduction

The chapter presents and reports on the results of the 13 interviews collected from leaders of a South African investment bank. The research questions are used to anchor the presentation of these results. The findings are reported at the category level identified from the thematic qualitative analysis of the antecedents to smooth implementation of FinTech implementation. The questions are designed to elevate the focus of reporting on the strategic elements and organisational conditions that could facilitate or impede implementation, in isolation or combination.

The chapter starts with the description of the sample and the conditions under which the research was undertaken, followed by the detailed presentation of the data categories and their relationships.

5.2. Description of sample and context

South Africa's oligopoly banking landscape boasts different types of banks. Banks are experiencing unprecedented change in the environment due to, among other things, the technological improvements and the changing client role. The change has led banks to review their strategy with the objective of taking advantage of technological opportunities. The unit of analysis for the research was the technology department of a South African investment bank. The unit of analysis was decided to focus on implementation accountability. Therefore, sample of managers leading technology innovation implementation were selected to represent the population. A sample from the population was contacted to partake in a semi-structured interview data collection process.

Table 5-1 below provides a list of role and descriptions of the participants interviewed to represent the investment bank.

Table 5-1: Descriptions of participants' responsibilities

Title	Responsibility description
Solutions Architect	Technology architecture design and maintenance to ensure technology can support the strategy.

Title	Responsibility description
Head of Innovation Capability	Scans the external environment for technology advancements and offers consultancy services to internal managers
Chief Information Officer	Accountability for stability of the information technology environment, budget, people and process
Platform Lead	Daily operations of the platforms supporting the users of the technology solutions.
Technical Architect	Governs the standards and principles for bringing technical technology solutions into the organisation

Names of the participants and other demographic information were not recorded as this was deemed to not change the direction of the discussion, and secondly, in this way the researcher could provide confidentiality to the respondents. Where direct quotes are attributed to the participants, a gender agnostic pseudo name like participant 1 is used.

The researcher conducted a total of 15 interviews; however, two interviews were discarded from the research. Of the discarded interviews, the first interview was used primarily to calibrate the research instrument and the framing of the interview questions. The second was discarded because it not offer insights related to this study. The second participant was a snowball recommendation to the researcher. Even though the respondent failed the role criteria, the interview took place. However, the outcome did not provide insight relating to this study, and as such the interview data were removed. This report presents data from the 13 semi-structured interviews.

The reported interviews all took place at the convenience of the participant; either at the meeting room, the participant's office, or the participant's chosen coffee area. At the time of the interview, the participants had the responsibilities as described in Table 5-1 above. All these took place at the premises of the investment bank in Johannesburg, South Africa. The research booked the participants for 45 minutes. The objectives of the research and the GIBS consent letter were attached to the meeting invitation at least 24 hours in advance. The interview questions were not provided to the participants prior to the meeting.

The researcher is employed by the investment bank and interacts with the participants regularly on a professional basis outside of the research process. As such, it is noted that the researcher is also an actor in the study. To guard against bias, the researcher used the model for sustaining corporate entrepreneurship to ground the themes for the questions for the semi-structured interview. The researcher asked the questions and allowed the participants to be fully expressive without letting bias influence the direction of the conversation.

5.3. Results: Research Question 1

Which conditions, when perceived to be present in the organisation, will lead to innovation implementation?

The research question aimed to investigate the conditions in the organisation, perceived or real, which when present would lead to higher rate of successful finance technology innovation implementation. Furthermore, the question aimed to identify those conditions which when present would lead to the failure of implementation. The organisation would then focus on providing an internal environment maximising those conditions that lead to success while working to eliminate those that impedes it.

5.3.1 Organisational antecedents

Table 5-2 provides a visual representation of the categories that emerged from the organisational antecedents theme.

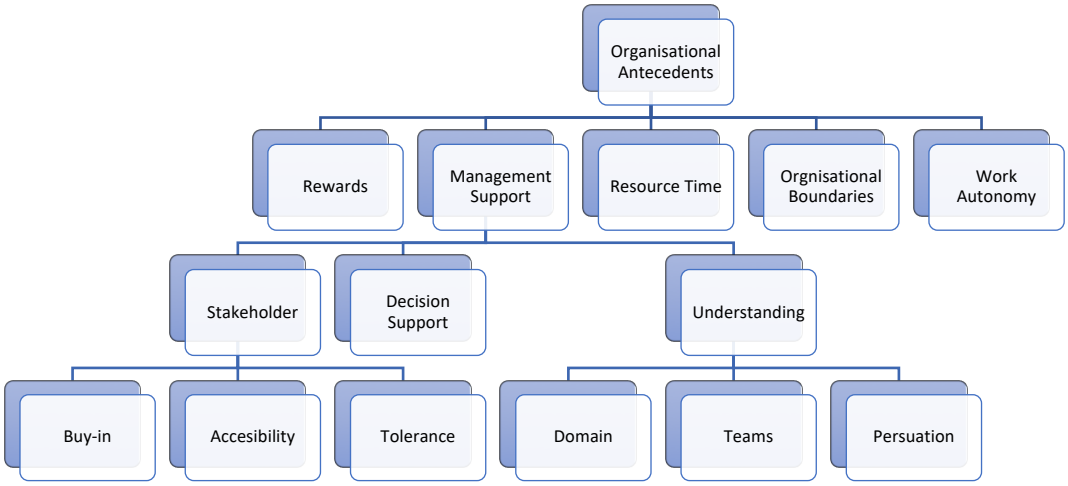


Table 5-2: Organisational antecedents theme

5.3.1.1 Use of rewards

Rewards are tools for which organisations, through their leaders, can use to reinforce and influence a desired outcome. The interviewed participants indicated varying levels for types of rewards, how rewards are allocated, and the effect rewards would have on the goal of successfully implementing innovation. Participants indicated that implementers are fulfilled by a sense of adding value to the organisation.

> Participant 1: *'You start to realise like there's a lot of value that you could add.'*

> Participant 3: *'Paying people if they add value, it shouldn't be about how much money be making basically.'*

The interviewed participants indicated that if tailored to the employee's preference, non-financial rewards are the most effective way to drive behaviour.

> Participant 10: *'The money part, I think it's maybe a third or a fourth attribute.'*

In the study organisation, the implementers of innovations are professionals often referred to as knowledge workers. The data suggest that implementers are willing to give discretionary energy when they are given the freedom to work on cool and exciting work that makes them shine.

Participant 9: *'There's no incentive for doing it but you are incentivized on a monthly basis, because your job is to find new stuff and bring it in.'*

However, some of the participants cushioned against the negative implications of the rewards. Focusing on rewarding success has the unintended consequence of discouraging experimentation. Having an uneven reward structure across the teams and business units was cited as being the source of negative consequences.

Participant 6: *'I think when it comes through, it has to the meaningful, you know, and you have to understand where it is coming from, you know, because it, I think, for you to be given a fat check, when you know, deep down that you actually didn't add any value, it demoralise even more.'*

Table 5-3: Use of rewards

Rank	Condition(s)	Frequency
1	Implementers are fulfilled from a sense of adding value	14
2	Reward structure drives behaviour	9
3	Aspiration to work on cool stuffs	6
3	Less willingness to allocate discretionary energy	6
4	The need to work on things that makes one shine	5
5	Giving people freedom is an incentive	4
5	Rewards put in place to encourage implementation	4
5	Unequal reward structure discourages innovation	4
6	Importance of enjoying what you do	3
6	Lack of reward of failure discourages experimentation	3
6	Money reward is a key factor for people's aspiration	3
7	Incentives could negatively impact implementations	2
8	Not celebrating enough	1

5.3.1.2 Top management support

Executive and senior management being actively involved and creating a conducive environment for implementation ranks highly as a support condition.

Participant 1: *'If your boss leans more towards innovations, and taking those sort of risks, that's where you will see your innovation coming into fruition where it actually gets implemented.'*

Participant 3: *'And if you have the sponsors, so let's say the mentors, people are able to open doors for you, is a very powerful thing.'*

This is even more so when management has an above average grasp of the domain of innovation and can engage at the technical level. While being able to fully grasp the technical details, the participants felt management should maintain a moderate level of involvement with the delivery teams, particularly ensuring that decisions are made close to the delivery.

Participant 2: *'The devil is unfortunately in the detail. So you need to pay attention to it.'*

Participant 5: *'But those managers really don't think they understand and know people, I think they know you as a person, but they don't really know. What is it that you are passionate about?'*

While maintaining a moderate level of involvement, the participants report that the senior stakeholders should remain accessible.

Participant 10: *'The other thing is, I believe in working collaboratively with other people.'*

Participant 12: *'But I can literally go into somebody who is not a coder or a BA.'*

Due to the executive balancing multiple competing priorities, they could easily fall victim to the sales influence. Some participants felt that although management support is crucial, having the wrong people involved could be detrimental to innovation implementation.

Participant 8: *'There's a couple of people who are against it. When you get it approved, someone feels jilted. They feel shafted.'*

One senior participant commented that senior leadership is hardly the problem in an entrepreneurial organisation.

Table 5-4: Top management support

Rank	Condition(s)	Frequency
1	Senior stakeholder buy-in	20
2	Managers should understand the domain details	18
3	Importance of skilled project managers	13
3	Managers should understand their teams	13
4	Selling to influence the implementation	12
5	Move decision making close to the delivery	11
6	Importance of stakeholder accessibility	7
6	Importance of understanding the solutions	7
7	Falling victim of sales pitch	6
7	Wrong people are involved in the discussion	6
8	Dedicated more time in the beginning phase	4
8	Stakeholders tolerate failure when they are vested	4
9	Senior leadership is not a problem	1

5.3.1.3 Resource time allocation

Time availability of resources received moderate mention and the attributes were fairly distributed without any clear distinction. The participants mentioned spending time on valuable activities and having dedicated time for an initiative as being are necessary conditions to influence implementation.

