The mediating role of agile practices in enhancing resilience during uncertainty: Senior leaders' perceptions.

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Abstract

An increasing amount of academic literature suggests that agile business models can enhance resilience when confronted with challenging situations. Agile organisations demonstrate an enhanced ability to anticipate and respond to change, equipping them with greater resilience to navigate difficult circumstances. To obtain a comprehensive understanding of the ways in which agility enhances the resilience of organisations, it is critical to acquire a profound comprehension of the fundamental characteristics that define agility.

To develop a thorough comprehension of agility and its contribution to promoting organisational resilience, the researcher undertook a comprehensive analysis of the impacts of uncertain situations, including the COVID-19 pandemic, on the business environment. Based on cross-sectional data from 14 semi-structured interviews, it was found that uncertainty had a detrimental effect on the business's capacity to sustain its operations in the foreseeable future. Furthermore, it influenced the regular decision-making processes within organisations in the ordinary course of business.

The study examines the factors contributing to the effective implementation of agile practices, emphasising the key competencies that foster agility. Additionally, it underscores the role of specific mechanisms guided by senior leaders in facilitating and directing these capabilities. The study's findings emphasise the significance of the mechanisms that revolve around the senior leadership's capacity to promote and execute agility inside the company. As a result, a guiding framework is designed for senior leaders, emphasising the importance of strategic foresight as a crucial tool for the successful adoption of agile practices.

Keywords

Agility; Organisational Resilience; Strategic Foresight; Adaptability; Dynamic Capabilities

Plagiarism Declaration

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

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Chapter 1: Introduction to the Research Problem

1.1 Introduction

This chapter offers a contextual framework for examining the study problem of how agile business practices contribute to enhancing resilience and driving performance in the context of the COVID-19 epidemic. This study examined the impact of agile business practices on enhancing resilience in unpredictable circumstances.

To enhance comprehension of the constructs of agility and resilience, which serve as the focal points of this study, the researcher investigated the factors that contribute to uncertainty and the role of agility as both a capability and facilitator of resilience. Moreover, the investigation examined the necessary methods for facilitating the adoption of agile practices to attain resilience within an organisational setting, which informed the agility framework designed for this study.

The framework serves as a comprehensive resource for senior executives seeking to implement agile methodologies to foster organisational resilience throughout periods of uncertainty. Through the literature review process, the chapter expands on the problem formulation supported by theories and frameworks, as well as the work of other scholars.

1.2 Background: The impact of uncertainty on organisational resilience

Fundamental uncertainty is widespread in the contemporary corporate landscape (Miceli et al., 2021; Christofi et al., 2021). Factors such as globalisation, disruptive business models, and rapid technical advancements have significantly amplified the levels of instability and complexity within the competitive environment (Haarhaus & Liening, 2020). Technological advancements, according to Niemimaa et al. (2019), have rendered traditional business models obsolete, illustrating the susceptibility of business models to a variety of business environment conditions. The uncertainty that comes with this and the consequences of extreme events referred to as Black Swans have placed the resilience of organisations under scrutiny (Rachinger et al., 2019).

More recently, in 2020, an unprecedented incident caused one of the largest turbulences gobally (Hadjielias et al., 2022; Radic et al., 2022). On a macroeconomic scale, the world's economies declined because of the COVID-19 pandemic, with the global GDP falling to -3.4% with no evident signs of economic recovery (Radic et al., 2022; OECD, 2021). Due to the inherent volatility and intricacy of the current landscape, there has been a notable shift in strategy emphasis from the sole pursuit of profit maximisation towards the cultivation of resilience in response to environmental fluctuations and market uncertainties (Conz & Magnani, 2020).

Table 1: OECD 2021 Economic Outlook

Global recovery outlook	Average 2013-2019	2020	2021	2022	2023	2021 Q4	2022 Q4	2023 Q4
				Per cent				
Real GDP growth[1]								
World[2]	3,3	-3,4	5,6	4,5	3,2	3,8	3,9	3,2
G20[2]	3,5	-3,1	5,9	4,7	3,3	4,1	3,8	3,3
OECD[2]	2,2	-4,7	5,3	3,9	2,5	4,4	3,3	2,2
United States	2,4	-3,4	5,6	3,7	2,4	5,1	3,0	2,3
Euro area	1,9	-6,5	5,2	4,3	2,5	4,9	3,3	2,1
Japan	0,8	-4,6	1,8	3,4	1,1	0,0	3,1	0,9
Non-OECD[2]	4,3	-2,2	5,8	4,9	3,8	3,2	4,3	4,0
China	6,8	2,3	8,1	5,1	5,1	3,9	5,5	5,0
India[3]	6,8	-7,3	9,4	8,1	5,5			
Brazil	-0,3	-4,4	5,0	1,4	2,1			
Unemployment rate[4]	6,5	7,1	6,2	5,5	5,2	5,7	5,4	5,1
Inflation[1,5]	1,7	1,5	3,5	4,2	3,0	4,9	3,4	3,1
Fiscal balance[6]	-3,2	-10,4	-8,4	-5,2	-3,7			
World real trade growth[1]	3,4	-8,4	9,3	4,9	4,5	6,1	5,2	4,2

1. Percentage changes; last three columns show the change over a year earlier.
2. Moving nominal GDP weights, using purchasing power parities.
3. Fiscal year.
4. Per cent of labour force.
5. Private consumption deflator.
6. Per cent of GDP.

Source: OECD (2021)

Failure to respond to uncertainty in a timely manner can have material and irreversible consequences for organisations (Khorasani, 2018). According to Niemimaa et al. (2019), ensuring business continuity requires evaluating the organisation's resilience during uncertain periods. Consequently, Radic et al., (2022) assert that following the COVID-19 pandemic, resilience in the organisational context has become more pertinent.

The impact of the COVID-19 pandemic precipitated a worldwide economic crisis, as evidenced by supply and demand disruptions (El-Haddad & Zaki, 2023). This has resulted

in the questioning of the capacity and preparedness of comparable organisations to maintain their value proposition in the face of comparable economic turmoil (Radic et al., 2022).

According to Hadjielias et al. (2022), a significant impact was observed on businesses of different sizes. Smaller organisations experienced financial fragility, while larger organisations had challenges adapting to environmental changes (Hadjielias et al., 2022). The importance and urgency of developing organisational readiness to respond and react effectively to unexpected developments in the corporate environment has been amplified since the COVID-19 pandemic (Conz & Magnani, 2020).

1.3 Organisational resilience

Resilience is an organisation's capacity to maintain its value proposition in unanticipated or future disruptions (Conz & Magnani, 2020; Radic et al., 2022; Ramdani et al., 2020). The abstract notion of organisational resilience as a temporal process and, ultimately, the factors that contribute to an organisation's resilience, have been the subject of limited research (Conz & Magnani, 2020). The evaluation of resilience in relation to an organisation's strategic imperatives is crucial for promoting business continuity. However, it is unfortunate that this is not commonly practised in many organisations (Niemimaa et al., 2019).

According to Ramdani et al. (2020), a developing body of research identifies resilience as a crucial factor that allows businesses to overcome external challenges. As posited by Ramdani et al. (2020), resilience is commonly perceived as a system's capacity. However, it should be noted that resilience also encompasses the capability to adapt and restructure in response to evolving market dynamics and environmental requirements (Sreenivasan et al., 2022). Radic et al. (2022) identify a gap in the literature regarding how the configuration of business practices contributes to the organisational and performance resilience of a business. Organisational resilience is a collection of evaluable managed behaviours and relationships (Sreenivasan et al., 2022).

In this study, resilience pertains to the capacity of organisations to proficiently assimilate and adjust to disruptive events, as well as to formulate adaptable and transforming

approaches considering unanticipated adverse conditions (Sreenivasan et al., 2022). This definition aligns with the research conducted by Conz and Magnani (2020). In a constantly changing world, there is a need to continuously search for effective ways to respond to uncertainty (Haarhaus & Liening, 2020).

Scholars such as Troise et al. (2022) emphasised the need to maintain resilience, particularly in environments highly vulnerable to volatility, uncertainty, complexity, and ambiguity. Consequently, it is imperative for businesses to possess information on effectively attaining resilience within their organisational structures.

Despite the extensive examination of resilience within the field of business management, there is a notable deficiency in the conceptualisation of this term (Conz & Magnani, 2020). Moreover, some essential characteristics have been associated with the concept of resilience and this study explores those characteristic attributed to agility.

1.4 Dynamic capability and agile practices

Dynamic capability (DC) is the ability of organisations to solve their problems systematically upon identifying threats internally and externally, that arises from the effective allocation and utilisation of resources within the organisational framework. (Oliva et al., 2019). The scholarly community has engaged in a discourse regarding the notable significance of DC, highlighting its favourable effects in effectively navigating difficult circumstances (Haarhaus & Liening, 2020).

The concept of DC has been linked to resilience within a paradigm that involves the integration, improvement, and adjustment of both internal and external capabilities. (Miroshnychenko et al., 2021). However, this strategy response that is aimed at effectively addressing the rapid swings witnessed in the market is questioned under the increased levels of uncertainty experienced in the environment (Haarhaus & Liening, 2020).

Mitigating uncertainty at various levels necessitates superior attributes surpassing DC, enabling businesses to exhibit heightened responsiveness and minimise the risk of failure (Kahl et al., 2021). The concept of agile practices has gained significant attention due to the growing uncertaintyin environmental conditions (Kahl et al., 2021). However, limited

research is available on the specific competencies that enhance agility (Troise et al., 2022). This is even though agility has become a core competency in the management field as organisations constantly have to develop strategies to manage the uncertainty experienced in organisations (Kahl et al., 2021).

1.5 Significance of research for theory and business

Scholars have dedicated considerable time and resources to investigating resilience as a conceptual framework, however, it has been conceptualised in a highly diverse manner, which has led to a profusion of different ideas and interpretations (Miceli et al., 2021). This study draws from the Resource Based View (RBV) and Dynamic Capabilities (DC) literature (Teece et al., 1997), which have been largely associated with influencing agility (Kahl et al., 2021).

In addition, the DC concept is perceived as the managerial aptitude necessary to maintain organisational resources to achieve efficiency and resilience in response to internal and external factors (Oliva et al., 2019). This serves as a solid foundation for establishing the premise of this research, as it bears a resemblance to agility. However, key to note is that agility incorporates the response time (Christofi et al., 2021). Consequently, Kahl et al., (2021) argue that robust DC is crucial in facilitating organisational agility.

According to Niemimaa et al. (2019), businesses must adapt to current and future contingencies and uncertainties in turbulent economies to develop resilience. Henceforth, there is a need to investigate the factors that distinguish resilient organisations from those with low resilience (Radic et al., 2022). The COVID-19 pandemic prompted discussions on business resilience, further highlighting the need to establish the practical relevance of resilient business practices (Radic et al., 2022). As such, Khorasani (2018) posits that business practices lacking agility in uncertain times and turmoil lose their competitive advantage.

To conceptually elaborate on the efficacy of agile business models during uncertain periods and contingencies, this paper refers to the literature on constructing resilient organisations. Although resilience has been the subject of extensive research, there is limited empirical evidence demonstrating the role of agility in fostering resilience in uncertainty. The issue of addressing heightened environmental uncertainty has spurred

the advancement and refinement of forward-thinking methodologies that seek to enhance strategic decision-making (Haarhaus & Liening, 2020).

During times of ambiguity, the focus should be on the components of the business model rather than the implementation's resources and processes (Niemimaa et al., 2019). Scholars have contradicting views in terms of where the focus should be during times of uncertainty. This notion is underscored by Radic et al. (2022), who assert that in times of uncertainty, companies have the challenge of allocating resources between pursuing organisational objectives and investing in the costly endeavour of enhancing organisational resilience.

1.6 Contribution of study

The research contributes to the RBV and DC theory by providing a better understanding of senior leaders' perspectives on agile practices in enhancing resilience during uncertainty. Both theories deal with contributing factors to innovate, adapt, and create change; therefore, an in-depth study on the factors influencing the successful adoption of agile practices becomes beneficial to the DC of an organisation (Kahl et al., 2021). The focus of DC lies in the arrangement of stationary resources (Teece et al., 1997). However, for companies to make prompt decisions in a dynamic and rapidly evolving context, it is necessary to adopt proactive and ongoing approaches (Oliva et al., 2019).

The comprehensive analysis of agility as a conceptual framework has primarily concentrated on certain sectors, including supply chain management and project management. The advancement and execution of agility within organisational contexts are currently in their nascent phases. The present study constitutes a significant scholarly addition to the existing corpus of literature pertaining to the concepts of agility and resilience within organisational contexts.

This research makes three unique contributions to the existing body of literature on resilience. Firstly, it is important to consider the theoretical implications of uncertainty on the resilience of organisations in response to unforeseen events, such as the global COVID-19 epidemic. The present analysis focuses on the capacity and fundamental factors that contribute to the agility factor as a means of addressing and adapting to unpredictable circumstances. The researcher examines and builds upon existing scholarly

ideas and concepts recognised as influential factors in promoting resilience. Additionally, the researcher investigates the potential integration of these ideas and concepts into the broader concept of agility.

The study contributes to theory by providing a guiding framework that elucidates the links and interdependencies between leadership and the mechanisms associated with adopting and implementing agile practises. The significance of leadership mechanisms is in the potential correlation between inadequate agility and either an ill-suited strategy or ineffective execution procedures (Kahl et al., 2021).

1.7 Purpose statement

The primary objective of this qualitative research is to conduct an in-depth examination of the attribution of the agility factor to resilience in the context of uncertain environments, specifically focusing on the Covid-19 pandemic. The generally recognised notion that businesses that implement agile practises demonstrate resilience in times of uncertainty is supported by minimal empirical evidence. (Miroshnychenko et al., 2021). The study aims to gain a comprehensive understanding of the factors that contribute to resilience and to explore the role of agility in promoting resilience.

Given the significant and disruptive impacts of the COVID-19 pandemic on a wide range of organisational aspects, such as operationally and financially, as well as the safety and security of individuals, it is imperative to thoroughly examine the need for organisations to adopt a proactive approach to strengthen their organisational resilience. Furthermore, the ability of businesses to adapt and respond to unexpected circumstances is essential for promoting economic growth, hence facilitating the recovery phase after a period of uncertainty (Putritamara et al., 2023) The research aims to comprehend the following objectives:

I.   The impact on organisations during periods of uncertainty
II.   How agile business practices enhance organisation resilience.
III.   The attributes that drive the agility factor
IV.   The barriers to the adoption of agile practices
V.   The role of senior leaders in driving agile practices.

The subsequent sections are structured as follows. The paper begins with a summary of the theory and literature on the resilience of organisations and business models, emphasising agile business models. Second, it describes the research methodology and design. Finally, the research's completion schedule is described in detail.

Chapter 2: Literature Review

2.1 Introduction

The present literature review delved into the current corpus of information pertaining to the resilience of organisations within the framework of unpredictable business environments, placing specific emphasis on the role of agility as a catalyst for resilience. Chapter 1 of the study explored the theory of organisational resilience in response to unexpected occurrences and crises. The literature expands on this construct through the examination of the attributes of agility. This to identify the factors contributing to the effective adoption of agile business practices as outlined under the research objectives in Chapter 1.

Moreover, the present study's literature evaluation incorporates two theoretical frameworks to conceptualise the domains under investigation. The thorough examination of agility as a construct has been focused on certain industry dimensions, such as supply chain management and project management (Troise et al., 2022). The development and implementation of agility in organisational contexts is still in its early stages. This study is a valuable contribution to the current body of literature about agility and resilience in the context of organisations.