> Participant 1: *'Someone has to communicate that time away from an individual to say, if you drop this and do this there is more value to the bank'*
>
> Participant 2: *'Otherwise, it's just like, you know, you're wasting your time, you're wasting everybody else's time.'*

The participants mentioned that splitting the focus on competing priorities could delay implementation.

Table 5-5: Resource time allocation

Rank	Condition(s)	Frequency

Rank	Condition(s)	Frequency
1	Resource time has to be allocated to value adding activities	9
2	Importance of having dedicated time	7
3	Allocate people to initiatives they do best with less energy	5
3	Capacity allocation should be done with minimal waste	5
4	People's personalities play a key role in work setting	4
4	Too quick to move to solution before clarifying the problem	4
5	Split focus leads to failure	3
5	Too long a time between ideation to implementation	3
6	Less focus on research and development	1

5.3.1.4 Organisational boundaries

The participants indicated that implementation is carried out across teams. As such, success depends on multiple teams with competing priorities.

> Participant 1: *'You're going to get this thing, you know, infused as part of the offering of the bank, you need all other teams'*
>
> Participant 8: *'Projects require approval from a lot of people in the organisation'*
>
> Participant 11: *'You got multiple sources that you have to go and engage'*

Furthermore, they mentioned that in addition to competing priorities, the teams themselves are in competition internally.

> Participant 8: *'The nurture the incubation area of that idea, and the stand up of implementation, are totally different cultures'*
>
> Participant 9: *'Well, what makes them special, they're not smarter they are anything, they just given a different mandate'*
>
> Participant 12: *'And the us and them thing, that's it, that's, that's I think, for me, that is really, really challenging'*

Participants indicated that forums are important for moderating and influencing behaviour; however, few mentioned that lack of clarity in those very same boards' mandates can impede innovation implementation.

> Participant 1: *'I feel they see the rules as to crush you, you know, rather than to help you align. It's almost like their mandate is to essentially open the gate or they close it, and not allowing any gap'*

> Participant 5: *'You put a drive to say by the time it comes to the architecture board. It's already been through a whole lot of other gates since people have said yes'*

> Participant 9: *'I've seen some of the things that they brought to arc board. Yeah, but we pushed back many times.'*

Table 5-6: Organisational boundaries

Rank	Condition(s)	Frequency
1	Cross team dependency in large organisations	11
2	The unhealthy competition between business and technology stifle innovation	10
3	Internal forums influences behaviours of implementers	8
4	Strategy varies at business unit level	5
4	Unclear mandate of the various boards	5
5	Ability to move in the organisation	1

5.3.1.5 Work autonomy

Participants indicated that clarity of roles and responsibilities is a critical condition for implementation. Second to clarity of roles was a well thought out job description which paves the way for the scope the employee has to fulfil during their employ, and particularly on the idea journey.

> Participant 1: *'It's a tough space to be where there's that misalignment between what we think is innovative and disruptive, versus, What is your day to day job and what you should be doing on a daily basis'*

Participant 3: *'I've seen it happen, we, you need to know what people are expecting from you.'*

The participants moderately agreed that teams with freedom to decide collectively on how they would like to work are more successful at implementing innovation.

Participant 5: *'I never expected that we get to a COO level making a call about technology I think it should be technical people presenting to the bank COO why they believe this is the best solution for that problem'*

Participant 6: *'Don't just take it and run with it is, you know, understand why you have to do it, and how it fits in into, you know, the ecosystem. And what your role is going to be'*

The participants indicated that if pressure goes unchecked, it could become a barrier to innovation with individuals making costly mistakes during the implementation. One participant mentioned that the people in the innovation ecosystem are the reason for the failure and success of the system.

Table 5-7: Work autonomy

Rank	Condition(s)	Frequency
1	Clarity of roles	17
2	Team collectively agree on way of working	10
3	The role of job description	6
4	Unchecked pressure forcing teams to make mistakes	2
5	People in the ecosystem makes the system ineffective	1

5.3.2 Summary of the findings of Research Question 1

The results of investigating organisational conditions which accelerate or are impediments to successful implementation of FinTech innovations can be seen in the figure below. The data suggest that middle managers should maximise top management's buy-in of innovations and minimise unhealthy competition within the organisational boundaries. The data further suggest that middle managers focus minimum efforts on the resource time allocation to value-adding activities to

accelerate implementation. Similarly, middle managers should focus minimum efforts on dealing with unchecked pressure impediments.

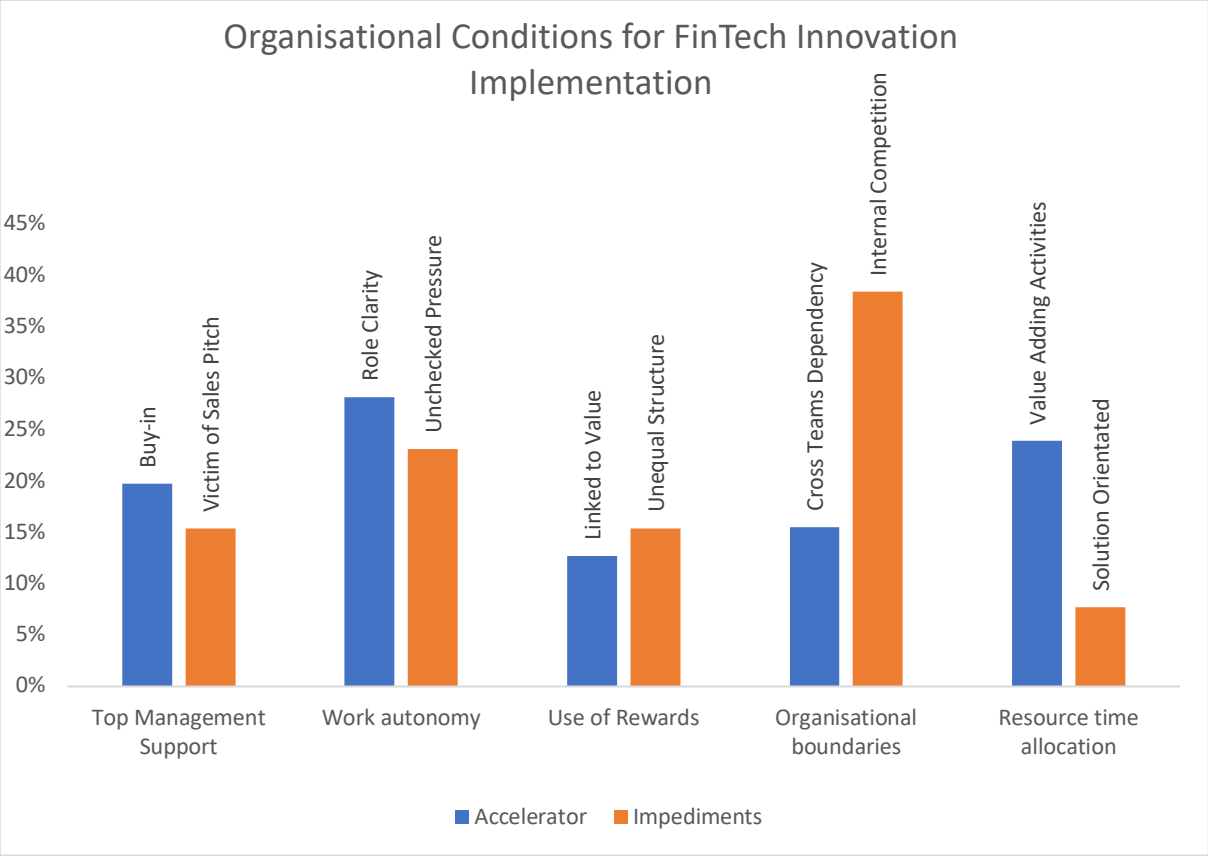


Figure 5-1: Organisational conditions for FinTech innovation implementation

5.4. Results: Research Question 2

Which strategic elements are perceived to lead to high innovation implementation success?

The research question aimed to investigate the elements in the organisational strategy, perceived or real, which when present would lead to higher rate of success of finance technology innovation implementation. Furthermore, the question aimed to identify those elements which, when present, could lead to the failure of implementations. The organisation would then focus on designing strategic options to respond appropriately.

5.4.1 Strategic elements

Figure 5-2 below provide strategic elements that and their relationships as emerged from the data.

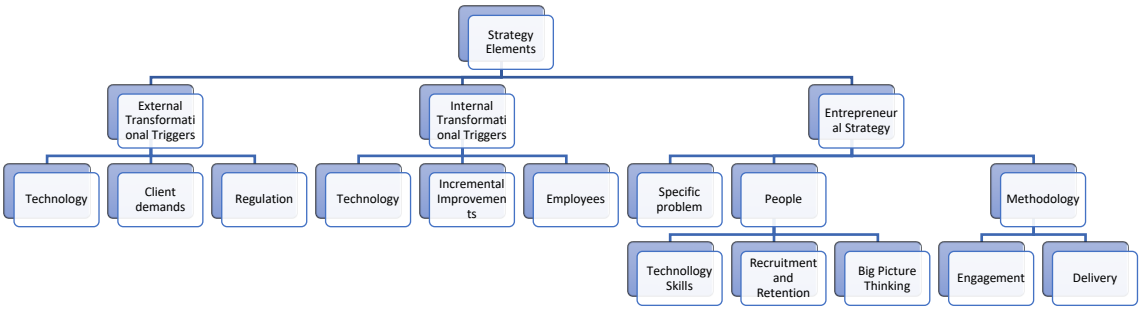


Figure 5-2: Strategy Elements theme

5.4.1.1 External transformational triggers

Participants mentioned advancements in technology and a changing client profile as key drivers of entrepreneurial strategy.