Emphasis is placed on the examination of literature pertaining to organisational resilience, as it represents the fundamental element of the organisational context affected by uncertainty. The existing body of literature offers valuable insights into the various components that contribute to resilience, thereby establishing the scope of inquiry into resilience levels. Moreover, the existing body of research in the realm of business and management focuses on delineating the concept of firm resilience and delves into the identification of crucial qualities required for achieving organisational resilience. Figure 1 below illustrates the arrangement of the literature, showcasing the interrelationships between the study's goal and the research objectives outlined in Chapter 1. The literature review culminates in a concise overview of the findings derived from the examination of existing scholarly works, while also delineating the areas that warrant further investigation. The research questions in the subsequent chapter were derived from the aforementioned factors.
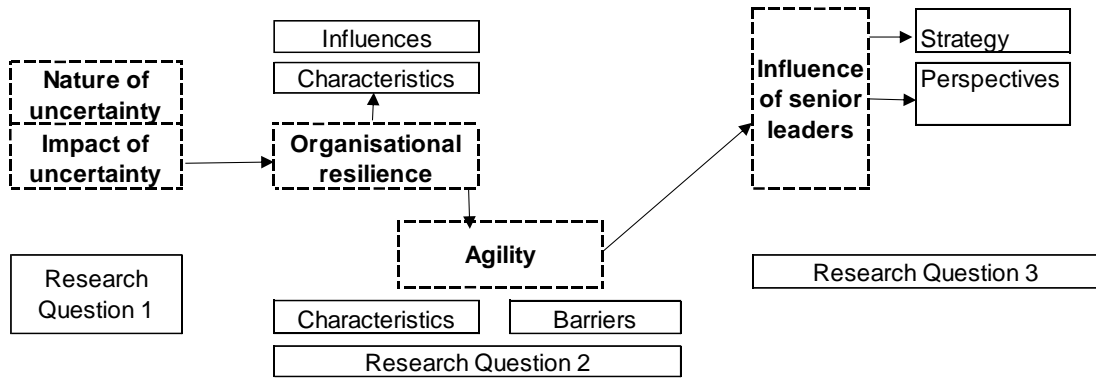
Figure 1: Conceptual Framework for Literature

Source: Researcher's own adaptation

2.2 Theory and frameworks

To better comprehend organisational resilience as a concept, theory and framework have been applied to deconstruct the phenomenon. To investigate the applicability of the concept of the resilient business model, Radic et al., (2022) apply the Fraunhofer IMW business model resilience framework, which assesses resilience at three levels, namely environmental, organisational, and individual, to resilience factors as illustrated in Figure 2.
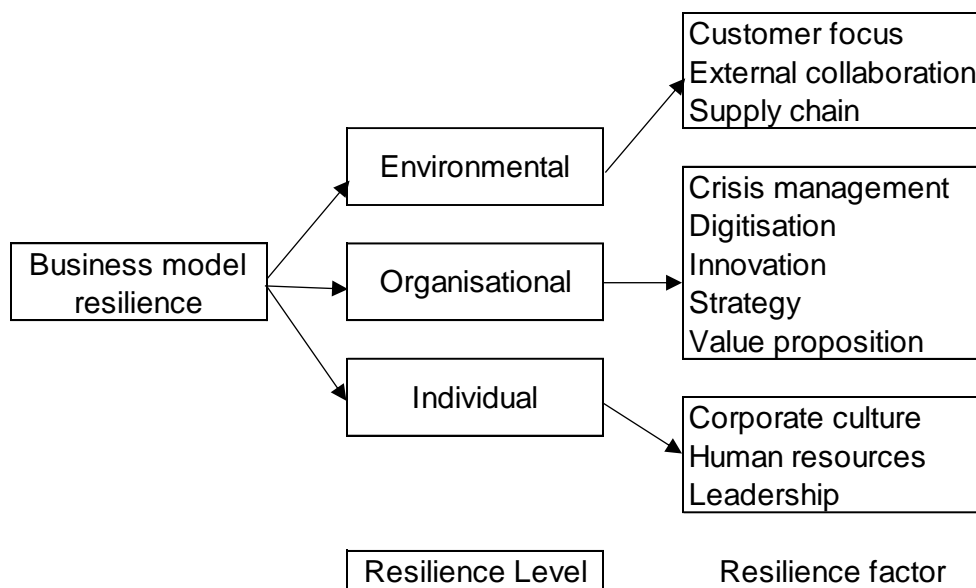
Figure 2: Fraunhofer IMW Business Model Resilience Framework

Source: Radic et al., (2022)

The study focuses on the organisational resilience level and its four corresponding factors. Consequently, business model resilience is a more exhaustive method for evaluating an organisation's capacity to maintain its value proposition in unanticipated events and crises (Radic et al., 2022), thereby making organisational resilience a critical consideration. The COVID-19 pandemic exemplified how a crisis can be a catalyst of business model innovation, as most businesses were compelled to modify their business models (Ritter & Pedersen, 2020).

On the other hand, Conz and Magnani (2020) attribute resilience to proactivity, redundancy, resourcefulness, and collectiveness, which facilitate the practical application of the resilient business model concept. Furthermore, Radic et al., (2022) posit that organisations must maintain a balance between business model flexibility and stability to maintain resilience during crises.

Figure 3 below highlights the distinction between organisational agility and resilience, highlighting that organisational agility focuses on the capacity and speed with which an organisation can change direction. In contrast, organisational resilience focuses on the capacity to endure or resist disruption, with adaptability a key enabler (Conz & Magnani, 2020).
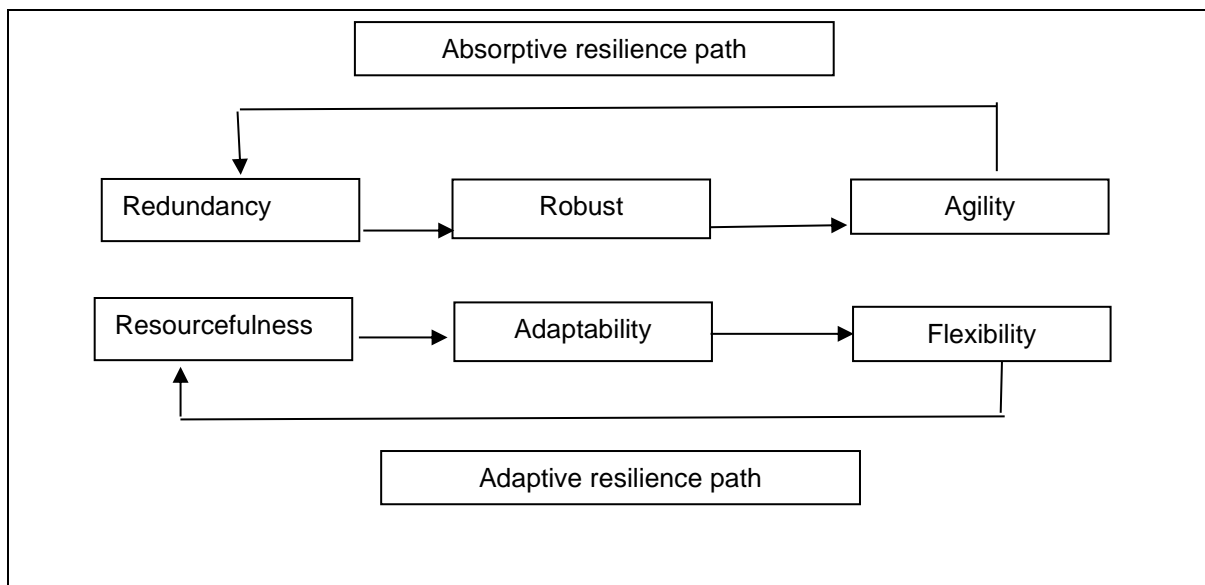
Figure 3: The Resilience of Firms. A Conceptual Framework

Source: Conz and Magnani (2020)

2.3 The impact of uncertainty on organisations

The effects of COVID-19 are still felt long after the pandemic first made its presence known in 2020. The first case was reported in Wuhan, China, in November 2019 (Hadjielias et al., 2022). However, the business and the world at large continue to devise strategies to combat the effects of what will remain in the history of business, the most unprecedented, unexpected event. Furthermore, the crises presented its uniqueness in terms of global reach, economic impact, and political impact (Ritter & Pedersen, 2020). It has affected businesses across all industries and businesses across the globe. The impact of its uncertainty and its impact on the resilience of organisations has remained topical (Acciarini et al., 2021). The COVID-19 pandemic significantly impacted organisations of various sizes, leading to changes in customer interactions and transaction methods and a shift towards a new way of working (Hadjielias et al., 2022).

This is contrary to historic periods where the sequence of crises that have a negative impact on organisations have presented windows of opportunity (Ritter & Pedersen, 2020). The organisations more recently face environments with volatility, uncertainty, complexity, and ambiguity (VUCA) which requires different strategies (Troise et al., 2022). Additionally, Xu & Koivumäki (2019) argue that the use of technology facilitates the implementation of agile methodologies in addressing the challenges posed by VUCA.

2.4 Organisational resilience

2.4.1 Characteristics of organisational resilience

The significance of organisational resilience within the domain of strategic management has been widely acknowledged, particularly considering its heightened relevance during times of uncertainty (Putritamara et al., 2023). An effective response to the changes in the external environment has been associated with resilience (Hadjielias et al., 2022) and is best shown after an incident or disruption (Putritamara et al., 2023). Consequently, this has intensified the need to put effective measures built on resilience to reduce the resulting impact of disruptions and catastrophes (Acciarini et al., 2021).

Resilience is attributed as a trait that characterises individuals or organisations that can survive adversity and uncertainty and recover from negative experiences (Conz & Magnani, 2020). This phenomenon is linked to the ability to anticipate and mitigate hazards (Putritamara et al., 2023). Radic et al., (2022) cite the 1970s application of the term to humans and its subsequent use in the context of individuals within the field of psychology. It is derived from the Latin word "*resilire"*, which means to recover or rebound (Radic et al., 2022).

2.4.2 Organisational resilience as a capability

According to Ramdani et al. (2020), resilience is the organisation's capacity to maintain its competitiveness and value proposition amid turbulence and uncertainty. Furthermore, resilience enables organisations to adapt efficiently in times of uncertainty, ensuring a quick recovery and a greater chance of success (Yuan et al., 2022). As a characteristic, resilience possesses the inherent ability to facilitate learning and adaptability within systems. This capacity enables systems to effectively assimilate changes while maintaining their existing functionality through self-organisation (Kadenic & Tambo, 2023). According to Niemimaa et al. (2019), resilience is associated with the resources that contribute to the successful implementation of business models, but it does not guarantee business continuity. Ritter and Pedersen (2020) attributes resilience to five characteristics namely, prepare, protect, prevent, respond, and recover. Resilience is the ability to recognise and seize opportunities that arise from disruptions, leading to ongoing growth and the reorganisation of systems and procedures to enhance adaptive capabilities (Kadenic & Tambo, 2023).

On the other hand, Conz and Magnani (2020) define resilience as "the capacity to be prepared and to maintain organisational performance during disruptions and crises". Adaptability and resourcefulness are key attributes that allow an organisation to be resilient (Miceli et al., 2021). If an organisation is adaptable to its environment, it can endure and maintain success over time (Rachinger et al., 2018). In addition, it has been observed that organisations with a strong capacity for resilience can effectively and expeditiously address and mitigate the impact of disruptive changes, thereby safeguarding the well-being of their personnel, safeguarding their assets, and preserving the equity of the business (Putritamara et al., 2023).

Though resilience has been a desirable approach in organisational science to adapt to achieve positive outcomes during turbulence, its conceptualisation for standard use in organisational practice has been slower to acquire traction (Yuan et al., 2022). Equally, Conz and Magnani (2020) ascribe this to the fragmented and abstract nature of the concept.

To expand the resilience literature, Radic et al., (2022) evaluate organisational resilience in the context of enduring unanticipated events and crises such as the COVID-19 pandemic. Ramdani et al. (2020) posit that a growing corpus of research identifies resilience as a key factor that enables businesses to overcome external challenges.

2.4.3 Leadership influence on organisational resilience

Culture is identified as another significant element of resilience, as highlighted by Ritter and Pedersen (2020). This aspect pertains to the exposure of culture to both internal and external stakeholders, which in turn impacts the organization's learning, motivation, and cohesion during times of crisis (Ritter & Pedersen, 2020).

In their study, Sreenivasan et al. (2022) analyses the resilience factors for start-ups and posit that effective communication maintained with internal and external stakeholders is necessary for resilience. This is a process closely managed by leaders in organisations hence the leaders play a critical role in resilience (Ritter & Pedersen, 2020). In addition, agile leadership is indicative of the leader's capacity to adapt and change with the circumstances, which is a critical element of resilience (Sreenivasan et al., 2022). Furthermore, the concept of agile leadership which speaks to the ability of the leader to be dynamic and flexible to changes in the environment, is a key component to resilience (Sreenivasan et al., 2022). Ramdani et al. (2020) posits that a growing corpus of research identifies resilience as a key factor that enables businesses to overcome external challenges, while Sreenivasan et al. (2022) highlights the need of adaptability and flexibility in response to market fluctuations. This statement provides support for the claim made by Conz and Magnani (2020) that resilience is comprised of two components: absorptive capacity and adaptive capacity.

2.4.4 Absorptive and adaptive capacity

Absorptive capacity is the ability to withstand and absorb the repercussions of an event, while adaptive capacity refers to the ability to adjust and adapt to the changes resulting from the event (Conz & Magnani, 2020). It is the ability to recognise and digest new information, and subsequently leverage it to maximise organisational benefits (Yuan et al., 2022). This capability increases the organisations competitive advantage through strategic flexibility which enables organisations to come up with innovative strategies such as business model innovations or agile practices (Conz & Magnani, 2020).

Miroshnychenko et al. (2021) categorizes absorptive capacity into two paths, "the potential absorptive capacity and realized absorptive capacity". The latter refers to an organisation's power to recognise and be responsive to changes in the external environment by effectively allocating resources. However, it is important to note that possessing potential absorptive capacity does not automatically ensure the successful pursuit of identified opportunities as organisation may not have the capability to transform and exploit the opportunity (Miroshnychenko et al., 2021).

Adaptability and resourcefulness are key attributes that allow an organization to be resilient (Miceli et al., 2021). Resilience, as a characteristic, possesses the inherent ability to facilitate learning and adaptability within systems (Niemimaa et al., 2019). This capacity enables systems to effectively assimilate changes while maintaining their existing functionality through the process of self-organization (Kadenic & Tambo, 2023). It has been observed that organisations with a strong capacity for resilience are able to effectively and expeditiously address and mitigate the impact of disruptive changes, thereby safeguarding the well-being of their personnel, safeguarding their assets, and preserving the equity of the business (Putritamara et al., 2023).

2.5 Strategic agility

2.5.1 Key attributes of strategic agility

The concept of resilience incorporates agility and adaptability as buffers against environmental variations and dictates the resources required to drive performance (Oliva

et al., 2019; Yuan et al., 2022). Agility is the capacity to respond quickly and effectively to uncertainty, resulting in a competitive advantage for the organisation (Khorasani, 2018; Xu & Koivumäki, 2019). Troise et al., (2022) argue that increasing competitiveness is crucial for businesses as it contributes to the operational effectiveness of the organisation (Khorasani, 2018).

Abdelilah et al., (2018) posit that the firm's agility is derived from various factors, including the external environment, which includes competition and technology, and the internal environment, which consists primarily of people, products, and strategies. According to Acciarini et al. (2002), the capacity to respond is proportional to the size of the organisation, with larger companies preparing for times of uncertainty and smaller organisations implementing routine measures that align with environmental changes. In essence, agile means keeping pace with a dynamic environment (Fjeldstad & Snow, 2018) thereby influencing firm performance and competitiveness (Christofi et al., 2021).

Troise et al., (2022) contended that research into the characteristics of agility that enable firms to compete in turbulent times is still nascent. Dynamic environments necessitate adaptability and innovation to mitigate external threats and increase responsiveness to capitalise on opportunities (Khorasani, 2018). Conversely, adaptability comprises the capacity to exhibit flexibility in acquiring knowledge, conducting experiments, and embracing novel solutions (Kadenic & Tambo, 2023). Khorasani (2018) and Abdelilah et al., (2018) argue that businesses that lack adaptability and flexibility during uncertain and turbulent times lose their competitive advantage.

Additionally, Abdelilah et al., (2018) argue that agility is an evolution of flexibility and is encouraged by its ability to create rapid changes during uncertainty. On the other hand, Xu and Koivumäki (2019) posit that the changes being made must be favourable to the organisation.

The agility of a business model is contingent upon its capabilities (Khorasani, 2018). To achieve organisational productivity, the integration of the adaptability of the numerous elements of business processes is necessary (Khorasani, 2018). Troise et al., (2022) and Khorasani (2022) argue that innovation, knowledge sharing, and strategic resource sharing are among the factors that influence agility in a business context.

The development of agility improves risk management, allowing the organisation to respond more quickly to fluctuations in the business environment (Khorasani, 2018). Furthermore, Troise et al. (2021) attributes the positive performance of organisations to organisational agility. In practice, an agile supply chain, as part of a business model, enables an organisation to timeously deliver innovative solutions to consumers in a profitable manner (Khorasani, 2018). Moreover, an agile manufacturing system, ensures timely responses to customer demands and prompt delivery of products and services. A system or procedure can acclimate to change if it is inherently agile and effective (Khorasani, 2018).

On the other hand, Kahl et al. (2021) emphasize agility as a competence in management environments. Contemporary organisations operating in VUCA environments employ agility techniques to effectively navigate and mitigate the repercussions of such situations (Troise et al., 2022). The allocation of authority across several tiers of management enables the autonomy of Top Management Teams (TMT) and Senior Management Teams (SMT) in implementing agile practices at suitable levels, hence promoting enhanced agility (Kahl et al., 2021).

The concept of agility has primarily been examined within specialised sectors such as project management and supply chain (Troise et al., 2022). However, there has been a recent shift towards embracing agility as a more comprehensive strategy inside businesses (Kahl et al., 2021). This has amplified the need for a streamlined approach or methodology on how senior leaders adopt agile practices within organisations during uncertainty (Kadenic & Tambo, 2023).

There is a consensus from various scholars that companies using agile practices manage periods of uncertainty better than those who do not (Oliva et al., 2019; Kahl et al., 2021; Putritamara et al., 2023) The identified gap pertains to the lack of empirical evidence that specifies the levers, enablers, and mechanisms of agility that ultimately contribute to resilience. The existing body of literature has examined agility e in the context of the RBV view and has extensively investigated the various aspects that impact agility (Kahl et al., 2021). There is a need to expand upon the extant literature on organisational agility and its influence on organisational resilience through empirically supported practical and theoretical applications (Radic et al., 2022).

2.5.2 Strategic flexibility and adaptability

Sreenivasan et al., (2022) highlight the need for adaptability and flexibility in response to market fluctuations. Strategic flexibility is a characteristic inherent in dynamic capacities that enables the adaptation and repositioning of resources in accordance with shifts occurring in the external environment (Miroshnychenko et al., 2021). Strategic flexibility can manifest in two ways: reactive and proactive. Reactive strategic flexibility is the ability for organisations to respond to change based on changes in the external environment. Proactive strategic flexibility pertains to the capacity to actively influence and reshape the environment through modelling and transforming the organisation (Miroshnychenko et al., 2021).

The concept of strategic flexibility can be interpreted in two ways within the scholarly literature. One perspective views it as an outcome of business model innovation, whilst another perspective regards it as a competency that involves the identification, assimilation, and application of new technologies to novel processes and systems within an organisation (Miroshnychenko et al., 2021).

2.5.3 Innovation of business models

Niemimaa et al., (2019) define business models as strategic assets in organisations that inform the process of converting goods and services to profits. Simply put, business models are defined as understanding what customers want, how the organisation ensures customer's needs are met, and how the organisation can be paid for it while making a profit (Niemimaa et al., 2019).