> Participant 3: *'That is why when FinTechs come, we like, Whoa, what's going so which is why then people start saying, look, we need the world need banking, but not banks.'*

> Participant 6: *'If we don't revisit or revise what we have to check if it still relevant then how do we know if we still competitive.'*

Profits received minimal mention, primarily because the sample profile had no direct involvement with the company profits. However, one participant mentioned that not putting the client at the centre of the strategy could be an impediment. Two participants mentioned that regulation stifles innovation implementation; however, one participant found that saying initiatives have regulatory deadlines can be an effective way of driving implementation.

Participant 11: *'What makes that happen really quickly is if it comes down in terms of like a regulatory thing, like you have to do it. And this impending deadline, like, you know, it's a hard deadline.'*

Table 5-8: External transformational triggers

Rank	Condition(s)	Frequency
1	Client demands for products drives innovation	3
1	Technology drives strategy	3
2	Regulation stifles innovation	2
3	Declining profits drives innovation	1
3	Externally enforced timelines improves speed of execution	1
3	Not putting client at the centre of implementation	1

5.4.1.2 Internal transformational triggers

The sample had middle and back office responsibilities. Middle and back office teams have responsibilities to support the work of the front office. The scope of support includes operating an effective and efficient technology environment. The participants indicated the need to continuously improve, and the kind of employees in the organisation, as key drivers of entrepreneurial strategy. This is as people navigate the constraints of the legacy technology.

Participant 6: *'I'm also very much in favour of the approach of revisiting what's already in place because you don't know if it still meet the requirements.'*

Participant 11: *'Re-engage with the user base after implementation to say? Okay, so now it's been three months, how's it been? What can we change? What's working? Well, what's not?'*

The participants indicated that because they are internally focused on back office activities, it limits their horizon.

Participant 3: *'We never really get to see what else is going on outside, so, we spent so much time internally.'*

Table 5-9: Internal transformational triggers

Rank	Condition(s)	Frequency
1	People that do what they enjoy innovate	12
2	Need for improvements drives innovations	5
3	Technology drives strategy	3
4	Internal focus limits view of possibilities	2

5.4.1.3 Entrepreneurial strategy

Participants indicated that starting by ascertaining the existence of the problem was a key condition for accelerating implementation.

> Participant 2: *'You need to be solving for something, because I just think, and there's a time and place for everything, there's innovation where you can play around. And then there is innovation where, actually, there's a problem that you're solving for, I lean more towards a problem that I'm solving for.'*
>
> Participant 6: *'My preference will be addressing a need. So what's the need? What is the business problem that we're trying to solve?'*
>
> Participant 12: *'Here's the problem statement that we really need to solve. And everybody understand what needs to be solved.'*

The condition was ranked equally with the importance of having an entrepreneurial strategy. A lack of common understanding of how things work and the different naming of things were noted as being barriers to implementation.

> Participant 5: *'Don't use the word platform first establish a common understanding as to when we say a platform in this context, what do we mean get the right people to build the platform.'*
>
> Participant 6: *'Because if terms and clauses are left, very loose, and subject to interpretation, when they have to be actioned. Now there's questions around what did you mean by that did then that is responses will be no, that's not what we meant.'*

Participant 10: *'So as an organisation, alright, we are very bad at defining what is innovation? Or actually, no, not just defining innovations. But just at giving things definitions? Currently we are speaking about platforms and whatever, like, what is the platform? Is it one system is one application is a number of application.'*

Some participants thought that because of multiple competing priorities that need limited resources, innovation implementation suffers. The models for engagement and for delivery were key to balancing priorities and for getting implementation done.

Table 5-10: Entrepreneurial strategy

Rank	Condition(s)	Frequency
1	Implementation focused on specific problems	17
1	Strategy paves way for innovation	17
2	Balancing competing priorities	12
3	Common understanding of constructs	9
3	Operation takes first priority	9
4	Importance of talent recruitment strategy	8
5	Importance of understanding the bigger picture	7
5	Importance of vendor management	7
6	Organisational structure drives innovation	6
7	Clearly defined stakeholder engagement model	5
8	Clearly defined delivery model	4
9	Inadequate allocation of technology skills	3
10	Kind of people is less important	1
10	The innovator's vision	1

5.4.2 Summary of the findings of Research Question 2

The results of investigating strategic elements perceived to influence finance technology innovation implementation are summarised in Figure 5-3 below. The data suggest that middle managers should focus their efforts on influencing

employee engagement and on anchoring the innovation implementation around a specific problem. The data further suggest that managers should invest efforts in managing the priorities that are competing for scarce resources.

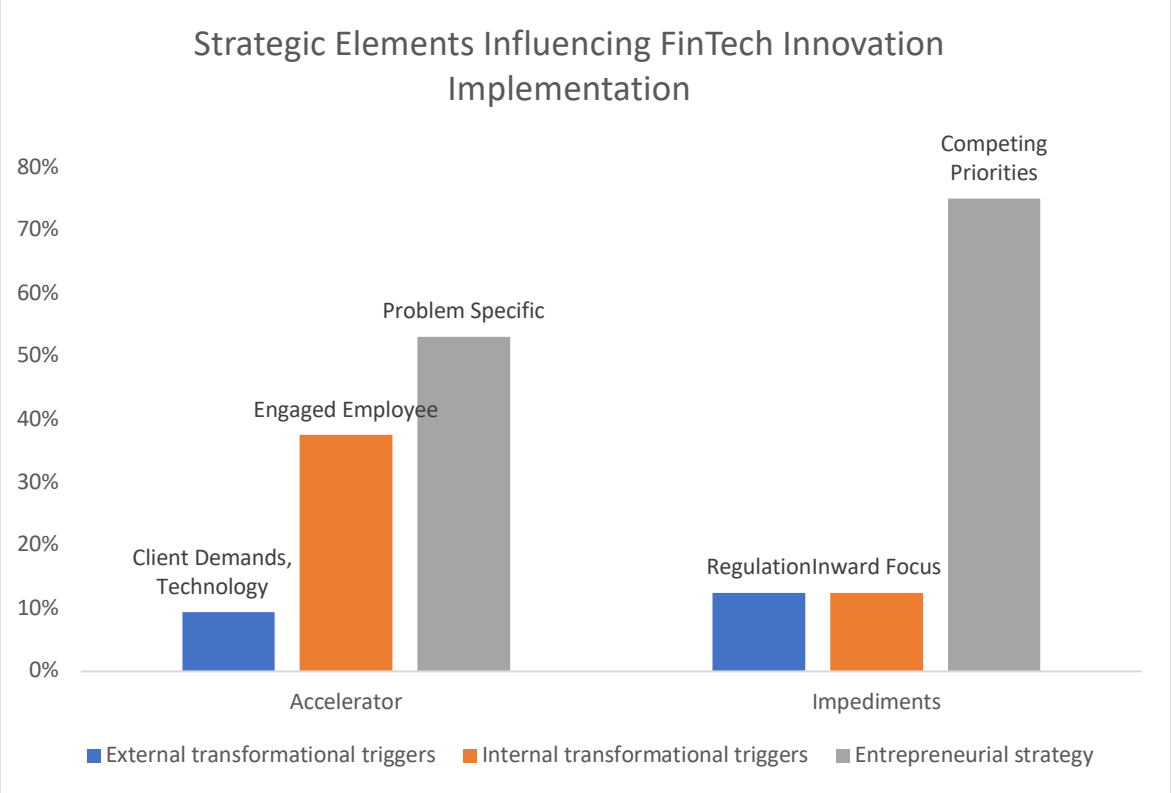


Figure 5-3: Strategic elements influencing FinTech innovation implementation

5.5. Results: Research Question 3

Which combination of elements and conditions yield high entrepreneurial behaviour?

The research question aimed to investigate the combination of strategic elements and organisational conditions, perceived or real, which when experienced would lead to a higher rate of success of finance technology innovation implementations. Furthermore, the question aimed to identify a combination, which when present could lead to the failure of implementation. The organisation would then focus on deploying resources to influence the variables for favourable implementation outcomes.

5.5.1 Entrepreneurial behaviour

The importance of wider stakeholder engagement was perceived to be the most important lever for innovation implementation.

> Participant 12: *'For idea to be successfully implemented, or that innovation to be successfully implemented, you actually need buy-in from the implementers.'*

Followed by measurable objectives and senior sponsor buy-in, the three variables had a frequency of 20 and above. Stakeholders having clarity regarding the role they are to play in the innovation, innovating around a specific problem, and having an entrepreneurial strategy had similar ranks and moderate frequency.

> Participant 2: *'So we need to be very clear at the beginning. What is everybody scope? When are they going to be able to fit in this work?'*

Though still important, the individual value proposition as a reward, technology complexity and organisational politics received lower frequencies. Table 5-11 below provides the top 10 elements and conditions with maximum implications for entrepreneurial behaviour.

Table 5-11: Summary of top 10 entrepreneurial behaviour enablers and barriers

Enablers	Barriers
Stakeholder buy-in and engagement (20+24)	Absence of measurable objectives (22)
Technical and business domain understanding (18)	Complexity of technology architecture (15)
Client specific problem focused (17)	Unclear strategic direction (17)
Entrepreneurial strategy (17)	Lack of role clarity (17)
Value proposition (14)	Organisational politics (15)

5.5.2 Summary of the findings of Research Question 3

Which combination of elements and conditions yield high entrepreneurial behaviour?

The results of investigating a combination of strategic elements and organisational conditions perceived to have maximum influence on variables to successfully

implement finance technology innovation suggest that middle managers should focus their efforts on influencing organisational antecedents, particularly being inclusive with stakeholders and ensuring that implementations have measurable objectives.

5.6. Conclusion

This chapter presented the results of the semi-structured face-to-face interviews conducted with the leaders of a South African bank. The results were presented in categories best suited to inform the three research questions of the study. The purposive sample of respondents all had finance technology leadership and innovation implementations responsibilities.

The findings indicate that specific strategic elements and organisational conditions can be tools for managers to influence the outcome of finance technology innovation implementation.

The data indicate that implementations can be successful on condition that managers solicit and maintain top management support and buy-in. Furthermore, managers should ensure that roles are clear, particularly as innovation implementations do not usually work within the existing role descriptions. The data indicate that implementers are motivated by a sense of adding value. The internal managers will have more success if they ensure that people are assigned to value-adding activities and that the rewards are also valuable. A great benefit to the manager is that implementers are motivated by working on cool technology, and autonomy of work is perceived as a reward.

While amplifying the accelerators, it is important to minimise the impediments to innovation implementation. The data indicate that the manager should look to minimise unhealthy internal competition across business units. Further, while the bank is a pressured environment, the manager should take care to manage the pressure as it could lead to costly mistakes.

The data indicate that strategic elements can be used to influence the desired entrepreneurial culture. The culture will result in agility and optimisation of scarce resources to obtain maximum value. The organisation should focus on those implementations with maximum implication for the customer's problem. The data

indicate that employees will be engaged when they perceive their efforts to add value in solving specific problems linked to the organisation's clients. The implementation manager's challenge is that of managing competing strategic priorities.

The following chapter discusses the results providing a contrast with the literature.

CHAPTER 6. DISCUSSION OF RESULTS

6.1. Introduction

This chapter presents a detailed discussion of the results presented in the previous chapter. The discussion is grounded on answering the research questions. Furthermore, the chapter provides an analysis of the questions as they relate to each other and the main research question. By providing an analysis of the antecedents to the smooth implementation of finance technology innovations implementations, the chapter builds on the model for sustaining corporate entrepreneurship (Kuratko et al., 2014).

6.2. Discussion of research question 1

Which conditions when perceived to be present in the organisation will lead to innovation implementation?

The question uncovered the conditions within organisational boundaries that managers could use to influence and effect a positive outcome of the finance technology innovation implementation. The research questions is discussed based on the organisational antecedent theme of the model for sustaining corporate entrepreneurship (Kuratko et al., 2004).

6.2.1 Organisational antecedents

6.2.1.1 Use of rewards

The literature suggests that rewards and incentives are critical internal tools which managers can use to influence innovation (Bradford & Florin, 2003; Kuratko et al., 2014; Lee & Shin, 2018). The type of rewards employed and the delivery channel utilised is instrumental in influencing cultural behaviour. The data presented in Chapter 5 showed that of the five organisational antecedents, rewards have a moderate effect when used as a lever to influence the implementation of innovations.

South Africa banks contribute 20% of gross domestic product (GDP) and they employ more than 10% of the South African labour market (Ifeacho & Ngalawa,

2014). Investment bankers are fairly well rewarded and incentivised when compared with the other professionals in South African economy, and as such, it is no surprise that the rewards data antecedent received a moderate mention.

Analysis of the data indicates that when used as a lever, participants would prefer non-financial rewards which are linked with value-add to organisational performance. In line with the data, Bradford and Florin (2003) indicate that implementation-specific issues can be attributed for their influence on individual satisfaction. The participants cited implementation-specific issues such as the perception of adding value, working on cool technology that makes them shine, and having freedom as sought after incentives. However, the data do not reveal the implications on the implementation outcome and individual satisfaction should financial rewards be withdrawn. What is clear though, is that when rewards are perceived to be unequal across the organisation, innovation implementation seems to results in a negative outcome.

The unequal rewards structure in the bank is due to the traditional configuration of the bank into front, middle and back office. Front office office teams generally take products to the market and collect revenenue for the organisation. Furthermore, individuals in the organisation are rewarded relative to the money they bring into the organisation. This structure makes the front office an aspirational place for those in the back office. Some of the participants indicated that money is a key factor for people's aspirations. Systemically, being in the front office implicitly means a money flow as a form of reward that can be taken for granted. The managerial challenge is managing perceptions about unequal reward structures while ensuring that the work people do is linked to organisational value. If not kept in check, incentives could have negative implications as people subtly rebel against the reward systems and top management in the organisation.

6.2.1.2 Top management support

Of the five categories under organisational antecedents to innovation implementation, the top management category ranks second. The analysis suggests that this could be related to the fact that the bank has a mature entrepreneurial culture where people are empowered to do what is good for the organisation. The bank promotes an owner-manager culture. Some of the

participants mentioned that when one believes something will create value for the shareholder, no one will stop them from pursuing it.

To be successful, innovators should articulate the need and benefits for change to the stakeholders with the aim of soliciting stakeholder buy-in (Petrou et al., 2018). Innovation implementations with senior management and executive support have a greater chance of succeeding. This is the case particularly when the support comes from an individual with influence as to where organisational financial resources should be allocated. The data presented in Chapter 5 were overwhelmingly confirmation of the literature. The participants felt that without management support, there is essentially no point in moving forward.

The data analysis indicates that success can be said to be a given when the supporting senior stakeholder understands the domain details, has project management skills, and can influence the socialisation of innovation in the organisation. The senior stakeholder will benefit from delegating implementation-specific decisions to the people responsible for the implementation delivery. While all that are mentioned as key ingredients to positively influence the behaviour and outcome of implementation, the data suggests that senior stakeholders are more susceptible to falling victim to sales tactics. To balance this weakness, the data suggest that senior stakeholders will do the organisation greater good if they empower people close to the initiatives to take decisions.

The data analysis indicates that senior stakeholders in the bank are fairly accessible. Accessibility of stakeholders is important when paired with communication and information flow. This finding is consitent with the literature that timeous sharing of strategic information needed to successfully carry out the implementation of information is a great persuasion and influence tactic (Petrou et al., 2018; García-Sánchez et al., 2018). Analysis of the data further indicates that sharing of information leads to key stakeholders understanding the solution's domain to a greater degree.

As supported by the data, domain understanding is a key attribute that leaders and implementers must have to be effective in engaging and leading the delivery. The domain 'understanding' is ranked the second most influential condition for the senior stakeholder support category, indicating a requirement for leaders to have

an above average grasp of the business and technical details. This is consistent with the literature that indicates a requirement of managers for technological skills and to be efficient at seizing opportunities (García-Sánchez et al., 2018). Being accessible and having technological skills stimulates the innovation in the organisation and leads to robust debate. When leaders are highly accessible, but are handicapped by a limited understanding of the domain, delays and frustrations will be the order of the day.

Managers should focus their efforts in ensuring that they solicit senior stakeholder buy-in. This is because failure is tolerated when stakeholders have a vested interest in the outcome of the innovation. To achieve buy-in from senior leadership, people that lead initiatives will benefit from dedicating more time at the beginning phase of the idea. The data indicate that senior leadership is not a problem in the organisation. This suggests that when managers perceive the merit of an innovation to be valueable to the organisation, at the very least they will have an opportunity to rally support for resource allocation.

6.2.1.3 Resource time allocation

Implementations compete for limited resources, be they financial or human. Resource time allocation ranked third in the organisational antecedents category. The data analysis indicates that managers will benefit their organisation if they optimally allocate the resources to value-adding activities. The scarcity of resources requires that allocation is done with minimal waste. This is consitent with the literature indicating that the ability to allocate and utilise large sums of capital is a competitive advantage amongst the banks. The analysis indicates that there is a positive link for the implementing organisation on value between the resource time allocation and use of rewards catergories. The managerial challenge in both categories is to keep a healthy pipeline of value-adding strategic activities.

Once allocated, the manager should focus on creating an entrepreneurial environment that allows resources dedicated to value-adding strategic activities. The data indicate that splitting the focus leads to failure. Teece et al. (2016) make the point that the criticality of the entrepreneurial culture is necessitated by the organisational need for greater agility and it leads to individuals doing the right

strategic activities amid high levels of uncertainty. Secondly, the time between ideation and implementation is too long.

Due to the entrepreneurial and owner-manager culture mentioned when discussing top management support, it is not surprising that the resource time allocation category ranks third. In an entrepreneurial culture, employees take the initiative as opposed to being assigned to initiatives. The data point is consistent with the literature indicating that employees with autonomy to influence their responsibilities during the lifecycle of innovation can complement their managers during uncertainties or when management is inadequate (Petrou et al., 2018). The point further supports the top management support catergory condition that managers should counter their inadequacy by delegating decision making close to delivery. This is supported by the data indicating that minimum time should be spend on allocating people to initiatives.

Entrepreneurial managers should understand how to deploy the financial capital of the firm and its technical expertise for the benefit of their stakeholders (Teece et al., 2016). The individuals themselves should perform only the initiatives they do best with minimal energy. Because more often than not, it is the individual who knows what they would do best with minimum effort, making it practical that they perform initiatives as opposed to being assigned.