Like Wilson et al. (2018), Rachinger et al., (2019) and Krammer (2022) use of "value creation, delivery, and capture mechanisms", which serve to establish a connection between company strategy and business operations. Furthermore, Wilson et al., (2018) posit that a business model is a set of choices that drive business processes, products, and systems.

Significantly, business models drive innovation and competitive advantage in organisations (Rachinger et al., 2019). According to El-Haddad and Zaki (2023),

innovation and technology strengthen the resilience of business models, while Yuan et al., (2022) posit that resilience drives organisations into innovative business models, enabling them to adapt dynamically. Moreover, Andreini et al., (2021) assert that the process of business model innovation is the critical factor that significantly impacts the performance of businesses.

As a result, businesses should be sensitive to change and ensure business model adaptability in an agile manner to maintain performance during market disruptions and crises (Bhatti et al., 2021). Ramdani et al., (2020) argue that business model innovation is a mechanism that extends beyond product and process innovation and focuses on adjusting business models in response to external environment challenges.

The COVID-19 pandemic demonstrated how significant a crisis is as a driver of business model innovation, as most businesses were forced to alter their business models (Ritter & Pedersen, 2020). Andreini et al., (2021) define business model innovation as a "configuration of a company's value proposition and value capture strategies and activities." Ritter and Pedersen (2020) are of the view that a crisis is an ideal time for business models to evolve and adapt. During the Great Depression, widespread amenities such as laundromats, supermarkets, and chocolate chip cookies were developed (Ritter & Pedersen, 2020).

2.5.4 Dynamic capabilities

The uses of resources to create another resource through a combination of actors to produce a value proposition in the market is economic activity (Ritter & Pedersen, 2020). The resource-based view deals with the ability of firms to identify strategic resources and exploit them (Sultana et al., 2022). Comparably, dynamic capabilities refer to an organization's inherent potential to intentionally structure itself to develop, enhance, and adapt its pool of resources (Haarhaus & Liening, 2020). It is the capability that drives innovation management (Sultana et al., 2022). Putritamara et al. (2023), argues that the presence of dynamic capacities is a necessary condition for achieving resilience. Dynamic skills are recognised for their ability to reorganise and redirect fixed resources in reaction to external changes. However, volatile markets are characterised by constant fluctuations, which need the adoption of strategic agility (Clauss et al., 2021).

The relationship between competence, capability, and customer satisfaction must be established to better encapsulate the adaptability of the business model (Khorasani, 2018). According to Ritter and Pedersen (2020) a capability is a skill that is required to perform an activity. An important aspect of the business model is identifying the capabilities that render it successful, and those that need to be developed (Ritter & Pedersen, 2020). Rapid and radical shifts in market demand generate uncertainty, necessitating high levels of adaptability in areas such as production and supply chains (Khorasani, 2018). According to Ramdani et al. (2020), businesses respond to crises by perpetually adapting and modifying their business models, which necessitates adaptability and flexibility.

According to the findings of Haarhaus and Liening (2020), it is imperative for companies to develop a robust capacity for sense making and implement early detection mechanisms. This is crucial to promptly recognise potential dangers and effectively respond to them, hence enhancing their chances of survival in highly volatile and uncertain situations. In addition, El-Haddad and Zaki (2023) assert that the extent to which a company possesses good management, innovation, and technological advancement to enable business model adaptation during uncertainty, thereby enhancing its chances of survival, is a crucial factor in determining its ability to survive crises. Consequently, a key characteristic of resilience is the ability to accumulate resources to enhance resourcefulness and redundancy (Conz & Magnani, 2020; Miceli et al., 2021).

Investment in resources such as digital technology has proven to be worthwhile during Covid-19 and has lessened the impact from the disruption (Acciarini et al., 2021). Technological advancements act as a mediator for resilience (Putritamara et al., 2023) and makes business processes more effective and efficient, fostering agility (Troise et al., 2022). This is due to its capacity to accumulate large amounts of data, virtual process management, and remote collaboration capabilities (Miceli et al., 2021). In addition, the implementation of digital transformation in companies enhances their potential to modify business processes in ways that generate value for consumers and cultivate dynamic capacities (Putritamara et al., 2023).

2.6 Strategic foresight

Engagement in anticipation and foresight activities enhances an organisation's cognitive capacity to see and comprehend new possibilities and hazards (Haarhaus & Liening, 2020). Sarpong et al., (2019) and Haarhaus and Liening (2020) posit that foresight enables the firm to acquire knowledge about its dynamic environment and shapes human action within complex and fast-changing environments. The knowledge acquired enables organisations to develop agile practices that enable them to develop high-quality solutions and compete in a volatile environment (Oliva et al., 2019).

Strategic foresight plays a significant role in creating agile and adaptive organisations by providing strategic guidance, assessing the magnitude of opportunities, and identifying novel business models (Gordon et al., 2020) through the method of perpetual scanning (Sarpong et al., 2019). Perpetual scanning involves a process of robust filtering and cueing of a combination of insights from internal and external sources that are compared to identify future patterns (Sarpong et al., 2019).

Furthermore, Oliva et al., (2019) posit that popular methods have been developed through foreknowledge, which have successfully reduced risk in the decision-making process and increased agility in uncertain periods. The acquisition of information in dynamic environments and the management and transformation of a company's knowledge capacity are of utmost importance (Miroshnychenko et al., 2021). Despite the progress in the development of these popular methods, there remains a few barriers to implementing these methods and practices that reveal the importance of senior leaders' commitment to providing the support and resources required to successfully adopt these practices (Oliva et al., 2019). Clauss et al. (2021) in assessing the strategic agility capability places strategic sensitivity as key characteristic of strategic agility. The ability to adopt an outward-in approach through methods such as scenario and forecast planning enables the organisation to critically analyse its environment and generate new alternatives (Clauss et al., 2021).

2.7 Resource optimisation

Resilience incorporates agility and adaptability as buffers against environmental variations and dictates the resources required to drive performance (Yuan et al., 2022; Oliva et al., 2019). According to Haarhaus and Liening (2020), DC capabilities refer to an organisation's inherent potential to intentionally structure itself to develop, enhance, and adapt its pool of resources. According to Putritamara et al. (2023), the presence of dynamic capacities is a necessary condition for achieving resilience.

The relationship between competence, capability, and customer satisfaction must be established to better encapsulate the adaptability of the business model (Khorasani, 2018). Rapid and radical shifts in market demand generate uncertainty, necessitating high levels of adaptability in areas such as production and supply chains (Khorasani, 2018). According to Ramdani et al. (2020), businesses respond to crises by perpetually adapting and modifying their business models, necessitating adaptability and flexibility.

According to the findings of Haarhaus and Liening (2020), it is imperative for companies to develop a robust capacity for sense-making and implement early detection mechanisms. This is crucial to promptly recognise potential dangers and effectively respond to them, enhancing their chances of survival in highly volatile and uncertain situations. In addition, El-Haddad and Zaki (2023) assert that the extent to which a company possesses good management, innovation, and technological advancement to enable business model adaptation during uncertainty, thereby enhancing its chances of survival, is crucial in determining its ability to survive crises. Consequently, resilience is demonstrated by the accumulation of resources to enhance resourcefulness and redundancy (Conz & Magnani, 2020; Miceli et al., 2021).

Investment in digital technology has proven worthwhile during COVID-19 and has lessened the impact of the disruption (Acciarini et al., 2021). Technological advancements mediate resilience (Putritamara et al., 2023) and make business processes more effective and efficient, fostering agility (Troise et al., 2022). The capability is demonstrated by its capacity to accumulate large amounts of data, virtual process management, and remote collaboration capabilities (Miceli et al., 2021). In addition, implementing digital transformation in companies enhances their potential to modify business processes in ways that generate value for consumers and cultivate dynamic capacities (Putritamara et

al., 2023).

2.8 Conclusion

The existing body of literature and analysis reveals that extant literature has been conducted on organisational resilience in relation to agility, as evidenced by the review of frameworks and theories. However, this has been observed within certain domains, such as project management, engineering, and supply chain. The demand for agile practices and methods has arisen due to the advent of constantly changing environments that pose a danger to organisational resilience. These practices and methods aim to limit the risks associated with uncertainty.

As seen in the frameworks, there is a complex interaction between multiple variables, and it is unclear what role agility plays in promoting organisational resilience. Conz and Magnani (202) provide evidence of a correlation between resilience and the qualities of robustness and adaptation. In contrast, Kadenic and Tambo (2023) contend that resilience has a broader scope beyond mere robustness in the face of disturbances. Though resilience has been a desirable approach in organizational science to adapt to achieve positive outcomes during turbulence, its conceptualization for standard use in organizational practice has been slower to acquire traction (Yuan et al., 2022). Like Yuan et al. 2022, Conz and Magnani (2020) ascribe this to the fragmented and abstract nature of the concept. Therefore, the objective of this research is to conceptualise agility as a factor that influences the ability of organisations to adapt and withstand challenges in unpredictable circumstances.

Chapter 3: Research Questions

3.1 Introduction

This study aimed to examine the perceptions, experiences, and underlying mechanisms related to the role of agile business models on promoting organisational resilience in uncertainty. Chapter 2 of the study conducted a comprehensive evaluation of the existing literature on the factors that contribute to agility and the subsequent effects on resilience.

3.2 Conceptual model

Various aspects of agility were examined, with a particular focus on those that were pertinent to managing the effects of uncertainty. The literature review yielded a conceptual model, as seen in Figure 3, which was derived from Conz and Magnani (2020).

The researcher reconstructed the conceptual model and subsequently employed it to organise the study's research questions. The framework encompasses the fundamental factors that contribute to organisational agility, namely the presence of sufficient resources and the ability to adapt tactics that facilitate the transformation of internal processes.

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┌──────────────────┐        ┌──────────────────┐
│    Resources     │        │   Adaptability   │
│    *Enabling*      │        │  *Transformative*  │
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          │                          │
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│   │     Agile Business Practices      │         │
    │  *Proactive and timely response*   │
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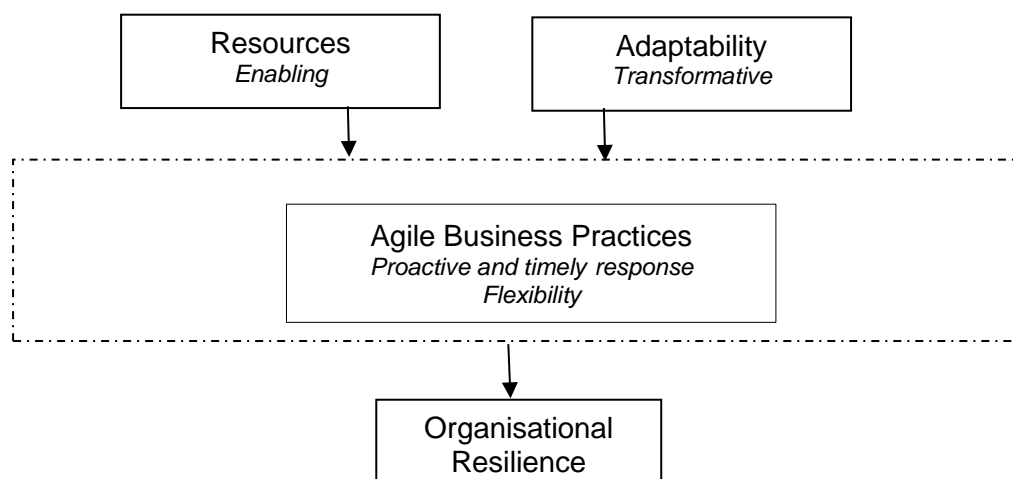
Figure 4: Conceptual Framework

Source: Researcher's own adaptation

Figure 4 demonstrates the adoption of agile business practices by businesses that possess the flexibility to promptly respond to changes and disruptions in times of uncertainty, which leads to the development of this skill. Based on this illustration, implementing these agile practices enhances organisational resilience.

3.2 Research questions

A key characteristic of resilience is the ability to accumulate resources to enhance resourcefulness and redundancy (Conz & Magnani, 2020; Miceli et al., 2021). Furthermore, resilience enables organisations to adapt efficiently in times of uncertainty, ensuring a quick recovery and a greater chance of success (Yuan et al., 2022). Agility is considered a contributor to resilience; however, it is unclear what factors drive resilience.

Agility is the capacity to respond quickly and effectively to change in an uncertain environment, resulting in a competitive advantage for the organisation (Khorasani, 2018; Xu & Koivumäki, 2019). Troise et al., (2022) argue that increasing competitiveness is crucial for businesses as it contributes to the operational effectiveness of the organisation. To explore the attributes that drive agility and contribute to resilience, the first research question to be answered was:

> **Research Question 1**: How does the attribute of agility enhance the capacity of an organisation to withstand challenges and disruptions in times of unpredictability?

Abdelilah et al., (2018) posit that the firm's agility is derived from various factors, including the external environment, which includes competition and technology, and the internal environment, which consists primarily of people, products, and strategies. To explore the successful adoption of agile practices, the following research question was posed:

> **Research Question 2**: What are the key barriers to the successful adoption of agile practices within organisations?

Successful implementation of new practices or processes necessitates the establishment

of mechanisms or techniques. Research Questions 1 and 2 focused on the factors that contribute to and facilitate organisational agility. The unresolved issue pertained to the specific mechanics that should be employed to achieve a successful execution.

Strategic foresight plays a significant role in creating agile and adaptive organisations by providing strategic guidance, assessing the magnitude of opportunities, and identifying novel business models (Gordon et al., 2020). Strategic foresight is a capability that is within the purview of strategic management, for which senior leaders bear responsibility. The present study sought to investigate the following research question to design a comprehensive conceptual framework that can guide senior leaders in adopting agile practices:

>**Research Question 3**: How do senior leaders influence the adoption of agile practices and the fostering of organisational resilience?

The subsequent chapter provides a comprehensive account of the research strategy and methods to address the three research questions.

Chapter 4: Research Design and Methodology

4.1 Introduction

This chapter describes the methodology and research design used to address the research questions posed in Chapter 3. Using a qualitative methodology, the study investigated how agile practices contributed to improving resilience during the COVID-19 pandemic. The data were collected through semi-structured interviews with senior leaders across multiple industries. The evaluation of impacts across various industries provides strong insights and can be considered appropriate as these compete in dynamic environments where the impacts of COVID-19 are expected to be explored. The themes that emerged from the data aligned with those identified during the literature review in Chapter 2.

The research design approach incorporated a thorough examination of the validity and reliability of the data, and appropriate procedures were used to address any concerns that emerged. This decision was made considering the time and resource limitations the researchers faced. This chapter incorporates the ethical considerations, while future chapters provide a detailed presentation of any constraints to the investigation.

4.2 Choice of methodology

4.2.1 Research philosophy

The research philosophy is the system of beliefs and assumptions regarding the evolution of nature and knowledge (Saunders & Lewis, 2018). A study is guided by a set of assumptions divided into three categories, namely ontological, epistemological, and axiological (Saunders & Lewis, 2018). The study investigated the role of agile practices in enhancing organisational resilience during uncertainty. This topic was explored by drawing on the insights and lived experiences of senior leaders; therefore, necessitating the adoption of an epistemological assumption. This involved interactions and perceptions of organisational stakeholders, which may differ by industry and influence organisational resilience and adaptive business models.

Epistemological assumptions refer to the validity and legitimacy of knowledge and how it is communicated (Saunders & Lewis, 2018). The research was based on the experiences and interpretations of organisational stakeholders and can be subjective because they are closely aligned with contexts and circumstances.

In this study, explorative semi-structured interviews were conducted with two groups, namely TMTs and SMTs from public and private companies to gain in-depth insight into their perceptions and interpretations of the agile strategies employed during the pandemic and how this enhanced organisational resilience. This is consistent with the interpretivism theory, as TMTs and SMTs are social actors within the organisation's natural environment. The researcher approached interviews with an open mind, enabling the opportunity to acquire new knowledge and enrichment through insights gained. The semi-structured interviews were conducted in accordance with prepared interview guidelines, which reduced the researcher's bias.

The interpretivist philosophical approach is used to investigate the social phenomena of the behaviours and strategies employed by research participants in their natural environments. (Saunders & Lewis, 2018). TMTs and SMTs play a crucial role in the decision-making process and implementing strategies inside an organisation. Incorporating insights from TMTs and SMTs is valuable due to their direct involvement in implementing agile business practices, providing pertinent and applicable perspectives on the subject matter. The study's foundation, an interpretive methodology was used to define the social reality and lived experiences of respondents while adopting an empathic posture toward participant perspectives (Mohajan, 2018).

4.2.2 Purpose of research design

Exploratory research was adopted to gain a better understanding of agility and resilience by gleaning new perspectives and information from those not directly involved in the study (Saunders & Lewis, 2018). The study employed an exploratory research methodology to obtain insight into senior leaders' experiences, perspectives, and perceptions during the COVID-19 pandemic.

There has been substantial research on resilience as a construct in organisational performance during uncertainty; however, it lacks empirically supported practical and

theoretical applications (Radic et al., 2022). The examining of senior leaders' experiences, perspectives, and perceptions sheds light on the drivers and enablers of agile approaches to organisational resilience and the role of senior leaders in its successful implementation.

4.2.3 Approach

The investigation adopted an inductive and deductive approach, which was also promoted by Saunders and Lewis (2018). The deductive approach was initially employed to identify and extract pre-existing theoretical notions pertinent to the study. These concepts were subsequently examined in greater detail within the framework of thoughts and experiences shared by senior executives. The inductive approach aims to get an understanding of the meaning that individuals attribute to events to construct a hypothesis derived from the data that has been gathered (Saunders & Lewis, 2018).