6.2.1.4 Organisational boundaries

This category ranked highest in importance in the organisational antecedents category. This revelation is in line with what motivates individuals in entrepreneurial organisations. The organisational culture that promotes collaboration across different sub-groups and functional silos can be a factor to influence entrepreneurial behaviour and innovation implementation (Antons & Piller, 2015; Alexiev, Volberda, & Van den Bosch, 2016). Flexibility of organisational boundaries is a core element for entrepreneurial management and for information flow. As implementation is carried out across teams, the data analysis indicates that managers will have to invest time in ensuring cross-teams function optimally.

Naturally, different teams will have competing priorities, different skills sets, and sub-cultures. The complexity of managing competing priorities is heightened by the teams competing internally. Evidence in the literature suggests that creativity

occurs when humans in their diversity interrelate (Perry-Smith & Mannucci, 2017). To facilitate the alignment of individual teams, the data analysis indicates that managers should prioritise and make internal forums effective and efficient. The internal forums can positively influence the implementations to deliver on the organisational strategy. However, if not optimised, the forums can result in red tape and other sources of frustration. The data support this analysis by revealing that some boards with unclear mandates are the source of many failed implementations. The organisation's managers should ensure that the boards have a clear mandate and the representation understands their roles.

The unhealthy internal competition is noted as a single biggest threat to implementation in the organisational boundary category. This is consistent with Antons and Piller's (2015) argument that one of the cited reasons for the failure to implement innovation is resistance from individuals believing the invention was not from within their tribe and thus do not embrace it. The challenge is heightened by the fact that this lever will not turn at the influence of an individual manager. It needs collective leadership. On the surface, it looks like it should be easy to turn, given that formal structures could be the solution. However, entrepreneurial organisations are known to have minimal formal structures.

6.2.1.5 Work autonomy

The work autonomy category category ranked second in terms of the organisational conditions theme. The literature suggests that employees with greater work autonomy and discretion result in an organisation that has a flourishing entrepreneurial culture and can positively influence innovation implementation (Kuratko et al., 2014; Petrou et al., 2018). The data analysis indicates that clarity of roles is an effective lever to influence implementation internally. The advantage to managers is that these levers can be be at the team's control. Clarity of roles, paired with teams collectively deciding on how they would like work, will yield maximum benefits.

The manager should be an observer monitoring that pressure is contained. Unchecked pressure will lead to teams making costly implementation mistakes. The lever closely relates to the senior management support category condition that senior managers should move the decision making closer to the implementation

delivery. Having the right people in the teams to make decisions that improves company performance is core to this data point.

When an employee has the autonomy to co-create their responsibilities as part of the entrepreneurial activity in the organisation, the result is a highly engaged employee (Petrou, Demerouti, & Schaufeli, 2018; Liao, Tseng, & Ho, 2015). Organisations outlive the employees who roll over in the organisation. It is important that the organisation manager does not let the autonomy lead to an inflexible configuaration that tightly matches a specific set of employees. The literature indicates that structures that takes the form and shape of those that conceived it could introduce challenges as the organisation evolves and diverse people join the organisation (Antons & Piller, 2015). This is also supported by the data indicating that it is the people in the ecosystem that makes the system ineffective.

6.2.2 Summary of the discussion of Research Question 1

Research question one aimed to uncover the conditions within organisational boundaries that managers could use to influence positive outcomes of the finance technology innovations implementation. The results were discussed based on the entrepreneurial literature grounded on the model for sustaining corporate entrepreneurship (Kuratko et al., 2004). The results discussion yielded work autonomy, organisational boundaries, and resource time allocation as key drivers to influence the outcome of the implementations.

Managers can attain the maximum by ensuring that employees have clarity in their roles and that they are allocated to activities that are perceived to have shared value for all stakeholders. Co-creation of responsibilities should be aligned with strategic implementations to yield maximum organisational performance (Liao, Tseng, & Ho, 2015) and highly engaged employees (Petrou et al., 2018; Antons & Piller, 2015). The manager's role is to ensure that the team's dependency is functional; this can be achieved by empowering the teams to collectively agree on a way of sharing information and working while the manager puts in effort to remove any unhealthy cross-team competition.

Getting top management support and the use of rewards is important at specific points in time. Buy-in is of primary importance at the beginning when

implementation needs to be correctly resourced. Senior stakeholders sharing strategic information provide the direction for implementation and create boundaries within which teams can then bring in their creativity (Petrou et al., 2018; García-Sánchez et al., 2018). It becomes a secondary during ongoing implementations because with entrepreneurial teams having autonomy and their efforts linked to strategy, they can self-manage these challenges in the implementation environment. The use of rewards can be further used incentivise implementations and enforce a specific desired behaviour (Bradford & Florin, 2003; Kuratko et al., 2014; Lee & Shin, 2018). The data suggests that the perception of being rewarded after adding value is a key motivator. Furthermore, the data suggest people are fulfilled by overcoming challenges and working on cool technology.

Financial rewards received minimal mention. As the participants primarily had internal responsibilities and are not revenue-driven, this data point was not surprising. This data point further indicates a limitation of the homogenous sample and could be a case for future research on the topic.

6.3. Discussion of Research Question 2

Which strategic elements are perceived to lead to high innovation implementation success?

Research questions two aimed to uncover the elements in the corporate entrepreneurial strategy for organisational leaders to take advantage of to positively influence the outcome of finance technology innovation implementation. The manager should be on the lookout for strategic elements of interest, both external and internal, then devise a strategic response to steer the organisational for sustainable performance. Das et al. (2018) add that innovation is a business imperative and firms have responded by setting up processes and research and development units to explore new technology.

The research questions discussed here were based on the triggers of the strategy and corporate entrepreneurial strategy categories of the sustainable model of corporate entrepreneurship (Kuratko et al., 2004). The themes are grouped under the strategic element theme.

6.3.1 Strategic elements

6.3.1.1 External transformational triggers

External transformational triggers did not receive much mention from the participants. This was suprising given that literature from Das et al. (2018) provides evidence that disruptions and volatility in the financial environment introduced by the recent 2008 financial crisis, the entrance of new global players and non-traditional banking players shocked the system, which forced banks to relook their strategies and initiate a series of disruptive changes. The ignorance and misalignment could partly be due to the profile of the sample selected for the research as they have their primary responsibilities for internal activities in the middle and back office.

The data analysis confirmed advancements in technology as a key trigger for entrepreneurial strategy and innovation implementation. This is consistent with García-Sánchez et al. (2018) summation of the discussion listing environment, stakeholders' roles and technological skills as the sources of disruption, which if exploited successfully, could lead to the emergence of innovation and profitability.

The entrepreneural manager always needs to scan the environment for advancements in technology that could be brought into the organisation to improve channels for reaching the customers. The developments of finance technology innovation seek to improve the customer's experience with financial services products (Schueffel, 2016; Lee & Shin, 2018). Further, the technology could also be brought into the organisation to keep the talent energised and engaged. As mentioned in the previous section under the use of rewards category, people like to work on cool things while adding value to the clients and the organisation.

The data analysis indicates that changing the client profile triggers a change of corporate entrepreneurial strategy. The client is said to be more sophisticated and demanding products that solve bespoke problems. The manager in the organisation’s response is to validate that the current products still add value. Furthermore, the manager has to innovate to match the speed of the new client profile. Externally, the challenge for the manager is that banks are highly regulated. Some of the participants indicated a frustration regarding regulation that

stifles innovation efforts. The organisation has to create value through innovation within the boundaries of regulation, not purely because of clients demands.

Declining profit margins did not seem to be a concern for the participants as a transformational trigger for corporate entrepreneurial strategy. This is not surprising given the sample profile as discussed. Lee and Shin's (2018) argument is that the disruption of business models in large firms is due to FinTech start-ups which promise to offer unique, niche, and personalised services to customers. Although the sample is not client-facing, there is recognition that not putting the client at the centre of the initiative will lead to failure and potentially lead to clients migrating to the competition.

A surprising outcome from the data was that although external triggers can stifle innovation, using the very same fact can be used as a tool to improve the speed of delivery. One participant mentioned that by telling people that an initiative has regulatory implications, there seems to be urgency and a discretionary energy that people apply to see that the implementation is successful.

6.3.1.2 Internal transformational triggers

In terms of the strategic element theme, it was not surprising that the data will be richer for the internal transformational trigger category. The sample profile is more vested in this category as it has direct implications on their roles. The data analysis suggests that people who do what they enjoy innovate. Advancements in technology have led to organisations digitising their processes and introducing new financial products (Das et al., 2018). This analysis is similar to the use of the rewards category analysis in that people are willing to give discretionary energy when the feel they are adding value. Internally the decretionary energy will most likely result in innovations that could then trigger a corporate entrepreneurial strategy transformation.

There is consensus in the literature suggesting the need for large banks to explore models to partner with FinTech start-ups to drive internal innovation and increase profitability (Antons & Piller, 2015; Lee & Shin, 2018). The partnership could take away the cool things from employees as that would reside with the startup. The manager's challenge is to ensure that people are engaged and do more of the things they enjoy. As mentioned in the organisational boundary category, this is

one of the simpler levers that has maximum influence on implementation outcomes. The team can be given the authority to pull initiatives, given a mandate to make implementation-related decisions, and self-organise. The role of the manager remains that of oversight.

The data suggest that people have an inclination to keep on improving themselves and the services the company provides to clients. In this way, participants suggest a culture of continuous improvement. García-Sánchez et al. (2018) see the disruption as an opportunity for large organisations to be innovative and entrepreneural.

Technology improvements are not only a matter of external advancement; internally, innovation around technology can lead to strategy transformation. Del Giudice et al. (2016) agree and add that traditional banks have focused on continuous incremental improvements to explore small changes for maximum returns, refined their customer value proposition, and strengthened their market dominance. The analysis of the participant's recognition of internal technology advancements transforming the organisation is a surprising revelation because the participants had indicated that the organisation does not invest enough in research and development.

The data suggest an organisational culture that does not promote experimentation. Due to their experimental nature, FinTech innovation projects carry technical, economic and regulatory uncertainties (Lee & Shin, 2018; Gomber et al., 2018). In analysing this data point, it can be mentioned that there seem to be pockets of outliers that still manage to experiment even though it is not in line with the organisational cultural norms. Further, it was surprising that internal technology drives the entrepreneurial strategy because one of the participants indicated that the middle and back office are too inward focused, thus limiting the view of external possibilities.

6.3.1.3 Entrepreneurial strategy

The data analysis indicated overwhelming consensus that strategy paves the way for innovation implementation. The challenge for the organisation's manager will be to create a strategy that gives the perception of adding value. A cost-led strategy will receive resistance and lead to negative consequences. During a

period of uncertainty, doing the right things is more important than doing things that primarily seek to gain operational efficiency (Teece et al., 2016). To be successful, innovation implementation should be focused on a specific problem. The manager could link the implementation to client demands, as indicated under the external transformation triggers, or tailor the implementation around cool technology that adds value.

Internally, managers have to balance competing priorities. There is a priority to refresh legacy technology and to bring into the organisation advanced technology to keep the business in operation. If the team responsible for the legacy technology is not persuaded on the innovation, they are likely to work against its implementation as it is a potential threat to their view of the environment (Perry-Smith & Mannucci, 2017). All these elements require that resource allocation be done with minimal waste, as indicated under that category.

The challenge for the manager is increased by the data point that constructs are defined differently depending on team and business units. Schueffel (2016) argues that although after more than 40 years of using the term 'FinTech' in practice as well as in the literature, there is no consensus as to what Fintech entails. Having multiple teams rally behind a few initiatives becomes a managerial challenge.

The data also suggest that because keeping the business in operation takes a higher priority than refreshing the environment, managers find it difficult to have resources allocated to innovation implementation efforts. Human resources and the required skills are scarce. To manage this challenge, the data indicate that the organisation needs to invest time getting the people to understand the strategic direction of the organisation. In line with innovative companies globally, innovation success can be attained by a disciplined innovation processes run by subject matter experts (Christensen et al., 2016). Further, the organisation should design a recruitment strategy to attractive talent with 'big picture' thinking and above average technological skills.

The analysis reveals that managers will benefit from communicating a stakeholder engagement and delivery model. It is important, however, that the model is designed by the teams and guided by the entrepreneurial strategy. Entrepreneurial strategy is hard to implement across the organisation because entrepreneurship is

usually synonymous with minimum structure and focus (Kuratko et al., 2014). Bringing a model for engagement and delivery has the side effect of coming with rigid structures. This links to the work autonomy category where participants indicated that teams should collectively design their preferred way of working.

Insights from the data reveal that the kind of people involved and the innovator's vision is less important for influencing implementation outcomes. This insight is in contrast with the literature indicating that to successfully implement the innovation, the required people must believe in the innovator's vision (Perry-Smith & Mannucci, 2017). The data reveal that the important thing for an entrepreneural organisation's success is that implementation be centred on a specific problem and must be perceived to add value.

6.3.2 Summary of the findings of Research Question 2

The question aimed to uncover the elements in the corporate entrepreneurial strategy for organisational leaders to take advantage of to positively influence the outcome of finance technology innovation implementations. The discussion combined two items in the model for sustaining corporate entrepreneurship (Kuratko et al., 2004) into a strategic elements theme. The findings uncovered that implementations will be succesful when the entrepreneural strategy has elements which solve specific problems, considers what keeps employees engaged, is driven by client demands, and is led by technological possibilities. The dominant impediment to strategic gains for organisations is failure to manage priorities which compete for scarce resources. Given the consensus in the literature suggesting the need for large banks to explore models to partner with FinTech start-ups to drive internal innovation and increase profitability (Antons & Piller, 2015; Lee & Shin, 2018), managing competing priorities between large banks and start-ups is case for future research.

It is also important that managers have their horizon outside the organisational boundaries as being inward-focused deprives the team of broad technologies possibilities. Recognising that coupling the entrepreneural strategy with agility is hard for large organisations to create as it is usually ascociated with minimal structure, leaders should find a balance between doing the right thing and seeking gains purely for operational efficiency (Kuratko et al., 2014; Teece et al., 2016).

This data point did not come out strongly, thus suggesting limitations due to the homogenous sample and it is suggested that management include people outside the employ of the organisations in an outsourced or partnership model.

6.4. Discussion of Research Question 3

Which combination of elements and conditions yield high entrepreneurial behaviour?

The question uncovered a combination of elements and conditions yeilding succes in corporate entrepreneurial behaviour. The implications of this behaviour are that employees will see opportunities amongst the challenges, embrace the idea of an owner-manager culture, and will have more success in the implementation of finance technology innovations.

The role of the customer is changing, and new competitors introducing a variety of new products to the market has accelerated innovation in the banking environment (Alexiev, Volberda, & Van den Bosch, 2016), forcing the traditional banks to effectively transform (Del Giudice et al, 2016; Ifeacho & Ngalawa, 2014). The manager should be on the look out to maximise the elements and conditions to steer the organisation for sustainable performance.

6.4.1 Entrepreneurial behaviour

The data analysis indicates overwhelming consensus that people can be both enablers and barriers to innovation implementation. This makes it important for mangers to be highly vested and take more interest in understanding people for innovation to thrive. García-Sánchez et al. (2018) note that for innovation implementation to thrive in organisations, there has to be a culture of entrepreneurship, motivation, processes, and a reward structure. The top 10 variables are consistent with the literature. Managers should have sales and communication skills to influence senior and other stakeholders. Petrou et al. (2018) note that communication can be key to successfully influence others to embrace change.

Another key insight that emerged from the data is that in addition to leadership attributes, managers should invest effort to understand the technical and business

domain. Having knowledge gives individuals credibility and it is a key influence tactic.

For organisations to positively benefit from implementations, managers should always look to create shared value for all the stakeholders, not just the shareholders. Klein and Sorra (1996), supported by Yunis et al. (2018) and Lee and Shin (2018), argue that to benefit positively from innovations and gain a competitive advantage in the market, companies should harness relationships between innovation implementation supporting factors.

6.4.2 Summary of the discussion of Research Question 3

The research uncovered a combination of elements and conditions that when controlled can result in succesful entrepreneurial behaviour enabling employees to overcome innovation implementation challenges. The majority of the categories that emerged are organisational and at the control of the internal manager. The findings discussion indicates the without stakeholder buy-in and engagement, leaders will have challenges progressing with innovation implementation. The internal manager will have more success by creating a culture and environment which infuses ideas from implementers and senior leaders. This is consistent with the literature that to benefit positively from innovation implementations, companies should harness relationships between implementation supporting factors (Yunis et al., 2018; Lee & Shin, 2018; Klein & Sorra, 1996). This finding might suggest a case for future research to investigate the mechanism to build working relationships between leaders and implementors with the objective of succesfully accelerating finance technology innovations.

Furthermore, the discussion uncovered technology as both a transformational trigger and an organisational antecendent. Internally, legacy techology can be an impediment or accelerate implementations as working on cool technology keeps people fulfilled (García-Sánchez et al., 2018; Perry-Smith & Mannucci, 2017). The findings reveal that people are motivated by working on cool technology and find it rewarding. This discovery suggests a contribution to the literture and an extension to the model for sustaining corporate entrepreneurship (Kuratko et al., 2004).

6.5. Conclusion

This chapter presented a detailed discussion of the results with the objective of answering the research questions. The researcher discussed the themes using the model for sustaining corporate entrepreneurship (Kuratko et al., 2014) to uncover the organisational conditions and strategic elements influencing the succesful implementation of finance technology innovation. The findings indicated that technology is a trigger both from the external environment and the internal organisation. Furthermore, with the revelation that people like to work on cool things, it emerged that technology is also an organisational antecendent category.

The chapter that follows provides the research conclusion, outlines the contribution to the body of entrepreneurial knowledge, and provides recommendations for future research.

CHAPTER 7. CONCLUSION

7.1. Introduction

The study set out to investigate the antecedents enabling the successful implementation of finance technology (FinTech) innovations within the context of a South African bank. This study investigated those innovations which require integration into the bank's architecture.

The South Africa banking sector is economically significant, with a contribution of 20% to the gross domestic product (GDP) and employing more than 10% of the South African labour market (Ifeacho & Ngalawa, 2014). The need to successfully implement innovation is a corporate strategic imperative (Mintzberg et al., 2005; Rafferty et al., 2013; Gomber et al., 2018; Lee & Shin, 2018; Teece et al., 2016).

Organisations that continuously innovate their products to solve specific customer problems while ensuring they protect their profits in perpetuity are said to be entrepreneurial. As such, the study was grounded on a model for sustaining corporate entrepreneurship (Kuratko et al., 2004). In realising the objectives of the study, the researcher aimed to propose the levers that business leaders should primarily focus on to positively influence the outcome of FinTech innovation implementation efforts.

This chapter presents the conclusions to the research paper by providing a summary of the principal findings, and presenting the contribution to business and theory. Furthermore, the chapter highlights the limitations of the research findings and makes recommendations for future research.

7.2. Principal findings

The exploratory study has achieved the research objectives mentioned in Chapter 1, which was to investigate the organisational conditions, strategic elements and their combination, so that finance technology could be implemented successfully. The principal findings can be described in two ways: Firstly, the antecedents that when perceived to be present in the environment could lead to the acceleration of innovation implementation; and secondly, the antecedents that when perceived to be present in the environment could be impediments to successful innovation

implementation. The principal findings are summarised in the table below and described further in the sub-sections that follow.