In addition, Mohajan (2018) asserts that qualitative research is inductive because it investigates the insights that contribute to a deeper understanding of a particular situation. Interviews with TMTs and managers offer flexibility and can provide insight into the practices and interpretations that emerged during the COVID pandemic, which is consistent with the inductive process. The framework illustrated in Figure 4 in Chapter 3 was developed by applying the emergent concepts found in the existing literature. Additionally, the conceptual framework from the interviews was integrated with these concepts to create a remodelled framework, presented in Chapter 7.

4.2.4 Methodological choices

Qualitative research is described as a method that describes, decodes, and translates concepts and phenomena (Basias & Pollalis, 2018). The study adopted a mono-method qualitative study, using only one data collection method through semi-structured interviews conducted with senior leaders (Saunders & Lewis, 2018). The interviews were performed with executives in the C-suite and TMTs to gather diverse viewpoints on the factors that drive and facilitate the adoption of agile practices. The utilisation of this methodology contributed to the enhancement of data triangulation and the establishment of data dependability.

4.2.5 Strategy

The researcher selected the research strategy based on the research question they expected to answer and the research objective (Busetto et al., 2020). The purpose of this study was to contribute to the existing body of literature by gaining a deeper understanding of the role of agile business models in enhancing resilience during the COVID-19 pandemic.

As such, phenomenology is the chosen research strategy as it is founded on the research question the researcher answered and the research objective (Busetto et al., 2020). Phenomenology seeks to translate the implicit structures of an experience to an explicit form (Sanders, 1982).

4.2.6 Time horizon

Data were gathered on a single occasion and can be categorised as a cross-sectional study. This type of research involved capturing a momentary representation of the participants' viewpoints and observations by conducting enquiries among a specific group of individuals across a predefined timeframe (Mohajan, 2018). Moreover, the selection of a cross-sectional study design was based on the research's inherent requirements for a reasonably expedient completion (Saunders & Lewis, 2018).

4.3 Population

The population is comprised of senior leaders in businesses operating in Gauteng and Eastern Cape, which constitute the entire group (Saunders & Lewis, 2018). Different industries and sectors that experienced variable degrees of disruption were considered to provide deeper insights on the topic and diverse viewpoints on the factors that drive and facilitate the adoption of agile practices.

4.4 Unit of analysis

The unit of analysis is the central focus of the investigation and the primary source of data collected for the study. The unit of analysis guides the overall design of the research project and functions as the procedure's focal point.

The unit of analysis for this study includes individuals categorised under senior leaders in TMTs and SMTs in both public and private organisations. The selection of TMTs and SMTs facilitated the accumulation of in-depth insights into the agile business models adopted during the COVID-19 pandemic based on strategies and best practices.

4.5 Sampling method and size

Due to the lack of an exhaustive list of senior leaders, this investigation employed purposive sampling, which forms part of the non-probability sampling technique. Non-probability samples are frequently combined with semi-structured interviews when collecting qualitative data (Saunders & Lewis, 2018).

Purposive sampling was selected as the researcher used their discretion to select the sample based on participants who fit the purpose of the specific research question and research objective within the context (Saunders & Lewis, 2018). Purposive sampling is the optimal sampling method for this qualitative research because it incorporates the interpretation of an individual's lived experience who is involved in strategic decisions and has the knowledge and expertise to respond to the interview questions (Johnson et al., 2020).

The criteria for selection were TMTs and SMTs, who participated in the decision-making process and tactics that informed the responses adopted by the organisation in an emergency or an unexpected catastrophe. The TMTs and SMTs served in such capacity for a period greater than five years in line with the set criteria. Criterion sampling is the method used since a predetermined standard need to be satisfied.

The C-suite executives and TMTs were interrogated from the standpoint of formulating suitable crisis-response strategies. As agents of strategy implementation, C-suite executives and TMTs were selected to contribute valuable primary data derived from contrasting experiences. The C-suite executives and TMTs were accessed through pre-arranged meetings with identified businesses, and where insufficient responses were not achieved, interviews were secured through the researcher's established networks and snowballing.

The sample size was determined based on the need to attain depth and richness of description (Putri et al., 2020). This research conducted interviews with 14 individuals; 10 were TMTs and four were SMTs. These individuals participated in the underlying mechanisms that influenced the enhancement of resilience in the organisation during the COVID-19 pandemic. This aligns with Saunders and Lewis (2018) and Guest et al. (2006), who recommended a sample size of six to 12 for a homogenous population where 12 is the minimum acceptable. Table 2 presents the distribution of sample sizes among different member groupings to which the participants belong.

Table 2: Sample Size and Distribution of Member Groups

	TMTs	SMTs
No of participants	10	4

The proportionate allocation between the participants provided a balanced view as most of the power rests with TMTs. The four SMT members were able to offer contrasting perspectives that provided practical insights into research matters.

Interviews continued until data saturation was achieved, which was at interviewee 12 (Busetto et al., 2020). Sample saturation is the most common guide for assessing the adequacy of purposive sampling in qualitative research (Hennink & Kaiser, 2022). In addition, it is the point where the insights and key issues are exhausted, ensuring that the emerging theories are grounded in data (Hennink & Kaiser, 2022). During interview 12, the participants' perspectives became redundant, and no novel discoveries pertaining to agility were unveiled. At this juncture, the researcher determined that data saturation had been attained. Two additional interviews were done, further demonstrating data saturation as the same insights consistently appeared. The figure below depicts the point at which saturation was reached. The variation in the addition of new codes between interview six and interview nine is evident as the SMTs presented a different level of insight into the discussions.
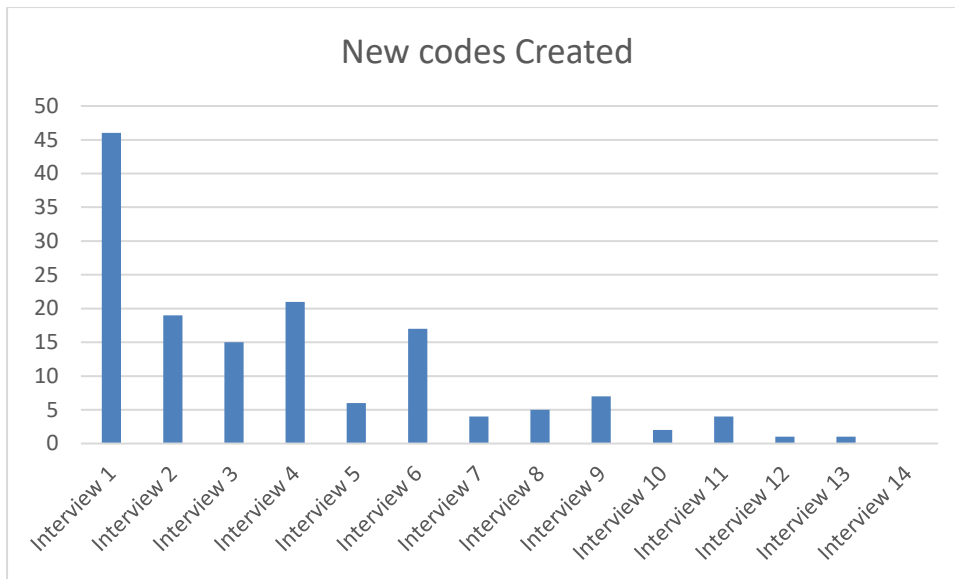
Figure 5: Saturation Figure

4.6 Measurement instrument

As Busetto et al., (2020) stated, a measurement instrument enables the researcher to collect data from the research participants. Using peer-reviewed academic journals, surveys, and in-depth interviews to conduct exploratory research is the most appropriate and effective approach (Saunders & Lewis, 2018). This study employed in-depth interviews as a measurement instrument, and through the literature review, reviewed highly rated journals were used.

The interview method employed a guide for interviewing as the instrument for conducting measurements. The interview questions were open-ended, allowing participants to express and clarify their views on the research questions more thoroughly and from their own unique perspectives. The interview guide is attached as Appendix 5. Furthermore, Table 3 below provides an illustration of the alignment between the research questions in Chapter 3 and the interview questions in the interview guide.

Table 3: Illustration of alignment between the research questions and the interview questions

Research question	Interview questions
Research question 1: How does the attribute of agility enhance the capacity of an organisation to withstand challenges and disruptions in times of unpredictability?	1. What are the characteristics that describe agile business practices? 2. In your opinion, how does an agile practice contribute to the organisation's ability to adapt and recover during disruptive events? 3. What does organisational resilience mean to you and how would you define it? 4. Is there a link between resilience and the adoption of agile practices? 5. How did organisation's ability to handle the pandemic change after adopting agile business models? 6. Did these models help companies change strategies, processes, or products to respond to changes in the market? If you answered yes, please give examples.
Research Question 2: What are the key barriers to the successful adoption of agile practices within organisations?	1. What are the key successes of agile business models? 2. What are the challenges of implementing agile business models in organizations?
Research question 3: How do senior leaders influence the adoption of agile practices and fostering of organisational resilience?	1. How do senior leaders drive the adoption of agile practices and foster a culture of resilience within the organisation?

4.7 Data gathering process

Since this research is qualitative, inductive, and interpretivist in nature, semi-structured interviews were considered the most appropriate method of data collection (Saunders & Lewis, 2018). It has been determined that questionnaires, semi-structured interviews, and in-depth interviews are the most effective methods for obtaining new ideas, perspectives, and a deeper understanding of the study topic (Saunders & Lewis, 2018). Saunders and Lewis (2018) recommend the use of semi-structured interviews when the researcher desires the participant's perspective on the event.

14 Semi-structured, open-ended, and in-depth interviews were used to collect data from the TMTs and SMTs to comprehend the phenomenon by identifying themes and constructs (Saunders & Lewis, 2018). The duration of the interviews varied between 45 and 60 minutes, depending on the extent of insights provided throughout each session. Certain individuals provided extensive elaboration on their experiences, whereas others opted for more concise responses. The interview's format facilitated open and unrestricted dialogue, enabling the researcher to acquire valuable and comprehensive perspectives.

The data collection process involved conducting a search within the Johannesburg Stock Exchange database to identify listed companies. Additionally, the business chamber database was consulted, including the Border Kei Business Chamber, Nelson Mandela Bay Business Chamber, and Johannesburg Chamber of Commerce and Industry. The aforementioned entities are regional business groups that advocate for the welfare and concerns of unlisted firms within the geographical boundaries of South Africa. The databases contain all the organisations' contact information, such as email addresses and telephone numbers. Consequently, an initial email was distributed to the designated contact individuals of the selected organisations. The email provided a comprehensive description of the research project, a formal request to arrange interviews, and an explanation of the potential significance and value of the study. A sample of the invitation letter is included in Appendix 4.

The GIBS Ethics Committee was approached to obtain ethical clearance. Once approval was granted, a pilot test was conducted, involving a minimum of one TMT individual with experience working for both listed and private companies. The primary objective of doing a pilot test was to ascertain the clarity and comprehensibility of the questions, ensuring

participants effectively comprehended them. The pilot testing phase afforded the researcher an opportunity to make modifications to the questions in cases where the intended meaning of the questions was ambiguous or unclear.   The individuals who participated in this study are employed individuals who have actively participated in implementing business model initiatives within both public and private enterprises within the preceding five-year period. The interviews were performed virtually, with English as the medium of communication. The interviews were pre-scheduled and arranged to be in an environment conducive to conversation, with as little disruption for all participants as feasible (Saunders & Lewis, 2018).

The researcher utilised the Microsoft Teams application for the recording to facilitate the transcription. Voice recordings and transcripts regarded to be primary data were analysed as part of the data analysis procedure (Saunders & Lewis, 2018). The utilisation of an audio recorder served the purpose of precisely capturing the verbal expressions of the participants, hence preventing the loss of significant data throughout the interview procedure. Furthermore, Participants were formally requested to provide their consent before the interviews commenced and prompted before recording on the Microsoft Teams application to ensure participant confidentiality. The consent letter served to provide participants with reassurance regarding the maintenance of confidentiality during the interview process. Specifically, it informed participants that any information obtained would be reported without the inclusion of any identifying details. A sample of the consent letter is included in Appendix 3. The recorded data was transcribed and compared to the field notes to verify the accuracy and reliability of the information.

4.8 Interview process

The interviews were conducted in a manner that encouraged participants to willingly disclose information, as suggested by Jacob and Furgerson (2015). During the interview, the participants were requested to respond to open-ended questions in a virtual, individual setting. Every interview would commence with a concise overview of the study, providing a brief description of the research focus on the notions of agility and organisational resilience. The questions were formulated in an open-ended manner to prevent any potential bias towards the participants, while also being led to ensure alignment with the research aims. Maintaining the setting of ambiguity was deemed crucial by the researcher,

as it was the primary focus of the investigation.

In cases where the participant's story in the study did not align with the research objectives, the researcher was permitted to offer their perspective, so contributing further depth to the understanding of the research topic. One participant expressed their experiences within a political setting that had a substantial influence on the outcomes of organisational resilience. This influence was observed in the way agility was adopted.

The participants were presented with a series of questions that were categorised according to the primary themes that had been previously determined. Sub-questions were employed as supplementary inquiries in instances where the researcher encountered limited depth in participants' responses, serving as prompts to facilitate further exploration. The researcher demonstrated active listening skills, enabling the participants to express their thoughts and perspectives in a comprehensive and uninhibited manner. The interviews were continued until the point of data saturation, at which no further novel insights were obtained from the collected data. The saturation point is depicted in Figure 5 presented above.

4.8 Analysis approach

The analysis was conducted using the thematic analysis approach (Saunders & Lewis, 2018). The recorded interview transcriptions were obtained from Microsoft Teams and reviewed for accuracy by the researcher and edited where necessary. This assisted the researcher to generate meaning from the data collected (Van Der Schyff & Krauss, 2014). The researcher familiarised themselves with the data collected through taking field notes and identifying preliminary patterns of interest.

The data were encoded using the computer-aided analysis software Atlas.ti, which classified the information based on the most common ideas and constructions. Manual coding was used to augment the computer-aided analysis for more accurate results. To ensure the confidentiality of the participants, the names of individuals included in the dataset were altered prior to its upload. The names of the individuals were replaced with the roles they occupied and the industry to which they belonged. Thereafter the data was allocated codes through open coding and categorised into groups based on the emergent themes.

Thematic analysis was used to determine the themes and patterns from the collected data (Castleberry & Nolen, 2018). It identifies hidden data patterns through analysing and reporting data schemas (Hanafizadeh & Nik, 2020; Braun & Clarke, 2012). The data analysis process adopted the six-step approach included in Figure 6 below as recommended by Braun and Clarke.
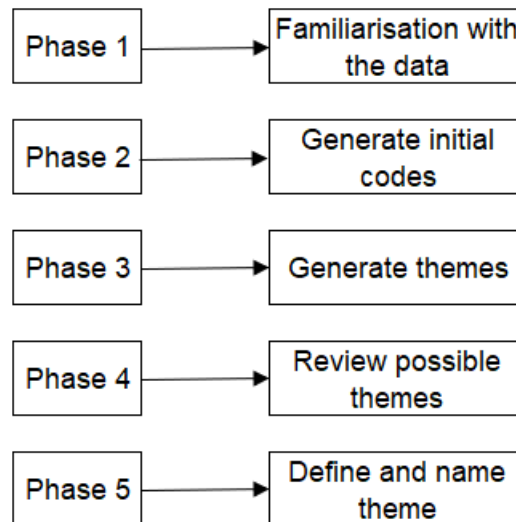
Figure 6: Data Analysis Six-Step Approach

Source: (Braun & Clarke, (2012), Byrne, (2021)

This involved coding and labelling of the data, combining key concepts, emergent themes, and results from the literature review (Mohajan, 2018). As the analysis process progressed, common themes derived from data collection and classification were established, thereby enabling the sorting of the raw data into a thematic map (Busetto et al., 2020). Using thematic analysis enabled the researcher to see meaning from the shared ideas, experiences, and constructions (Braun & Clarke, 2012). Various patterns came from the analysis, and the thematic analysis ensured that only those relevant to answering the research question were identified (Braun & Clarke, 2012).

The 13 emerging themes were analysed to establish the categories that link to the research questions. The summary of the analysis was exported from Atlas.ti to excel and summarised in the thematic table the detailed coding analysis is included in Appendix 6. The researcher reviewed the underlying quotations from the emerging themes and analysed the relationships through the network groups on Atlas ti. This tool assisted with identifying the association between the codes and the relationship between the key themes identified.

4.9 Quality controls

According to Saunders and Lewis (2018), the two pillars supporting the credibility of research are reliability and validity. To ensure rigour, the researcher adopted verification strategies that informed the variations in the research process, ensuring reliability and validity (Morse et al., 2002). An illustration of this was the comprehensive literature examination undertaken by the researcher to gain a thorough understanding of the study area and its associated concerns (Bogner et al., (2014). Additionally, the researcher improved the reliability of the study by incorporating varying degrees of senior leadership divided into TMTs and SMTs. This approach allowed for a more diverse perspective on the studied area.

To ensure their reliability, the semi-structured interview questions were derived from the literature and the theory (Busetto et al., 2020). The interview questions guide presented in Appendix 5 was formulated from the literature review and theory developed. The interview guideline enabled consistent measurement across all application areas, whereas the open-ended questions eliminated interview bias and permitted the interviewer to clarify points, thereby assuring credibility and confirmability (Johnson et al., 2020).

Verification strategies included the flow of the methodology applied linking it to the objectives of the study; the alignment of the data collection and analysis process; and the application of the theoretical background linking to the theory developed in Chapter 2 (Morse et al., 2002). These strategies have been applied throughout the research process. Transparency was achieved through audio-recorded interviews transcribed by the researcher (Yin, 2014). Reflexivity was demonstrated through the critical discussion of the patterns identified, contrasting the views from the various literature and this was captured in memos in the Atlas.ti software (Byrne, 2021)

Triangulation is recommended for achieving this objective because it allows for the validation of data accuracy (Saunders & Lewis, 2018). This was achieved by performing comparison between the various data sets. (Carter et al., 2014). Observations and fieldnotes were used as an addition to the interviews and theory triangulation, which involves differing theories that support or refute the findings augmented it (Carter et al., 2014).

4.10 Limitations

Due to the inherently subjective nature of exploratory research, the researcher's own preconceptions may have unintentionally influenced the study's findings, resulting in researcher bias. Since the research was conducted in such a brief period, there may be limitations on the scope of the information gathered. The study employed purposive sampling using the researcher's discretion to select a sample. This impacted the population represented by the study as the results will be limited and cannot be generalised.

4.11 Storage

The data obtained during this study is securely saved using cloud technology that employs password security and encryption, guaranteeing stringent confidentiality and data safeguarding for a minimum of 10 years. The data is kept in an external hard drive and Google Drive to facilitate efficient retrieval. The data is organised into folders based on thematic categories, and a standardised file naming system is implemented. Encryption techniques have been employed to safeguard the information and enhance data security. The stored data encompasses audio files and transcribed notes derived from audio recordings.

Chapter 5 presents the findings and results of the data collected.

Chapter 5: Findings and Results

5.1 Introduction

The following section presents the primary outcomes, which are condensed overviews of the 14 semi-structured interviews conducted with high-ranking executives, including TMT and SMT members, from diverse sectors in the Gauteng and Eastern Cape regions. The findings and results provide answers to the study objectives outlined in Chapter 3. The current chapter presents the results in a structured manner. It begins by examining the effects of a disruptive event, such as the COVID-19 pandemic, on the business environment. It then highlights the significance of implementing agile business practices and their contribution to organisational resilience based on the perspectives and experiences shared by the participants. The chapter also presents the findings in relation to the barriers associated with adopting these practices. Finally, it concludes by providing key insights for senior leaders as shared by the study participants.

The presentation of findings commences by providing background information and contextual details about the study participants, thus enhancing comprehension of the conducted interviews. The data are subjected to qualitative analysis, wherein emerging themes are identified and reinforced by quotations extracted from the interviews. These quotations offer valuable insights from the participants involved in the study.

5.2 Interview participants and context

The participants were categorised and labelled in line with their role in the organisation and the industry they operate in, as depicted in Table 4 below. This was to protect the participant's identity as communicated to each participant and in line with the ethical guidelines.

To provide further context to the value and insight each participant brings to the study, the number of years of experience in the senior role is presented. The sampling of two vastly different provinces (Eastern Cape and Gauteng) in size and economic landscape provides a contrasting effect that illustrates the applicability and relevance of the investigated topic. As noted in Table 4 detailing the list of study participants, only four of the ten participants in the sample represented the Eastern Cape Province.

The study participants were selected based on the nature of their occupation, which imposes significant time constraints due to the demanding and high-pressure nature of their roles. Consequently, the researcher encountered difficulties arranging the interviews, with certain individuals permanently postponing their participation and others outright cancelling. Incorporating SMTs has helped alleviate the challenge and, in addition, has yielded valuable practical insights from the departments closely involved in executing these agile practices.

Table 4: Participants' Details

No.	Designation	Industry		No. of years in the role	Province
1.	Managing Director	Financial Services	Female	10	Gauteng
2.	Chief Executive Officer	Manufacturing	Male	12	Eastern Cape
3.	Chief Innovation Officer	Facilities Management	Male	11	Gauteng
4.	Chief Executive Officer	Facilities Management	Female	10	Gauteng
5.	Chief Communications Officer	Telecommunications	Male	15	Gauteng
6.	Chief Executive Officer	Manufacturing	Male	8	Eastern Cape
7.	Head of Strategy	Telecommunications	Male	15	Gauteng
8.	Group Manager	Mining	Male	9	Gauteng
9.	Head of Communication	Automotive	Male	10	Eastern Cape
10.	Senior Manager	Banking	Female	10	Gauteng
11.	Managing Director	Textiles	Female	15	Gauteng
12.	Chief Executive Officer	Manufacturing	Female	8	Gauteng
13.	Chief Operations Officer	Media and Entertainment	Female	5	Gauteng
14.	Chief Executive Officer	Healthcare Industry	Male	7	Eastern Cape

5.3 Analysis procedure

Data were recorded through Microsoft Teams, a virtual meeting application. The transcripts were reviewed for logical sense and rectified to display accurate results of the virtual interview. The researcher reviewed the auto-generated transcripts from Microsoft Teams manually by cross-checking against the recordings to ensure that the data had been correctly captured in the transcripts. Corrections were made where data were not correctly captured.

The transcripts were individually uploaded to research software Atlas.ti for coding and analysis. The researcher read the transcripts numerous times to contextualise the data and identified multiple codes for labelling the data. The codes were reduced to categories relevant to the research questions posed by the researcher. A total of 148 codes were identified and grouped to categories of 13 themes that link to the research question and the themes identified as part of the literature review. The organising of the above data is presented in Appendix 6.

5.4 Analysis of the demographics

The below section expands on the demographics of the participants who participated in the study. A total of 14 participants presented in Table 4 above and Figure 8 below were interviewed as part of the study; six were female and the remaining eight were male. Figure 9 depicts the gender analysis of the participants. Three participants were from individuals from SMT, while 11 were individuals from the TMT level.
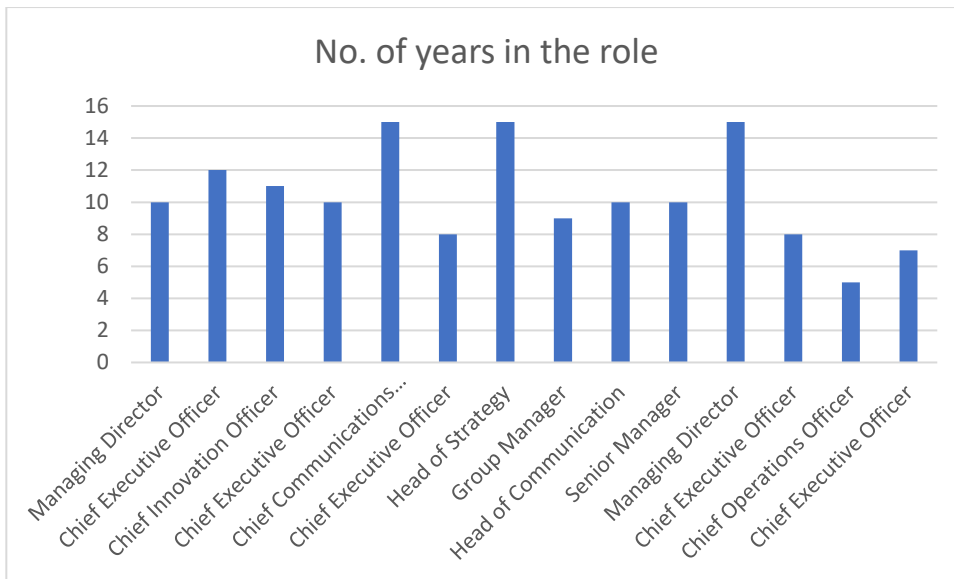
Figure 7: Experience in Years of Study Participants and Role Fulfilled
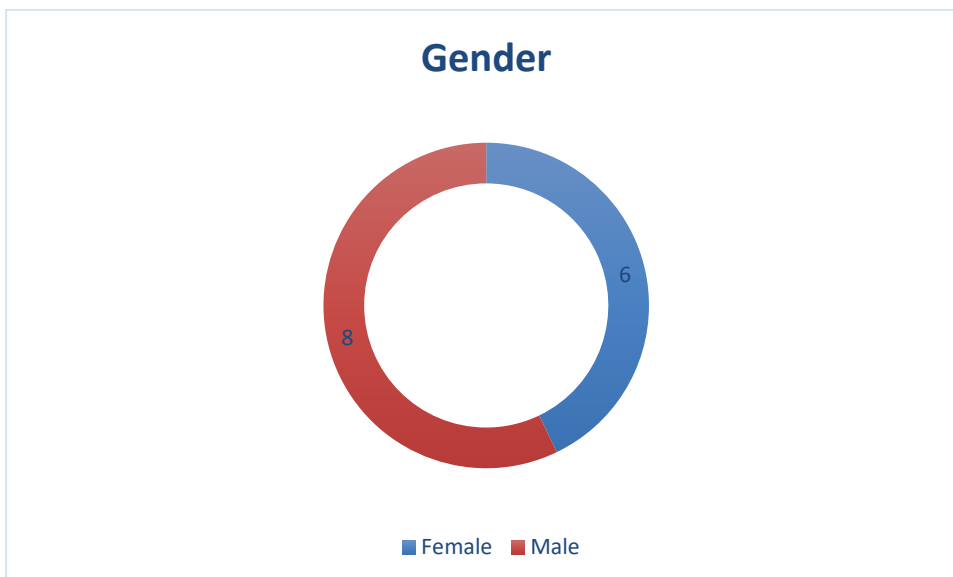
Figure 8: Gender Demographics of Study Participants

5.5 Research question 1

How does the attribute of agility enhance the capacity of an organisation to withstand challenges and disruptions in times of unpredictability?

To better understand agility and its extent in driving organisational resilience, the researcher deeply investigated the impact of periods of uncertainty, such as the COVID-19 pandemic, on the business environment. From the interviews, it emerged that

uncertainty negatively impacted the ability of the business to remain in operation for the foreseeable future (going concern assumption) and impacted the ordinary course of business in the way organisations make decisions. The operational capability of the organisation was impacted by loss of revenue and productivity, resulting in some businesses ceasing operations.

> *"The illnesses that were happening lowered efficiencies that you are observing around your employees because you could no longer utilise someone for 8 hours; for instance, you can now only utilise them for four hours or instead of you operating at full capacity and now operating at half capacity, implying you are actually and producing less for fixed costs that are quite high, and they are fixed in their nature."* (Group Manager – Mining)

> *"There were quite a lot of businesses that shut down during this period or post the COVID pandemic where they just could not recover, and some still managed to remain in operation."* (Non-Executive Director & MD – Multidisciplinary)

A significant number of participants articulated that firms were compelled to exhibit agility after the outbreak of the COVID-19 epidemic. Moreover, the enterprises that managed to endure were the ones that embraced agile methodologies. Participants shared the changes that the organisation made in order as a response to the uncertainty brought about by COVID-19 epidemic. These changes were product development changes, human element changes, process changes and system changes. The emphasis made by the participants was on organisations building the capability to respond to uncertainty.

> *"Any agile business within an agile plan should be able to still implement the strategy even when setbacks occur."* (MD – Investment Holding)

> *"There was no way that you could not be agile in that period. If you weren't agile, you closed your doors, so you had to come up with new ways of either generating additional revenue or saving on the costs."* (CIO – Facilities Management)

5.5.1 Key drivers of agility

The interviews revealed that agility has many facets and characteristics in the business environment. The researcher sought to understand the senior leaders' perceptions of agility and how it applies to the world today. Emerging themes from this varied, though there was consensus on characteristics condensed to "adaptability and flexibility" and "awareness and quick decision-making." In the business context, the participants revealed that agility is seen to be the anchoring theme of how businesses go forward as they operate in an evolving and fast-changing world.

> *"So as much as you have to be resilient, you have to be able to not to stick to the plan but also be flexible to understand that the plan changes and change is the only constant." (Senior Manager – Financial Services)*

> *"What agility certainly is not is moving quickly without rationalising what you're doing and where you're going only because you want to get on the quick path." (COO – Media and Entertainment)*

Participants revealed that in the business context, agility primarily pertains to the capacity for adaptability and the ability to sustain operations regardless of external circumstances or prevailing conditions. Organisations must carefully analyse a given scenario or problem and approach it in a manner that leads to the desired solution the participants explained. One participant elaborated that if faced with a difficulty or has a certain goal to accomplish, the question arises about how the organisation may effectively adjust and use its available resources.

A participant revealed that to succeed, businesses must consider the environmental requirements and adjust accordingly while analysing the competitive landscape. It is imperative to examine the prevailing market conditions. Adherence to prevailing practices and timely adaptation to the requirements of the competitive landscape are imperative. Recognising that a successful approach in the present does not guarantee future success is crucial. Agile, in essence, entails maintaining a perpetual state of advancement and seizing opportunities promptly.

5.5.2 Adaptability and flexibility

Adaptability and flexibility were identified by the participants as key drivers of agility. Adaptability is crucial in a rapidly changing environment because it enables businesses to act quickly when change is required. The disruption caused by COVID-19 required businesses to modify their operational procedures. Participants alluded that adapting necessitated a new way of doing things and diminished the resistance historically encountered when introducing change. There was a level of forced change where businesses either adapted or died one participant explained.

> *"Because with the pandemic, it meant we had to change our change management approach or change plans because previously obviously it would be engagements which you have workshops, you'll allow people to adopt at a slower pace." (Senior Manager – Financial Services)*

> *"We were able to manage it, and at the same time, we learned a lot of new ways of doing things." (CEO – Healthcare)*

Participants revealed that adapting to new ways of work increased efficiencies, resulting in resource optimisation. The flexibility that has come with the work-from-home culture cultivates productivity, while some participants revealed that it reduced personal interaction, presenting tensions between management and subordinates. Leaders had to develop new and flexible ways of measuring output while ensuring that productivity levels are maintained, and teams remain motivated.

> *"There needs to be flexibility in the system as things evolve; people must be empowered to make decisions." (Group manager – Mining)*

> *"As a leader, you now had to trust your people and also create more flexible measurements that would then allow you to be able to manage your guys differently." (Senior Manager – Financial Services)*

The participants emphasised other notable achievements that were attained through the implementation of agile methodologies. One participant emphasised the difficulty that the organisation encountered with its culture, which became more pronounced during the

period of uncertainty. The business exhibited a lack of synchronisation in its operational processes, from product supply to customer service. The presence of recognisable gaps prompted the use of agile practices, which effectively addressed and resolved these gaps.

Participants revealed that adaptation was an approach that entails the process of the organisation programming in alignment with the organisational context, wherein the organisation critically evaluates the external factors and consciously selects the most suitable elements to include in the framework. This deliberate act fosters adaptability and facilitates seamless integration into the firm. The organisation must actively engage with its surroundings to achieve success rather than avoid or evade challenging circumstances. By immersing itself in the environment, the primary goal is to emerge as the victor.

> *"Adaptability is not a process because a process is defined from A to B, and it ends. Adaptability is programming because you keep changing throughout the entire existence of the business." (CEO – Manufacturing)*

5.5.3 Awareness and quick decision-making

The data revealed that a crucial aspect in the execution and assimilation of agile methodologies is the capacity to discern the demands of the market and promptly respond to them. The participants disclosed that a crucial factor contributing to agility was prompt decision-making during the implementation process, which was supported by the strategic direction of the agility.

Participants emphasized that businesses faced challenges in achieving agility across all aspects of their operations. Most of the participants identified a gap in the risk preparedness process emphasizing that this was a key area to be focused on by organisation. There arose a necessity to embrace an externally oriented strategy to ascertain the evolving dynamics of the market, discern its requirements, and realign concentrate on those specific domains.

> *"Being acutely aware of what's happening around in the markets will enable us to enter the business and to respond quicker." (COO – Telecoms)*

"Leaders need to constantly be aware of, you know, technology or changes that are happening in the environment, they need to be aware, and how these things impact them." (MD – Investment Holding)

The importance of a level of awareness within organisations could not be overstated by participants. Many participants share the observation that organisations tend to have an internal focus, often establishing a dedicated research department to monitor external events and provide quarterly reports based on historical data. Participants highlighted the importance of organisations being cognisant and highly attuned to the developments occurring in the markets. The participants indicated a necessity for businesses in all industries, not only the healthcare sector, to allocate greater resources towards research and development.

Additionally, the ability to continuously scan the environment to identify the disruptor or changes, along with the emergence of several test iterations, were some of the insights provided by participants. Acquiring knowledge about one's response mechanisms prior to experiencing the repercussions of disruption is a crucial aspect.

5.5.4 Summary of the findings of research question

The findings of research question 1 revealed four factors that contribute to the promotion of agility. The TMT (Top Management Team) and SMT (Senior Management Team) assert that the ability to maintain ongoing awareness of the market and operating environment is a crucial capability to cultivate organisational agility. The participants underscored that the lack of readiness exhibited by organisations during the COVID-19 pandemic served as a clear manifestation of a significant deficiency in organisational strategy.

The presence of awareness facilitates the timely decision-making process. When faced with ambiguity, leaders frequently experience decision paralysis because of insufficient data-driven information. The attributes of adaptability and flexibility play a crucial role in facilitating prompt decision-making and the successful implementation of change.

5.6 Research question 2

What are the key barriers to the successful implementation of agile practices within organisations?

The participants revealed challenges that resulted in the poor implementation of agile practices in organisations. These include issues of bureaucracy, hierarchy, and centralisation of functions. Participants believed that the obstacles to implementing an agile business plan are people related. Organisations may encounter resistance when introducing an agile model to operations because people are unwilling to alter the status quo and will always be content with what serves them. Therefore, a success factor depends on how the introduction and adoption of agile business models are communicated.

The recurring views from the participants was that ultimately, accepting these strategies by individuals within the organisation is crucial. It is important for the organisation to prioritise future-oriented thinking rather than being fixated on historical perspectives. This will enable the implementation of strategies that can effectively support the organisation in the long run.

5.6.1 Resources and prioritisation

All participants unanimously agreed that organisational resilience is contingent upon the ability to exhibit agility. The participants generally expressed that adopting and implementing agile practices had a significant role in the survival of businesses during the COVID-19 pandemic and emphasized that this was however not the primary determining factor.