Table 7-1: Summary of principal findings

Category	Accelerators	Impediments
External/Internal Trigger	Client specific problem/ Engaged Employee	Regulation/Inward Focus
Entrepreneurial Strategy	Client demands	Unbalanced competing priorities
Top Management Support	Buy in	Victim of sales pitch
Work Autonomy	Role clarity	Unchecked pressure leading to costly mistakes
Use of Rewards	linked to value added	Unequal structure
Organisational Boundaries	Effective bridges of cross team silos	Unhealthy internal competition
Resource Time Allocation	Allocation to value adding activities	Rushing to solutions
New Insights	Technology, Relationships	

7.2.1 Antecedents to successful accelerate innovation implementation

Leaders in the organisation should focus on maximising the perception regarding the existence of accelerators. An entrepreneurial strategy and culture are enablers of the thriving innovation implementation organisational environment. To achieve success, managers should put effort into communicating the strategic direction of the organisation and articulating with clarity the problems faced by the clients.

The literature recommends that the sharing of strategic information has to be done with clarity and is tied to the objectives in order to have impact (Petrou et al., 2018; García-Sánchez et al., 2018). A key finding and objective of the entrepreneurial strategy is that it should be client-centric. Traditionally this would require that managers get closer to the clients to uncover client-specific requirements. However, there is a case to investigate business models with clients getting closer to the organisation and driving implementations while the organisation primarily provides the platform.

Internally, employees are likely to be engaged when strategic initiatives are perceived to create shared value for all the stakeholders. The manager will receive higher engagement when rewards are perceived to be linked to value-add. Engaged employees are key to the entrepreneurial strategy as they are able to self-manage when they have clarity of their roles and the right innovations are implemented.

The manager should allocate individuals to value-adding activities and put effort in to rewarding individuals based on their value-add. The use of rewards has been cited to be influential to elicit the required behaviours of employees in the banking sector (Bradford & Florin, 2003; Kuratko et al., 2014; Lee & Shin, 2018). Furthermore, the leader should spend effort and time creating bridges across teams to allow for information flow.

7.2.2 Antecedents impeding innovation implementation

Leaders in the organisation should focus on minimising the perception regarding the existence of impediments to innovation implementation. Unfortunately, the findings do not indicate the control the organisation has on regulation. This is a limitation in the findings which is suggestive of future research. Managers could influence their innovation implementation negatively if they are overly internally-focused and possibly miss the opportunities brought about by the changing environment.

As senior leaders are tasked with managing across a broad spectrum, they are more susceptible to falling victim to sales and influence tactics. It is possible that a solution can be made and sold to look good, while in practice it is not the case. Innovation implementations are likely to result in failure when decisions are made from the technical and business domains (Yunis et al., 2018; Lee & Shin, 2018; Klein & Sorra, 1996). It is for this point that senior managers should minimise their involvement in the decision making specific to implementation. The findings revealed that individuals thrive on pressure, with one participant making the example that when regulation is used, usually people pull through and get things done. However, it is recommended that this pressure is kept in check to prevent escalation that could result in unwanted mistakes.

The use of rewards can be effective; however, the perception about the unequal structure should be managed actively. Failure to do so could result in resistance showing through the deliverables. When the deliverables do not meet expectations, organisational performance will result in profit losses (Antons & Piller, 2015; Lee & Shin, 2018; Liao, Tseng, & Ho, 2015).

Furthermore, unhealthy competition needs to be actively managed. Because of the traditional configuration, the front office is seen as an aspiration for the back office employees. If not managed correctly, it might result in envy and unhealthy competition. Lastly, the findings indicate that organisations would benefit from spending more time at the beginning of the phase, and understanding the problem to be solved by the implementation. Managers should ensure that teams to not rush to solutions without taking into context the implications of the integration with the existing organisation and data flow.

7.3. Proposed extension to the model for sustaining corporate entrepreneurship

This section presents the proposed extension to the model for sustaining corporate entrepreneurship, based on the insights from the study. The table below shows the proposed changes in highlighted in red. Refer to appendix 6 for a complete visual of the extended model. The recommendation for changes was informed by the deep understanding of the insights after the analysis of the data from the interviewed senior practitioners. Furthermore, the insights were supplemented by entrepreneurial literature.

Table 7-2: Proposed extension of model for sustaining corporate entrepreneurship

Environment	Corporate	Organisational antecedents
External and Internal Transformational triggers	Corporate Entrepreneurial Strategy	Rewards, Management Support, Resource Time Availability, Organisational boundaries, Work discretion, Technology

The objective of the proposed changes derived from the research aims to bring completeness of the antecedents needed to successfully roll out implementations in the context of a South African bank. These changes are at the control of the organisational leader and manager. It is also envisaged that the organisational

manager uses the recommended categories with the least amount of effort and gets the maximum returns.

The insights from this research indicate that disruption in the environment is not only from the external environment, but is also driven by internal technological advancements. Banks are both the disrupters and are being disrupted. Another significant insight that requires a recommendation is that technology is a stand alone organisational antecedent category. Insights from the data indicate that a specific technology landscape can influence the entrepreneurial environment. The data indicate that people are fulfilled by working on cool things.

7.4. Implications for management and other relevant stakeholders

The research highlighted the levels of maximum effect for managers to successfully influence innovation implementation. Together with the proposed extension to the model for sustaining corporate entrepreneurship above, the research uncovered the following actionable insights with implications for management and other stakeholders:

- The attitude and personal preference of the individuals influence their behaviours within their work context and can be observed through their deliverables.

- Managers should constantly monitor the internal environment for barriers to innovation, as unchecked pressure could lead to costly mistakes and unhealthy internal competition leads to envy.

- Technology is not an end in itself but is a foundational enabler of the business model and an organisational antecedent to successful innovation implementation.

- Relationships between participants in the innovation ecosystem and solving customers' problems should be placed at the centre of innovation.

- Decision makers should not be constrained by the limitations of the local ecosystem, but leverage the experience of external partners. The threat of disruption might have negative consequences for the company if not mitigated.

- Integrating solutions into existing organisations comes with many challenges, and as such, managers should weigh the options against creating parallel innovations that could grow organically to become stand alone businesses.

7.5. Limitations of the research

The results of a qualitative and exploratory study cannot be generalised to the population; however, conclusions can be made about other settings with similar characteristics. In addition, the following limitations are noted:

- The sample size and the focus on investment banks limits the generalisability of the findings to other areas of banking like retail banks, foreign bank representatives, and other financial services providers.

- The purposive sample profile was based on representatives from a large bank, limiting those from the start-up environment.

- By nature, qualitative research is subjective. Because the researcher is an actor and observer the study might be affected by unconscious bias.

- The sub-culture of the back office teams and the absence of front office teams from the sample might have played a role in influencing the direction of the results.

7.6. Suggestions for future research

Based on the actionable insights uncovered through this research process, the following areas of potential future research are recommended:

- Investigate the outcome of the implementations should financial rewards be withdrawn completely.
- Quantitative analysis to test the conditions and settings under which the proposed extensions to the model for sustaining corporate entrepreneurship could yield consistent results most of the time.

- A study in the same setting with a different sample profile; i.e a profile including implementers of innovation, people with front office roles that interact with clients whose are problems are being addressed, executives leaders that provide sponsorship to the initiatives, and other financial services providers like boutique investment bank product houses and start-up companies.
- Comparative research in developed economies with a higher concentration of, and well-functioning, start-up ecosystems to understand their antecedents to successful innovation implementation.
- Investigate the implication on innovation implementation for business-to-business-to-customer (B2B2C) and customer-to-customer (C2C) business models where a bank primarily provides the technology platform to facilitate interactions.
- Given the consensus in the literature suggesting the need for large banks to explore models to partner with FinTech start-ups to drive internal innovation and increase profitability (Antons & Piller, 2015; Lee & Shin, 2018), managing competing priorities between a large bank and a start-up is a case for future research.
- Is is consistent with the literature that to benefit positively from innovations implementations companies should harness relationships between implementation supporting factors (Yunis et al., 2018; Lee & Shin, 2018; Klein & Sorra, 1996). This finding suggests a case for future research to investigate the mechanism to build working relationships between leaders and implementers with the objective of succesfully accelerating finance technology innovations.

7.7. Conclusion

The research has provided new insights into strategic elements and organisational antecedents to positively influence the outcome of innovation implementations. The research was exploratory with semi-structured face-to-face qualitative interviews conducted with 13 participants with technology responsibilities.

The investigation led to antecedents that South African banks can use to successfully implement finance technology innovation. The antecedents are in the

external environment, and internally in the element of the strategy of the organisation. Technology was seen to be a foundational condition, both in the external and internal environment.

Furthermore, working on the advancement of technology was seen as reward that fulfilled individuals. On the other hand, insights highlight that unmanaged unhealthy internal competition will derail the innovation implementation efforts.

Finally, the research made a contribution to the body of knowledge with the proposed extension to the model for sustaining corporate entrepreneurship. It is intended that the recommended extension, informed by insights from the data, would bring completeness of the antecedents in the context of South African banks.