Participants highlighted that to implement these agile practices, businesses needed financial capability, adequate skills, technological advancements, and innovation. One of the participants provided their perspective on the matter of enhancing capability through the allocation of resources, encompassing both human resources capacity and financial resources. They highlighted the necessity of capital expenditure (CAPEX) for fostering adaptability. The participant alluded that the capacity to act is occasionally limited by the availability of resources.

> *"So, there are many facets that come into agility, but for me, the biggest one is resources and being able to deploy them." (Group Manager – Mining)*

> *"When you want an agile business, you want people to be motivated and innovative, give them resources as well." (CEO – Healthcare)*

5.6.2. Financial capability

A notable subject that emerged during the interviews pertained to the capacity of sizable entities to withstand and sustain resilience within the COVID-19 pandemic, mostly ascribed to their significant reserves and the strength of their financial positions. The participants conveyed that the efficacy or calibre of agile practices in isolation was inadequate without the necessary financial resources for execution.

Moreover, the participants articulated the necessity of receiving financial assistance to establish the necessary infrastructure for implementing these practices. Additionally, the importance of enhancing the organisation's capabilities to effectively execute these agile practices was emphasized. Once more, a representative from the telecommunications industry reiterated the significance of possessing sufficient financial resources to invest in technological advancements. However, the apprehensions regarding the challenges associated with integrating these systems into pre-existing, inflexible, and intricate IT infrastructures were expressed as a challenge. The discussions revealed that there are distinct constraints particular to size and industry that have an impact on the implementation of technical improvements and, consequently, the adoption of agile systems.

> *"So, you want to make changes, but you just don't have the CapEx to do that." (CEO – Facilities Management)*

> *"Everything always depends on how much money you have because you can have all intentions to be agile, but it is often that there is no budget to support it; you are always restricted on what you can do." (Head of Communication – Automotive)*

Participants referred to a larger balance sheet as indicative of a better financial position, potentially enhancing a business's resilience in the face of adverse events and rapid shifts

in the economic environment compared to entities with weaker balance sheets. It became a recurring theme that that there is also a prevailing assumption that larger, well-established organisations possess a financial buffer in the form of reserves and surplus reserves recorded on their balance sheets.

This buffer enables them to endure and navigate through such challenging circumstances. However, private entities lacking reserves face the challenge of testing or requiring agility in their corporate operations said one participant. Furthermore, the issues of trade-off where operations were constrained emerged from the participants. One participant expressed that the challenge comes in when one must decide how the resources are deployed indicating that organisations would need to assess whether the spend is directed towards capital expenditure items or customer.

5.6.3 Adequate skills

The participants ascribed various aspects of agility to the competencies of teams and senior leaders. The remodelling of business models and concentrating on core operations emerged as a significant outcome from the COVID-19 pandemic. This element was widely recognised as being of great importance as it meant that organisation was required whether the requisite skill existed in the organisation. According to the participants, the successful attainment of this objective necessitates that the organisation possesses the appropriate skill set for its implementation. This meant that the organisations needed to invest in the upskilling of existing employees as business models changed to adapt to the environment.

> *"A lot of people were retrenched simply because businesses had to relook at the operational models and then only remain with what they turned critical stuff." (MD – Investment Holding)*

> *"A lot of companies started looking for the best skills and reassessing how they operate." (MD – Investment Holding)*

Participants identified the adequacy of skills as a factor of great importance because if old ways of work persisted, it would stifle innovation. A lack of skill was viewed as a hindrance to flexibility while promoting the silo mentality.

"You want to open it up in terms of making sure that we, we've got staff that is also agile so that we can think differently." (Senior Manager – Financial Services)

From a leadership perspective, the views expressed indicated that an element of design thinking needed to take place. It became evident that leaders could not drive agility and still think in a hierarchical manner. Leaders need to apply more design thinking, be critical thinkers and drive teams to think the same, which means more upskilling.

5.6.4 Technological advancements and innovation

Participants emphasized that technological breakthroughs and innovation serve as fundamental catalysts for agility which made the process of migrating to virtual platforms seamless. The participants indicated that adopting technology was crucial in attaining organisational agility as evidenced by those that adopted technology early on as the COVID-19 pandemic emerged. The participants revealed that technology exhibited a positive correlation with the velocity and expeditious decision-making necessitated inside an agile context.

"The introduction of technology has assisted the health industry to be able to quickly respond to patient's needs and adapt and become better. Deaths get reduced as we engage more on technology." (CEO – Healthcare)

"Imploring any exponential type of technology, like AI, robotics or anything like that, then significantly means that your business can pivot quicker." (MD – Investment Holding)

Furthermore, certain participants expressed that the organisations that embraced technology early on showed a greater ability to respond to disruptive forces than those that later adopted technology. Organisations with extant infrastructure and technology-advanced systems adopted responsive strategies in a seamless and timely manner.

Adjacent to technological advancements lies the concept of innovation in the findings. Participants attributed the enhancement of competitiveness within an organisation is facilitated by fostering innovation within the team. The participants emphasised the significance of innovation in preserving organisational agility.

"And so, in providing strategy or developing strategies, senior leaders need to consider innovation; they need to consider how resilient the workforce or the business can be." (MD – Investment Holding)

"Awareness and transparency, and what I mean by transparency is the culture of transparency, where there isn't hierarchy that stops innovation from happening." (CEO – Facilities Management)

5.6.5 Summary of the findings of research question 2

The acquisition of resources is identified as a significant obstacle in attaining agility, with participants attributing it to financial competence. The adoption of agile practises was shown to be significantly hindered by financial capacity, which serves as a major barrier to the adoption of technical advancements that facilitate such practises.

Moreover, the participants indicated that throughout a change process, it is necessary to acquire new skill and capabilities to facilitate the successful execution of the new procedure. The participants disclosed that financial resources posed a significant barrier, particularly during periods of uncertainty when businesses were unable to generate revenue at their usual level. Organisations often encounter circumstances in which the maximisation and optimisation of resources become imperative.

5.7 Research question 3

How do senior leaders influence the adoption of agile practices and foster a culture of resilience?

5.7.1 People and culture

Two key themes were identified in the participants' comments regarding research question 3. It became evident that people and cultural factors played a significant role in creating the conducive environment necessary to implement these agile practices. The participants emphasised the significance of obtaining the team's buy-in and support in adopting and implementing agile practices. It has also been revealed that there were occurrences in

which novel and agile methodologies were implemented within the business, and individuals exhibited resistance or slower acceptance. The presence of uncertainty exerts a significant impact, leading to a sense of urgency and the obligatory adoption and implementation of change.

> *"Agility is about change, and if people are not convinced in the change, then it will not work." (Non-Executive Director & MD – Multidisciplinary)*

The view of the participants was that an organisation must aim to cultivate adaptable individuals who can promptly execute new strategies that will benefit the company in the future. The central aspect of this approach revolves around leadership and their ability to adapt to these strategies. Participants further revealed that the foundation of the individuals and the society is dependent on the significant contributions of senior leaders.

> *"Senior leaders play the most important role; I mean, everyone in uncertainty looks to a leader. Somebody has to step up." (CEO – Facilities Management)*

> *"What separates success and failure is leadership and strategy; that is, is what is critical. You need a responsive leadership team." (MD – Investment Holding)*

The participants highlighted that agility was relevant not only to the organisations, but also to the senior leaders. The implementation of these agile practices necessitated a paradigm shift in the mindset of senior executives. In addition, it is crucial to obtain the support and commitment of the team, a goal that may be accomplished by fostering open channels of communication.

> *"Senior leadership needs to be agile itself not just the organisation being agile. It is a human behaviour thing where if they are waiting for outcomes to leave their decisions, then agility is taken away." (Group Manager – Mining)*

Participants revealed that establishing a culture of trust within the organisation is imperative, as it fosters an environment that encourages innovation and the generation of innovative ideas. To facilitate this, one participant suggested that it may be beneficial to implement platforms where individuals can freely contribute their ideas. However, ensuring that these ideas are not disregarded is crucial, as this can undermine the

effectiveness of such platforms, which are typically initiated at the beginning and conclusion of the ideation process. The lack of implementation might lead to individuals experiencing discouragement.

In addition, the participants saw that the presence of strong leadership is crucial in cultivating a climate of transformation and creativity, so guaranteeing the organization's enduring viability and flexibility. Establishing a leadership approach that promotes ongoing commitment to these initiatives is crucial, as discontinuity in leadership can hinder organisational progress and undermine its overall effectiveness. Additionally, prioritising the development of leadership capabilities within the organisation is imperative to address these needs effectively.

> *"You know, as you know, there's that saying in leadership that says the fish rots from the head, right. So, if the leadership or senior leadership is not considering innovation, is not considering how the business is agile enough and can adapt and transform to new ways of thinking, then, you know, it becomes challenging. In fact, the role of senior leadership, apart from technical abilities, is to always consider those things as part of strategy." (MD – Investment Holding)*

Individuals who are situated within a healthy corporate culture, particularly within a business that fosters a positive cultural environment, are more likely to effectively navigate adverse circumstances or unfavourable information than organisations with a subpar or average cultural climate. This is particularly evident at the executive level, where the presence of an experienced professional who operates in a consistent manner without resorting to scapegoating or observing others' shortcomings can greatly contribute to successfully managing challenging situations.

The TMTs perceived the transformation in culture via the lens of embodying the organisational principles. Implementing remote work arrangements has necessitated the consideration of accountability, as teams operate without direct supervision. The manager's trust was a necessary component in this situation. However, for teams that relied on external factors and were used to independent work, managers were required to devise methods for further assistance.

> *"It's a very deliberate people programme to actually transition and then be able to*

also source a new skill that is able to help you and then get to a particular culture."
(COO – Teleco)

"In terms of the culture, we found that there was a lot of dependencies, we had to push a lot when it came to accountability piece which we've always had as a value, but we were not driving as much." (Senior Manager – Financial Services)

5.7.2 Strategic foresight

An essential aspect to be considered participants revealed pertains to maintaining relevance within the business in which one operates. The participants indicated that it was crucial for senior leaders involved in their strategic efforts to prioritise retaining the organisation's competitive advantage and ensuring its relevance. This would ensure the achievement of resilience while simultaneously meeting the needs of the stakeholders.

"To be able to have an agile model, senior leaders must keep abreast with what is happening, especially technology, technology-wise always have a 10-year outlook. (MD – Investment Holding)"

"Senior leaders need to be futuristic and then think about all the things that coming out in the future." (Head of Communication – Automotive)

In contrast, some participants raised concerns about strategic foresight because it risked creating leaders distant from the day-to-day operations. There may be a disconnect between foresight and the actual operations or implementation of the strategy.

5.7.3 Communication and stakeholder management

Participants emphasised the importance of communication and stakeholder engagement in maintaining resilience. Therefore, leaders need buy-in from the staff, people must be informed, and effective communication to ensure success. If people are aware that you have incorporated the entire organisation, that your policies are aligned, and that you have made space for agility or some form of flexibility, then it becomes ingrained in the culture.

"The success or the ability to be able to, to implement an agile business model, you know, is really determined by the buy-in of the team, and everyone else working within the organisation." (MD – Investment Holding)

"if you leave your stakeholders in the dark right, if you are unable to quickly think on your feet, then you probably not going to." (COO – Media and Entertainment)

The participants revealed that the primary factor to consider is the establishment of transparent communication channels with staff members at all hierarchical levels, ensuring that they possess comprehensive awareness of ongoing developments and the company's strategic direction. It was revealed that small enterprises frequently tend to make choices at the senior management level. In essence, the blue-collar people within the organisation lack knowledge and experience a state of ambiguity. Participants revealed that establishing effective communication channels across all levels of an organisation is an essential strength and recommend that companies prioritise open communication with all their personnel.

5.7.4 Summary of the finding of research question 3

Research question 3 investigated the influence of senior leadership, and the findings revealed unexpected perspectives shared by participants in high leadership positions. The primary finding pertaining to study question 3 highlighted the imperative necessity for the application of strategic foresight. Senior executives have discovered a gap that necessitates rapid attention, given its significance in addressing uncertainty within the environment.

Senior leaders play a pivotal role in the decision-making process and are essential for the successful implementation of agility as a novel approach. To effectively embrace agility, it is imperative that the impetus for change originates from senior leadership. Moreover, obtaining support and acceptance from individuals was crucial for the successful implementation of agile practises. The establishment of a culture of trust and clear communication achieved by empowering individuals inside an organisation, played a vital role in fostering agility.

5.8 Conclusion

The participants revealed that adopting agile practices enhances resilience by promoting increased flexibility and preparedness. When adequately prepared, the impact of one's delivery, presence, and interactions with customers, personnel, and overall business performance is significantly reduced (Acciarini et al., 2021). This is due to the ability to fulfil the commitments made. One significant discovery indicates that the implementation of agile practises was contingent upon the presence of adequate resources. The absence of financial resources, technology, and sufficient skills hinders the presence of agility.

Furthermore, participants revealed that ensuring that culture aligns with organisational practices is crucial since it significantly influences external perceptions. The synchronisation of culture, the agile framework, and other organisational components is pivotal in shaping how individuals outside the organisation perceive it. The significance of cultural and organisational factors in mitigating the damage is indeed crucial. Moreover, it emerged that organisations that exhibited resilience in the face of the COVID-19 pandemic or any other disruptive event also demonstrated a capacity for agility, thus suggesting a direct correlation between resilience and agility.

From the participants' perspectives, agility can be succinctly defined as the ability to adapt and respond to changing circumstances while encompassing the strategic expansion of one's product or service portfolio through a comprehensive understanding of industry trends and trajectories. Participants revealed that organisations must proactively anticipate emerging trends, considering not just their competitive positioning but also the potential future transformation of the industry landscape. Chapter 6 discusses the results with linkages to theory and literature.

Chapter 6: Discussion of Results

6.1 Introduction

The subsequent section provides a comprehensive discussion of the findings derived from examining data obtained through semi-structured interviews, previously provided in the Chapter 5. The discourse progresses according to the order of the research questions presented and offers perspectives on agility as a fundamental catalyst for organisational resilience in times of uncertainty. The findings are analysed and juxtaposed with the current body of scholarly work to expand the understanding of agility capabilities, barriers to the adoption of agility, and the influence of senior leaders in embracing agile methodologies.

The primary objective of this chapter is to elucidate the findings and outcomes that were previously provided in Chapter 5. This chapter juxtaposes the obtained results with existing scholarly works to ascertain their alignment, divergence, or expansion in relation to the literature. Subsequently, the ramifications arising from these findings will be explored. The arguments offered in this chapter offer a comprehensive analysis of the similarities and differences within the research study's environment, drawing from relevant literature in Chapter 1 and considering the theoretical framework established in Chapter 2.

The discourse is organised in a way that offers answers to the research objectives, as outlined in Chapter 3, offering valuable perspectives on the impact of agile business practices on bolstering organisational resilience. Section 6.2 focuses on the primary factors contributing to agility, including a comprehensive overview of the features and attributes defining agile practices. This study aims to evaluate the degree to which the implementation of agile business practices contributes to enhancing organisational resilience.

Section 6.3 examines the various barriers that impact the efficacy of implementing agile practices within businesses, thus influencing their overall success or failure. Section 6.4 examines the pivotal role assumed by senior executives in implementing and integrating agile methodologies.

6.2 Discussion: Research question 1

How does the attribute of agility enhance the capacity of an organisation to withstand challenges and disruptions in times of unpredictability?

The research question explored the characteristics that contribute to agility to comprehend the significance of agility in bolstering organisational resilience. Furthermore, the researcher examined the impact of periods of uncertainty on resilience by deconstructing the fundamentals of the absorptive and adaptive capacity. After developing these foundational elements, the researcher endeavoured to comprehend the primary factors that contributed to organisations maintaining their resilience amidst the uncertainties brought about by the COVID-19 pandemic. Additionally, the research question determined the extent to which these agility drivers contributed to the resilience observed in these organisations during periods of uncertainty.

Khorasani (2018) posits that organisations that do not promptly address uncertainty or disruption would experience significant and lasting repercussions. According to Niemimaa et al. (2019), evaluating the resilience of business processes and models during periods of uncertainty is important to guarantee the uninterrupted functioning of business activities (Niemimaa et al., 2019). Furthermore, the findings of the study revealed that the conventional management paradigm, exemplified by formal strategic planning, is inadequate in addressing the altered dynamics inside the contemporary competitive environment. Senior leaders are required to strike a delicate equilibrium between the requisite stability for fostering the execution of strategic objectives and decision-making mechanisms and the necessary shocks that facilitates ongoing responses to a dynamic environment (Haarhaus & Liening, 2020).

Examining this research question commences with an analysis of the consequences of disruptions and periods of uncertainty. An investigation into the key drivers of agile practices and the relationships between these drivers follows this. Lastly, an evaluation is conducted to determine the degree of success of these agile practices by establishing a connection between the fundamental characteristics and their role in achieving resilience.

6.2.1 The impact of uncertainty on organisational resilience

The adverse consequences resulting from the COVID-19 pandemic on organisations demonstrate the ramifications of a period characterised by uncertainty. According to Radic et al. (2022), the COVID-19 pandemic has been characterised as an exceptional event that has resulted in significant disruptions on a global scale. This manifested in substantial economic downturns, with the global GDP experiencing a decrease of -3.4% (Radic et al., 2022; OECD, 2021). The study participants found that there is now a lack of observable indications of an imminent economic recovery. The effects of the COVID-19 pandemic have forced organisations to rethink their business models and practices with the objective of maintaining resilience and remaining operational in the aftermath of the COVID-19 pandemic.

The study revealed the presence of two distinct types of resilience that were found to enhance organisational resilience in times of uncertainty: balance sheet resilience and resilience derived from organisational practices and culture. The latter variable served as the central focus of the study, while the researcher emphasises the significant role of the former variable in contributing to overall resilience. This relates to the findings of the participants, who ascribed organisations' resilience to their preparedness. As a result of an emphasis on preparing for disruptions, larger organisations are better prepared for periods of uncertainty than smaller ones (Acciarini et al., 2021). Due to their greater level of preparedness, larger companies experience fewer negative effects during times of uncertainty. This has created an urgency for organisations to develop plans to prepare for crises more that to ways to return from crises Ritter and Pedersen (2020).