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APPENDICES

Appendix 1: Consistency matrix

Antecedents to smooth implementation of FinTech innovations in South African banks: comparison of insourced and outsourced model

PROPOSITIONS/ QUESTIONS	SECTION IN LITERATURE REVIEW	DATA COLLECTION TOOLS	ANALYSIS TECHNIQUE
1. What are the antecedents enabling smooth implementation of FinTech innovations within South African banks?	2.3, 2,7, 2.8	Semi-structured face to face interview	Thematic analysis
2. Which conditions when perceived to be present in the organisation will lead to innovation implementation?	2.2, 2.7, 2.8	Semi-structured face to face interview	Thematic analysis
3. Which strategic elements are perceived to lead to high innovation implementation success?	2.4, 2.6, 2.7, 2.8	Semi-structured face to face interview	Thematic analysis

Appendix 2: Consent letter

To whom it may concern,

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

I am conducting research on FinTech innovations implementation and trying to find out more about the antecedents to smooth implementations by interviewing leaders in the organisation. Our interview is expected to last about 30 to 45 minutes and will help us understand those condition of which when present can lead to higher innovations implementation success rate.

Your participation is voluntary and you can withdraw at any time without penalty. All data will be reported without identifiers. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name: __Choene Rammutla___

Phone: 071 869 7194

Email: 11336162@mygibs.co.za

Research Supervisor Signature: ___Dr Kays Mguni__

Phone: 082 498 8611

Email kmguni@swod-sa.com

Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

Appendix 3: Interview schedule

- Preparation

The interview will be booked in advance using my RMB (choene.rammutla@rmb.co.za) email account. My MyGIBS (11336162@mygibs.co.za) email account will be copied in all the research related communication correspondence. Consent letter will be attached to the meeting invite. It is estimated that interview should last between 30 to 45 minutes in one sitting and will be recorded.

- The interview

On the meeting day, the session will start with introductions, purpose of the research and presentation of consent form. Anonymity (as opposed to confidentially) as it relates to this research will be described. The participant will be asked to accept or decline continuing in the interview process.

The following main sections will be covered during the semi structured interview, with questions framed primarily using the why, what and how:

The main research question:

- What are the antecedents enabling smooth implementation of FinTech innovations in within South African banks?

The sub questions to assist in shaping the direction of the conversation

- Which conditions when perceived to be present in the organisation will lead to innovation implementation?
    - Solicit views regarding signs for successes and earliest failures. i.e. the presence of specific conditions as catalyst
- Which strategic elements are perceived to lead to high innovation implementation success?
    - Historical context relating to product and service development/innovation
    - Company values that inspired successful innovations
    - Preparation, research and planning of FinTech innovations

- Solicit view regarding perceived dynamic capabilities of the firm and the necessity for implicit or explicit innovation strategy

- Which combination of elements and conditions yield high entrepreneurial behaviour?
  - Solicit views regarding various elements and conditions that yield success. Ground the discussion on FinTech innovations implementations

Appendix 4: Ethical clearance

Gordon Institute of Business Science
University of Pretoria

14 August 2019

Rammutla Choene

Dear Choene

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee

Gordon Institute of Business Science
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website **gibs.co.za**
University of Pretoria

Appendix 5: Atlas.ti codebook

ATLAS.ti Report

Atlas Project

Codes grouped by Code groups

Report created by Choene Rammutla on 09 Nov 2019

Cultural Values

9 Codes:

- empower people to take accountability
- importance of conducive environment for robust discussion
- importance of delivery track record
- importance of organisational culture
- in practice people are less empowered
- influence of organisational politics
- need a high tolerance for failure
- people should be held accountable for their responsibilities
- technology teams gets the blame unfairly

Entrepreneural Behaviour and Implementation

25 Codes:

- Balancing competing priorities
- clarity of roles
- Cross team dependency in large organisations
- empower people to take accountability
- forums or gates inside the organisation stiffle innovation
- Implementation focused on specific problems
- implementors are fulfilled from a sense of adding value
- importance of feedback loop
- importance of innovation communication

- Importance of measurement
- importance of skilled project managers
- importance of stakeholder engagement
- influence of organisational politics
- managers should understand the domain details
- managers should understand their teams
- move decision making close to the delivery
- people should be held accountable for their responsibilities
- people that do what they enjoy innovate
- selling to influence the implementation
- Senior stakeholder buy in
- Strategy paves way for innovation
- team collectively agree on way of working
- technology is highly specialised
- the unhealthy competition between business and technology stiffle innovation
- understanding the integration with existing solutions

Entrepreneural Strategy

14 Codes:

- Balancing competing priorities
- clearly defined delivery model
- clearly defined stakeholder engagement model
- Common understanding of constructs
- Implementation focused on specific problems
- importance of talent recruitment strategy
- importance of understanding the bigger picture
- importance of vendor management
- inadequate allocation of technology skills

- kind of people is less important
- operation takes first priority
- Organisational structure drives innovation
- Strategy paves way for innovation
- The innovator's vision

External Transformational Triggers

6 Codes:
- client demands for products drives innovation
- declining profits drives innovation
- externally enforced timelines improves speed of execution
- not putting client at the centre of implementations
- Regulation stiffle innovation
- technology drives strategy

Flexible Organisational Boundaries

6 Codes:
- ability to move in the organisation
- Cross team dependency in large organisations
- internal forums influences behavious of implementors
- strategy varies at business unit level
- the unhealthy competition between business and technology stiffle innovation
- Unclear mandate of the various boards

Innovation Communication

6 Codes:
- Importance of articulating with clarity
- importance of feedback loop
- importance of innovation communication
- importance of stakeholder engagement

- Importance of transparency
- Resistance when teams are involved late

Internal Transformational Triggers

4 Codes:
- internal focus limits view of possibilities
- need for improvements drives innovations
- people that do what they enjoy innovate
- technology drives strategy

Perception of Risk

6 Codes:
- Fear of failure
- forums or gates inside the organisation stiffle innovation
- gates are important risk mitigators
- risk avoidance environment prevents implementations
- too many ecosystem participants increases implementation complexity
- underestimating the amount of required effort

Resources Time Availability

9 Codes:
- allocate people to initiatives they do best with less energy
- Capacity allocation should be done with minimal waste
- importance of having dedicated time
- less focus on research and development
- People's personalities play a key role in work setting
- resource time has to be allocated to value adding activities
- Split focus leads to failure
- too long a time between ideation to implementation
- too quick to move to solution before clarifying the problem

Technology

7 Codes:

- lack of documentation
- legacy technology is an impediment to innovation implentation
- limitations due to working on proprietary technology
- limited investment in technological skills
- manual activities
- technology is highly specialised
- understanding the integration with existing solutions

Top Management Support

13 Codes:

- dedicated more time in the beginning phase
- falling victim of sales pitch
- importance of skilled project managers
- Importance of stakeholder accesibility
- importance of understanding the solutions
- managers should understand the domain details
- managers should understand their teams
- move decision making close to the delivery
- selling to influence the implementation
- senior leadership is not a problem
- Senior stakeholder buy in
- stakeholders tolerate failure when they are vested
- wrong people are involved in the discussion

Use of Rewards

13 Codes:

- aspiration to work on cool stuffs

- giving people freedom is an incentive
- implementors are fulfilled from a sense of adding value
- importance of enjoying what you do
- incentives could negatively impact implementations
- Lack of reward of failure discourages experimentation
- Less willingness to allocate descretionary energy
- money reward is a key factor for people's aspiration
- Not celebrating enough
- reward structure drives behaviour
- rewards put in place to encourage implementation
- the need to work on things that makes one shine
- unequal reward structure discourages innovation

Work Autonomy

5 Codes:

- clarity of roles
- team collectively agree on way of working
- the people in the ecosystem makes the system ineffective
- The role of job description
- unchecked pressure forcing teams to make mistakes

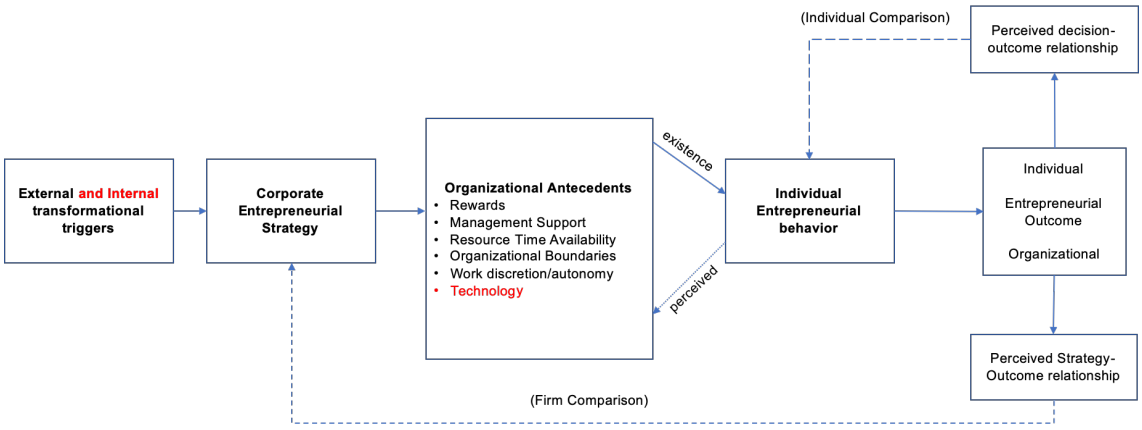
No code group

10 Codes:

- ecosystem is more than just people
- importance of focusing on minimum viable product
- importance of testing assumptions
- independence to carry on even though others do not understand it
- learn from previous implementations
- solutions takes form of organisational structure

- **the need for implementors to understand the domain**
- **throwing solution over the wall**
- **timeline enforced on the team leads stiffle implementation**
- **unnecessarily wanting to use a all the features in the solution**

Appendix 6: Extended model for sustaining corporate entrepreneurship



Source: (Adapted from Kuratko, Hornsby, & Goldsby, 2004)