The survival of organisations during the COVID-19 pandemic was attributed by research participants to the process of remodelling their current products and operating processes. This allowed organisations to effectively address the needs arising from the market's changing conditions. It is imperative to develop business practices that mitigate the adverse effects resulting from periods of uncertainty to uphold resilience (Ramadani et al., 2020). The participants made it clear that the organisations who had implemented continuity and contingency plans found it easy to adjust to the new environment that the COVID-19 epidemic had created. An essential element of resilience that must be attained is the state of being prepared during periods of uncertainty, as proposed by Conz and

Magnani (2020), as well as the capacity to maintain relevance through competitiveness and value proposition, as posited by Ramdani et al. (2020).

This study unveiled that attaining the level of resilience can be accomplished through implementing agile business practices. The findings of this study have linked agility to four attributes namely, heightened awareness, prompt decision-making, adaptation, and flexibility. The discussion of these attributes is structured within the two groupings of "heightened awareness and quick decision-making" and "adaptability and flexibility," illustrating the interrelationship between them. These attributes of agility are discussed in the next sub-section.

6.2.2 Awareness and quick decision-making

6.2.2.1 Heightened awareness

A crucial factor in achieving and sustaining resilience is the organisation's capacity to preserve its competitive edge and value offer amidst periods of uncertainty and disruption (Ramdani et al., 2020). The study findings indicate that businesses must possess a specific level of awareness when it comes to driving agility. The awareness is what extends the competitive advantage, a crucial aspect of the business (Troise et al., 2022).

The study revealed that heightened awareness facilitates organisations staying updated with the changes in the markets they operate in, enabling them to formulate strategies and plans that effectively address these changes proactively. Moreover, the study highlighted that this perspective challenges the inward-looking strategy method commonly adopted by organisations.

Participants unanimously advocated instead for an externally focused approach that considers the demands of the market served by the organisation. This goes beyond identifying risk and responses and requires proactive identification and scenario planning.

> *"You have to be aware that things are changing in order to be able to change with them." (CEO – Facilities Management)*

The acquisition of knowledge through the process of environmental scanning informs the timely decision-making and actions of the organisation. Environmental scanning is a commonly employed practice to notice and understand disruptions in a company's external surroundings (Haarhaus & Liening, 2020). By utilising this type of foresight, organisations are more likely to allocate resources effectively towards new strategies in a timely manner in reaction to changing circumstances. Efficient and timely decision-making is a crucial component of agility and will be further elaborated in the subsequent sub-section.

6.2.2.2 Quick decision-making

According to Khorasani (2018) and Xu & Koivumäki (2019), agility is characterised by the ability to make rapid decisions and effectively adapt to changes in an uncertain environment. The findings of this study indicate that the organisations that successfully navigated the challenges posed by the COVID-19 pandemic were those that promptly and innovatively adapted to the prevailing uncertainties. Several organisations successfully adapted their product and service offerings to meet the demands of the market.

Various entities implemented tactics and approaches that allowed them to sustain their operations amidst the significant shift brought about by the transition to a work-from-home arrangement. The implementation necessitated a substantial adoption of technological advancements and the swift implementation of change management strategies.

> *"Being able to develop quickly and making quick decisions on service offerings help to build up resilience." (CIO – Facilities Management)*

The study revealed that the capacity to expedite decision-making enables businesses to function effectively amidst periods of uncertainty. Additionally, the acquisition of pertinent information to inform these decisions has significance. The crucial aspect is to ensure that in the decision-making process, all important stakeholders are involved, and inputs are obtained from diverse parties such as the business community. Doing so makes it possible to make prompt decisions and subsequently take action to implement them. To expedite the decision-making process, it is advisable to promptly adapt and establish enduring corporate operations during periods of unpredictability.

Furthermore, the participants revealed that the organisations that successfully adapted to new circumstances likely had a strong inclination towards innovation, either as an inherent component of their strategic approach or as a cultivated capability. This predisposition enables them to make prompt judgements and take decisive action, thus ensuring their survival.

6.2.3 Adaptability and flexibility

6.2.3.1 Adaptability

The participants' responses demonstrated a correlation between adaptation and the usual reactions exhibited by organisations in response to the impacts of uncertain periods such as COVID-19, as explained by Yuan et al. (2022). The present study has examined the concept of adaptability within the framework of an organisation's ability to gradually adjust its functions in response to change, demonstrating that the organisation undergoes evolution in tandem with such changes (Miceli et al., 2021). This perspective contradicts the school of thinking that posits an alternative viewpoint, suggesting that an organisation's absorptive capacity, as evidenced by a rebound effect, can lead to resilience.

> *"Adaptability and quick turnaround decision-making strategies helped a lot of companies to survive during COVID." (CEO – Manufacturing)*

According to Khorasani (2018), incorporating adaptation across multiple components of a business model is crucial for enhancing productivity in times of uncertainty. According to the insights provided by the participants, periods of uncertainty significantly affect productivity due to the disturbance generated in the business operations.

When businesses exhibited flexible solutions in response to the disruptions, they restored order in their business processes and mitigated the effect (Kadenic & Tambo, 2023). This finding aligns with the research conducted by Conz and Magnani (2020), which posits that organisations exhibiting higher levels of adaptability, flexibility, and innovation are better equipped to swiftly respond to market changes by implementing resilient strategies.

6.2.3.2 Flexibility

The speed and way the responses are made result in the dichotomous view that researchers have on agility (Christofi et al., 2021). Some scholars believe that agility is an extension of flexibility; as such, the concept of flexibility is used synonymously with agility (Christofi et al., 2021). While discussing change, it is common for flexibility and agility to be used interchangeably. However, it is important to note that in the context of agility, the key differentiating factor is the pace at which the change occurs (Abdelilah et al., 2018).

The perspective expressed is supported by the results outlined in this research, wherein participants ascribed the implementation of agile practices to the manifestation of flexibility, thus indicating a correlation between the two concepts. In a dynamic and evolving context, inflexible structures, processes, and mechanisms lead to adverse consequences, underscoring the need for flexibility in attaining resilience (Acciarini et al., 2021).

Christofi et al., (2021) assert that the notion of flexibility encompasses the modification of processes, systems, and structures to capitalise on technology opportunities as a means of addressing competitive challenges. The study participants expressed an increased awareness of the importance of flexibility in an organisation's processes, rules, and procedures, as it contributes to achieving agility. This statement aligns with the findings of Ramdani et al. (2020), who argue that organisations respond to crises by continuously modifying and adapting their business models, requiring them to possess adaptability and flexibility.

Moreover, flexibility is regarded as a dynamic characteristic that empowers companies to combat inertia and swiftly adapt to change by using the competencies inherent inside the company (Christofi et al., 2021). The participants revealed that due to the COVID-19 pandemic, they were compelled to transition to alternative product offerings to meet the demands of the market. This confirms the assertion by Khorasani (2018) that businesses that lack agility and flexibility during uncertain and turbulent times lose their competitive advantage.

> *"We had to look at new ways of generating income, which meant we also had to jump on the bandwagon of adding a service for disinfection." (CIO – Facilities*

Management)

One intriguing perspective that the participants unveiled pertained to the efficacy of agility in its application. According to Miceli et al. (2021), the rapidity with which an organisation may assimilate, adjust, and undergo transformation holds considerable significance, particularly within the context of the dynamic business environment. It has been elucidated that the implementation of agile practices by businesses is contingent upon having sufficient resources. According to the research conducted by Abdelilah et al. (2018), flexibility and agility can be categorised as components of change.

However, it is important to note that flexibility is specifically designed to address anticipated changes, whereas agility is intended to address unforeseen changes and situations of uncertainty. The subsequent part delves into the essential resources that facilitate the implementation of agile practices within organisations.

6.2.4 Summary of the discussion of research question 1

Gaining external insights can help organisations achieve a higher level of awareness, which in turn can improve their decision-making capacities. The process described is characterised by its repetitive nature and continuous evolution in response to environmental changes. Senior leaders commonly examine internal shocks, which in turn influences the modifications made; however, these adaptations often fail to yield the expected benefits in terms of agility. One crucial aspect of agility is the ability to make prompt decisions, which allows organisations to effectively adapt to unexpected disruptions arising from uncertainty.

In light of dynamic and unpredictable circumstances, businesses are compelled to make timely decisions and consistently adjust their strategies to sustain competitiveness. Flexibility is a crucial attribute that facilitates adaptability and, as a result, enhances agility. The present study has identified heightened awareness, rapid decision-making, flexibility, and adaptability as enablers that facilitate agility.

6.3 Discussion: Research question 2

What are the key barriers to the successful implementation of agile practices within organisations?

6.3.1 Resources and prioritisation

In this study, the strategies employed to evaluate the resourcing and prioritisation are viewed in line with the DC, resource-based view, a management concept that details how organisations can maintain and expand competitiveness (Teece et al., 1997). According to Haarhaus and Liening (2020), DCs demonstrate usefulness in volatile business environments because they enable companies to "enable the firm to integrate, build, and reconfigure internal and external resources to address and shape rapidly changing business environment" (p.3). The response to the changes required are largely attributed to DC (Putritamara et al., 2023). However, many limitations encompass the practicality of day-to-day operations while applying the DC perspective (Haarhaus & Liening, 2020).

The changes that came about with the COVID-19 pandemic revealed that one of the primary factors that businesses must consider when considering the adoption of agile practices is the adequacy of resources, including human resources capability and financial resources. Additionally, organisations need to examine the capital expenditure required to engage in agility while maximising existing resources and capabilities (Haarhaus & Liening, 2020).

To effectively respond to changes, it is imperative for an organisation to possess the necessary competencies for reconfiguration and adaptation. If environmental turbulences necessitate rapid adaptation, a business with robust capabilities to compete in the market utilising its resource base demonstrates ability to respond to market changes (Haarhaus & Liening, 2020). According to Heredia et al. (2022), cultivating effective human resources and encouraging employee innovation have been observed to enhance the resilience of organisations.

6.3.1.1 Financial capability

The interviewees consistently expressed the notion of balance sheet resilience, indicating that the robustness of an organization's balance sheet served as a protective measure

against the adverse effects of the COVID-19 pandemic. The present findings support the claims made by Niemimaa et al., (2019) on the association between resilience and the resources that facilitate the effective implementation of business practices. However, it is important to note that resilience alone does not ensure the continuity of business operations. This statement posits that resilience is not exclusively contingent upon the execution of organisational strategies.

The study examines financial capability as both as an enabler for agility. The concept can be divided into two distinct viewpoints: firstly, the significance of a robust balance sheet as a protective measure during times of unpredictability, and secondly, the capacity to allocate funds or invest in resources that facilitate the implementation of agile practices.

> *"You can be as agile in your culture and your outlook as you need to be; if you don't have the financial strength to adopt that, then you are not going to be able to." (Non-Executive Director & MD – Multidisciplinary)*

> *"That's why you find some companies actually went down during the COVID era because you needed to spend financial resources for you to be able to accommodate the depth that was happening." (Senior Manager – Mining)*

6.3.1.2 Technology and innovation

Adapting technology in the business environment is known to increase effectiveness and efficiency (Miceli et al., 2021). Amidst the COVID-19 pandemic, participants of this study have reported that the utilisation of technological advancements has facilitated the rapid adoption of agile practices and reactions within organisational contexts (Acciarini et al., 2021).

The participants revealed that this technology facilitated the rapid distribution of information, enabling senior leaders to make well-informed decisions based on facts. This correlates with the assertion by Acciarini et al. (2021), that the adoption of technologies such as Artificial Intelligence (AI), blockchain, and the Internet of Things (IoT) has beneficial impacts on organisations. At the core of this phenomenon lies the crucial aspect of research and development. It is worth noting that research and development play a significant role in predicting and analysing megatrends.

Technology enables the interconnection of business processes and the stakeholders involved (Miceli et al., 2021). In addition, it facilitates process monitoring, collaboration among teams, and rapid process and change adaptation. The participants disclosed that the alterations induced by the COVID-19 pandemic in the business process have facilitated the enhancement of interdepartmental information exchange, thus enabling the delivery of a superior service to customers.

The cost associated with technological innovation mostly hinges on the organisation's capability to adapt. This capability is constrained by the absence of the required technology or the necessary skills to respond effectively. Occasionally, despite appropriate technology and expertise, there might be difficulties in altering individuals' thinking to abandon traditional practices and adopt novel approaches.

The deployment of technology plays a pivotal role in successfully implementing change during the COVID-19 pandemic, considering the multifaceted challenges posed by operational and human resources factors. Organisations employ digitisation as a strategy to adapt (Heredia et al., 2022).

The utilisation of technology enables individuals to be present and accomplish necessary tasks, hence possessing the capacity to effectively leverage existing resources for the progression of one's organisation. In this scenario, the utilisation of technology or the inclination to acquire knowledge about available resources can be regarded as indicative of one's openness to self-education. This might facilitate the progress of one's business.

6.3.1.3 Adequate skill

In the discussions, skill availability emerged as a significant barrier to implementing agile practices. A new technology or system change necessitates an investment in skill to ensure the new technology's adoption. When implementing new agile practices, it is necessary to provide additional training and development opportunities for the current workforce.

Moreover, amid the uncertainty induced by the COVID-19 pandemic, organisations used novel remote working practices, requiring employees to do their duties from their

respective residences. Consequently, the necessity for remote team engagement arose, rendering the organisation's traditional training methodologies and onboarding strategies impractical.

In contrast, the introduction of remote working and flexible human resources allow organisations to hire temporary jobs, which can reduce costs and improve firm performance (Heredia et al., 2022). The presence of uncertainty and the dynamic nature of the business environment have facilitated the emergence of a worldwide pool of resources, hence simplifying the process of resource accessibility. Businesses faced the difficult decision of downsizing their workforce and reassessing their skill requirements. This phenomenon is exemplified by the increasing trend of companies hiring individuals from various countries.

This is the inaugural instance in which organisations have encountered the phenomenon of a cross-border or global workforce amidst the COVID-19 pandemic. It is now feasible for individuals to work for companies in the United States while being physically situated in South Africa, owing to the widespread adoption of remote work practices. The integration of technology and innovation, facilitated by the acquisition of necessary skills, constitutes a crucial aspect of the adoption and execution of agile practices. However, it is important to note that this approach may not be viable in the long-term. It is imperative to allocate resources towards the development of both the human capital and organisational culture, in addition to refining the operational processes and methodologies of the company. The upper echelons of the organisation instigate the shift, and the subsequent section delves into the various facets of this occurrence.

6.3.3 Summary of the discussion of research question 2

Resources have a crucial role in facilitating organisational agility. Financial competence is crucial in enabling organisations to invest in the necessary resources for implementing agile practices. The financial capacity enables businesses to acquire the necessary technology and innovation to support these agile practices, while the presence of appropriate skills ensures successful implementation.

6.4 Discussion: Research question 3

How do senior leaders influence the adoption of agile practices and foster a culture of resilience?

6.4.1 People and culture

An organisation aims to cultivate adaptable individuals who can promptly execute new strategies that will benefit the company in the future. Acciarini et al., (2021) attribute the investment in employees' strengths and development as a contributor to resilience. The central aspect of this approach revolves around leadership and their ability to adapt to these strategies.

The implementation of agile practices in businesses requires the restructuring and reconfiguration of both business processes and structures. This transformation involves a corresponding shift in leadership structures and organisational culture. The analysis of obstacles to adopting agile methodologies highlights the substantial impact of inadequate leadership and organisational culture on the attainment of agility.

This calls for a shift in how senior leaders steer the strategic messages and cultivate the organisational culture. It entails moving away from the conventional top-down hierarchical and bureaucratic models that often foster a silo mentality. Instead, a more collaborative approach is needed, wherein senior leaders serve as the focal point of a rotating leadership model that promotes the exchange of ideas and places innovation as a central driving force. To address the need for increased agility within businesses, it is necessary to incorporate various levels of the value chain in the organisation into the strategies aimed at adopting agile practices (Kahl et al., 2021).

According to Haarhaus and Liening (2020), conventional organisational structures characterised by hierarchical command and control systems, which perceive businesses as mechanistic entities, are inadequate in addressing the inherent unpredictability of the contemporary economic landscape. Being agile necessitates the ability to adapt one's firm to be flexible in response to the prevailing circumstances. To effectively address the situation and gain a competitive edge, it is imperative to engage individuals who are open-minded and willing to apply themselves.

Culture is a critical part of driving agility within an organisation and is often driven by the tone set by the leadership. Fostering creativity and resilience is believed to require strong attributes, such as outstanding leadership that influences factors like diversity, equity, and inclusion. When an organisation possesses a varied workforce and incorporates input from lower-level employees, it can effectively cultivate a culture characterised by both agility and resilience. Participants' views in relation to culture were linked to the fact that individuals are intricately connected to the historical context and organisational heritage. Culture undergoes a process of evolution, wherein it dynamically shifts and transforms in response to the actions and behaviours of individuals.

As one of the CEOs indicated, the challenge arises when individuals resist altering or accommodating their cultural practices. This hinders the desired shift that agile practices aim to accomplish, as individuals still prefer to adhere to traditional methods. Technological advancements serve as enablers that mitigate disruptions by augmenting the capacity for agile processes and offering adaptive solutions, thus facilitating personnel in effectively navigating through changes (Putritamara et al., 2023).

6.4.2 Strategic foresight

The empirical evidence from the study revealed that strategic foresight is a crucial aspect of predicting and managing uncertainty. This is supported by Oliva et al. (2019), who assert that knowledge accumulation through foreknowledge is critical in promoting agility for organisations in times of uncertainty. Participants in the study emphasised the importance of an outward-looking approach by continuously scanning the environment and identifying potential threats before they negatively impact the organisation. The primary objective of strategic foresight is to attain a comprehensive comprehension of future conditions without relying on predictions (Gordon et al., 2019). This is done to enhance the strategic choices made by senior leaders.

With the insights gained from the framing, scanning, futuring, visioning, designing, and adapting stages of strategic foresight, senior leaders can timeously detect adverse conditions, provide direction and guidance on policies, inform, and shape strategy, and explore new markets, products, and services (Gordon et al., 2020). Most significantly, the insights will guide new causes of action for leaders, allowing them to respond to

uncertainty in an appropriate and timely manner. Aside from mitigating unpredictability in the future, strategic foresight has been shown to improve organisational innovation, which is known to increase competitive advantage.

The participants interviewed revealed that organisations commonly engage in the ongoing process of balancing risk and reward within the business environment. This procedure involves managing anticipated risks that are effectively reduced or eliminated. Uncertainty poses unforeseen risks, which frequently catch organisations off guard and result in disruptions to their regular business operations (Haarhaus & Liening, 2020). Considering and arranging potential future events in a thoughtful manner is a crucial responsibility for organisations, as Sarpong et al., (2019) emphasised.

The participants revealed that to increase preparedness for unanticipated events, it is essential for organisations to invest in research and development initiatives that provide prompt identification of issues as they arise, thereby allowing sufficient time for an effective response. Furthermore, prioritising data derived from these endeavours to inform organisational decision-making is essential (Gordon et al., 2020).

The findings indicate that organisations that implemented informed and outward-looking strategies in their processes demonstrated superior management of the uncertainty and disruption caused by the COVID-19 pandemic compared to those that did not. The results of this study align with the goals of strategic foresight, which is defined as the ability to create and maintain a carefully constructed, coherent, and impactful vision of the future.

Furthermore, it has been revealed that the utilisation of foresight is of utmost importance in facilitating innovation within businesses by aligning it with research and development and innovation management strategies (Gordon et al., 2020). Strategic foresight involves leveraging the knowledge gained from the vision to drive organisational progress and foster the development of adaptable capabilities (Haarhaus & Liening, 2020).

The capacity of businesses to perceive, capture, and respond to opportunities and challenges, enhancing their ability to address unforeseen future circumstances, is an essential competence for organisations seeking to prosper in volatile marketplaces (Haarhaus & Liening, 2020). The study identified a significant gap in research and development capabilities within organisations that generate data to facilitate data-driven

decision-making to inform strategic foresight.

The capacity to engage in strategic foresight is considered of utmost importance since it involves the systematic examination of the external environment to detect potential disruptions. By doing so, businesses may effectively mitigate the negative consequences of such disruptions (Haarhaus & Liening, 2020). The conclusions drawn by Conz and Magnani (2020) about the enhancement of resilience through the reconfiguration of internal structures in response to external disruptions are invalidated by this. This assertion is corroborated by the results of the study, wherein participants disclosed that the critical juncture for the efficacy of agile practices lies in the proactive and ongoing evaluation undertaken by organisations.

6.4.3 Communication and stakeholder engagement

As defined in this study, communication pertains to the act of engaging with both internal and external stakeholders (Sull & Turconi, 2019). The study participants placed considerable emphasis on the importance of communication, which has subsequently formed the basis for adopting agile practices. These observations are consistent with the findings of a recent study conducted by Sreenivasan et al. (2022), which shows that effective communication can enhance an organisation's ability to undergo transformation and increase its responsiveness to change. This evaluation encompasses systematic external environment monitoring, active customer engagement to ascertain their requirements, and the persistent pursuit of collaborative endeavours with stakeholders. The organisation's innovation capability is enhanced through continuous experimentation and data-driven decision-making. When used, this perspective fosters a sense of adaptability that ultimately contributes to the overall resilience of an organisation. Identifying senior leadership as the primary facilitators of these enablers shows the crucial significance of their role in directly shaping the resilience result.

According to Miceli et al. (2021), including customers and other partners in a collaborative setting result in the sharing of risks and resources, ultimately leading to resource optimisation. The incorporation of customers and other partners permits the rapid formulation of responses that are evaluated as they are being formulated, thereby minimising the risk of investment loss, and optimising the response process. In addition, the participants disclosed that it is imperative to consider the engagement of customers

and other stakeholders to develop solutions tailored to their specific needs. Based on the assumption that the engagement of customers and partners enables the prompt development and assessment of responses, hence minimising financial losses and enhancing the efficiency of the response process, the significance of communication to foster awareness and elicit the required actions is paramount. In an agile framework, organisations function as organic entities rather than mechanical systems.

In this context, leaders assume the responsibility of offering guidance, hence facilitating action, while teams carry out the given direction to attain a specific goal before transitioning to the subsequent task. To establish an action-centric process, it is imperative to maintain a consistent, transparent, and open line of communication. The high pace of environmental change necessitates a swift transition towards novel approaches and methodologies. The rapid integration of changes into the business environment may render traditional change management solutions unsuitable.

> *"So as a leader, you need to communicate and clearly communicate and not communicate once." (Non-Executive Director & MD – Multidisciplinary)*

6.5 Summary of discussion of research question 3

The participants disclosed that the successful adoption of agile practices relied on various aspects necessary to foster resilience. The necessity of strategic foresight in maintaining a high agility capability has been revealed. Strategic foresight plays a crucial role in promoting innovation, which is a fundamental driver of agility. Additionally, it has a notable impact on enhancing flexibility, a major capacity associated with agility Gordon et al. (2019).

Moreover, the profound understanding obtained from the act of anticipating future events equips senior leaders with valuable information to make judicious choices that mitigate the consequences of disruptions arising from unpredictability. According to Haarhaus and Liening (2020), the involvement of senior leaders in strategic foresight can effectively improve the organisation's ability to adapt and be flexible, hence enabling prompt response to unpredictable circumstances.

The significance of effectively communicating and engaging with both internal and external stakeholders was underscored. The integration of this aspect should be deeply ingrained into the organisational culture and effectively demonstrated by the senior leadership. The successful implementation of novel practises necessitates obtaining support and acceptance from both internal and external stakeholders. Based on the findings pertaining to research question 3, it can be inferred that people, culture, strategic foresight, and communication play pivotal roles in facilitating organisational agility.

6.6 Conclusion

This chapter has examined the degree to which organisational agility increases resilience in uncertainty through the responses to the research questions provided. The primary drivers of organisational resilience were identified as agility, resource prioritisation, and responsible leadership. The findings of the study indicate that relying solely on agility is inadequate. Instead, resilience can be attained by effectively providing the necessary resources and implementing responsible leadership, which serve as crucial facilitators.

The study participants revealed that agility had many facets and may be deconstructed into four distinct components: heightened awareness, quick reactivity, adaptation, and flexibility. Miceli et al. (2021) identified these components as key factors contributing to the organisation's resilience. The study observed a causal relationship between these components, such that their presence led to increased agility. The attributes were identified as the primary defining features of agility responding to research question 1.

The necessity for senior leaders to possess awareness of market shifts to promptly formulate appropriate solutions has been brought to light. If the leadership or senior leadership fails to prioritise innovation and the ability of the business to be agile, adaptable, and open to new ways of thinking, it presents significant challenges. DC was emphasized as a critical factor in resources optimisation. In addition, it is suggested that DC be applied with the theory of strategic foresight to enhance the expansion of knowledge in enhancing resilience during periods of uncertainty (Haarhaus & Liening, 2020). The participants revealed that robust financial support is essential for the company to acquire the necessary resources and expertise to effectively execute agile practices. The aforementioned factors were recognised as significant obstacles in achieving the level of agility that was responsive to the second research question.

In conjunction with resourcing and optimisation, the role of senior leadership should consistently incorporate strategic evaluation of the aspects that result in resilience. In response to research question 3, the results revealed that senior leaders have a crucial role in providing strategic direction, allocating resources, and cultivating organisational culture. The participants emphasised the significance of fostering a culture that promotes innovative thinking and securing the support and commitment of the teams that embrace and execute these agile methodologies. Given that these competencies and enablers have been recognised as crucial factors in facilitating the implementation of agility, it can be deduced that senior leaders play a significant role in spearheading agility.

Agility, resource prioritisation, and responsible leadership lead to resilience (Sreenivasan et al., 2022). The companies that have exhibited agility in their decision-making processes and effectively reallocated their resources to address the evolving market demands have successfully endured, as revealed by the participants in this study. The findings were utilised to develop a theoretical framework that identifies the essential components contributing to agility in promoting resilience. This framework is presented in the subsequent closing chapter.

Chapter 7: Conclusions and Recommendations

7.1 Introduction

The researcher investigated the role of agility in augmenting organisational resilience in uncertain environments. Agility has been associated with flexibility and adaptability by numerous authors (Christofi et al., 2021, Kahl et al.,2021, Miceli et al., 2022, Troise et al., 2022,). The topic in question has been well-recognised and studied within the domains of supply chain management and manufacturing (Kadenic & Tambo, 2023). Nevertheless, there exists a conspicuous scarcity of scholarly investigations pertaining to this topic within the context of business management.

In recent years, organisations have faced challenges stemming from the complexities of the surrounding environment, which introduces inherent uncertainties (Haarhaus & Liening, 2020). This phenomenon was further intensified by the COVID-19 pandemic, which compelled businesses to restructure their operational frameworks and explore strategies for enhancing their ability to withstand and minimise disruptions resulting from unforeseeable and ambiguous circumstances. The escalating degree of interconnectedness within businesses often gives rise to unanticipated and uncertain behavioural patterns which organisations need to respond to a rapid speed.

One crucial factor to be considered within the dynamic markets in which organisations compete is preserving the organisation's competitive advantage. The pervasiveness of fundamental uncertainty is widely observed in the current corporate environment. Rapid technological advancement, the rise of globalisation, and the escalation of market disruptions have significantly altered the competitive environment, rendering it more volatile and intricate (Haarhaus & Liening, 2020). Organisations must continually strive to maintain a level playing field in the competitive environment and stay one step ahead of their competitors.

The objective of the study was to comprehend the factors and mechanisms that contribute to agility to determine the necessary conditions for agility to enhance resilience. Additionally, the study examined the primary obstacles that could hinder the adoption of agile business practices. Finally, the study examined the influence of senior executives in

facilitating the implementation of these agile methodologies.

The study explored the resilience path of absorptive capacity, which is characterised by the capacity to absorb shocks effectively and sustain stability. Conversely, adaptive capacity refers to the strategies and actions undertaken by an organisation in reaction to shocks, leading to inventive changes that prompt internal transformations (Conz & Magnani, 2020). The perspective above highlights that the organisation strives to return to its pre-shock state. In contrast, Miroshnychenko et al. (2021) argues that resilience is evaluated based on the organisation's capacity to sustain its competitive advantage in a dynamic business environment characterised by constant evolution. The agility trait is commonly regarded as a prominent characteristic of resilience, yet the lack of empirical evidence substantiating its dominance remains a notable limitation. The primary aim of this study was to evaluate the extent to which agility enhances resilience by assessing the various characteristics associated with resilience.

Research question 1 aimed to understand the extent to which the attribute of agility enhances an organisation's capacity to withstand challenges and disruptions in times of unpredictability. This was informed by the literature review, which identified that the role agility plays in achieving an organisation's resilience is understudied. Furthermore, literature on the capabilities that enables an organisation to be agile in a volatile market environment was still nascent (Troise et al., 2022). Academic scholars like Ramdani et al. (2020), Haarhaus and Liening (2020), Bouwman et al. (2017), Troise et al. (2022), and Miceli et al. (2021) emphasise the significance of agility as a catalyst for resilience. The precise characteristics of agile practices and their impact on resilience remain uncertain. Participants attributed the capability of agility to adaptability and flexibility, which are well-studied concepts by scholars such as Conz and Magnani (2020) and Yuan et al., (2022). The participants synthesised the factors that led to the capacity for agility, specifically adaptation, flexibility, heightened awareness, and rapid decision-making. The conclusions reached were consistent with the existing literature evaluation; however, novel viewpoints were also identified. Agility is a capability that drives resilience; however, it can be attained if certain enablers (research question 2) and mechanisms (research question 3) were in place.

Research question 2 was undertaken to identify the principal barriers impeding organisational agility to attain a more profound understanding of the elements that

contribute to the deficiency of agility in organisations. The participants indicated that the effective adoption and execution of agile practices relied on the financial capacity to invest in resources and the efficient utilisation of these resources. It became evident that the absence of investment in these facilitators would hinder the implementation of agile practices, which was the intended solution to address research question 2. Furthermore, the deployment of resources played a significant role in enabling agility as a capability.

Research topic 3 investigated the utilisation of agile practices to gain insights into the critical aspects that contribute to successful deployment. Ultimately, it is imperative to fully grasp the importance of the engagement of senior executives in fostering agility and guaranteeing its effective integration inside organisations. The participants' findings indicated that senior leaders played a crucial role in this context, aligning with the concepts outlined in previous research on strategic implementation and leadership. The crucial aspect in establishing agile and resilient firms is empowering individuals across various organisational domains, enabling them to expedite decision-making processes and undertake suitable activities to effectively address and adapt to disruptive circumstances (Kadenic & Tambo, 2023).

Furthermore, it has been revealed that fostering a culture that embraces innovative thinking and novel approaches to problem-solving is crucial for promoting and implementing agile practices. The significance of obtaining the support and commitment from both teams and consumers involved in implementing these practices was deemed of utmost importance. Moreover, it was determined that effective communication is essential for disseminating agile thinking throughout the organisation and to stakeholders. The collaboration in implementing agile practices has been observed to be enhanced through the active participation of stakeholders (Miceli et al., 2021). One of the important topics from the analysis was the significance of having a proactive perspective when assessing significant environmental changes that influence the implementation of agile practices within businesses. This necessitated the incorporation of strategic foresight into the ongoing implementation of the organization's strategy, with an emphasis on adopting an externally focused approach. Strategic foresight is an ongoing procedure that enables organisations to promptly identify hazards, thereby enhancing their readiness and ability to respond.

Numerous researchers have effectively articulated the deficiency in the existing empirical

evidence pertaining to the subject of agility. The term "agility" is commonly employed to denote the ability to adapt to market changes in supply chain management, manufacturing, and technology (Kadenic & Tambo, 2023). However, there has been a dearth of research investigating agility within the realm of business management. Despite the extensive research conducted on resilience in the field of business management, there is a notable deficiency in the conceptualisation of this term. Moreover, some essential capabilities, such as adaptive and absorptive resilience paths, have been associated with the concept of resilience (Conz & Magnani, 2020). However, there is a lack of data about the primary determinant or mechanism that must be employed to achieve resilience.

The main objective of this study is to provide an academic contribution by investigating the extent to which organisational agility enhances resilience. This research thoroughly examines the essential characteristics that constitute agility, specifically evaluating the extent to which these characteristics are impacted during periods of uncertainty. Furthermore, the study examined the key determinants that support or impede organisational agility, along with the impact of senior executives in fostering the adoption of agile practices. Literature specifically demonstrates that the ability to be agile is a key factor in developing organisational resilience (Christofi et al., (2021); (Khorasani, (2018); Miceli et al., (2021). The findings of the study provided support for this notion as presented in the results. However, it was revealed that the ability to adapt and respond quickly (agility) is contingent upon certain factors and processes that facilitate effective adoption and implementation, particularly in uncertain situations. These were viewed as key enablers to achieve resilience.

Finally, the study offers a realistic and comprehensive framework that assists senior leaders in understanding the necessary components for implementing agile practices. The study's findings emphasise the significance of the mechanisms that revolve around the senior leadership's capacity to promote and execute agility inside the company. The framework emphasises the importance of strategic foresight as a crucial tool for successfully implementing agile practices. Table 9 maps out the key finding of the study which have informed the conceptual framework in Figure 10.

Table 5: Mapping of Framework for Agility as a Driver for Resilience

Market volatility, uncertainty, complex, ambiguous				
Lever	Category	Attribute	Actions & Results	Literature
Capability	Agility and Dynamic Capabilities	Awareness	Research and Development; Environment scanning	(Conz & Magnani, 2020); (Oliva et al., 2019); (Haarhaus & Liening, 2020); (Putritamara et al., 2023); (Kahl et al.,2021); (Troise et al., 2022); (Miroshnychenko et al., 2021); (Miceli et al., 2021); (Khorasani, 2018); (Christofi et al., 2021)
		Quick decision-making	Responsive	
		Adaptability	Reconfigure; Remodel;	
		Flexibility	Reconfigure; Remodel;	
Enabler	Resource and Prioritisation	Financial Capability	Invest; Strong balance sheet	(Miceli et al., 2021); (Sreenivasan et al., 2022); (Rachinger et al., 2019)
		Technology and Innovation	Digitisation; Digital transformation; Creative	
		Adequate Skills	Competency; Upskill	
Mechanism	Senior Leadership	Strategic Foresight	Future Outlook; Commitment from TMTs	Oliva et al., 2019); (Gordon et al., 2019); (Sarpong et al., 2019); (Haarhaus & Liening, 2020);
		People and Culture	Buy-in; Agile leadership; Empowered SMTs	

		Communication and Stakeholder	Collaboration; Clarity of purpose; Clear communication	(Acciarini et al., 2021)
Organisational resilience				

7.2 Proposed framework

The study's findings indicate that various factors contribute to agility. Each component has a unique role in facilitating the development of agility to attain resilience. Market volatility and uncertainty can lead to significant shock and disturbance, resulting in a discourse inside operations and adversely affecting their continuity.

The many roles and contributors inside an organisation were categorised into three distinct categories: agility as a capability, enablers for embracing agility, and mechanisms for applying agile practices.
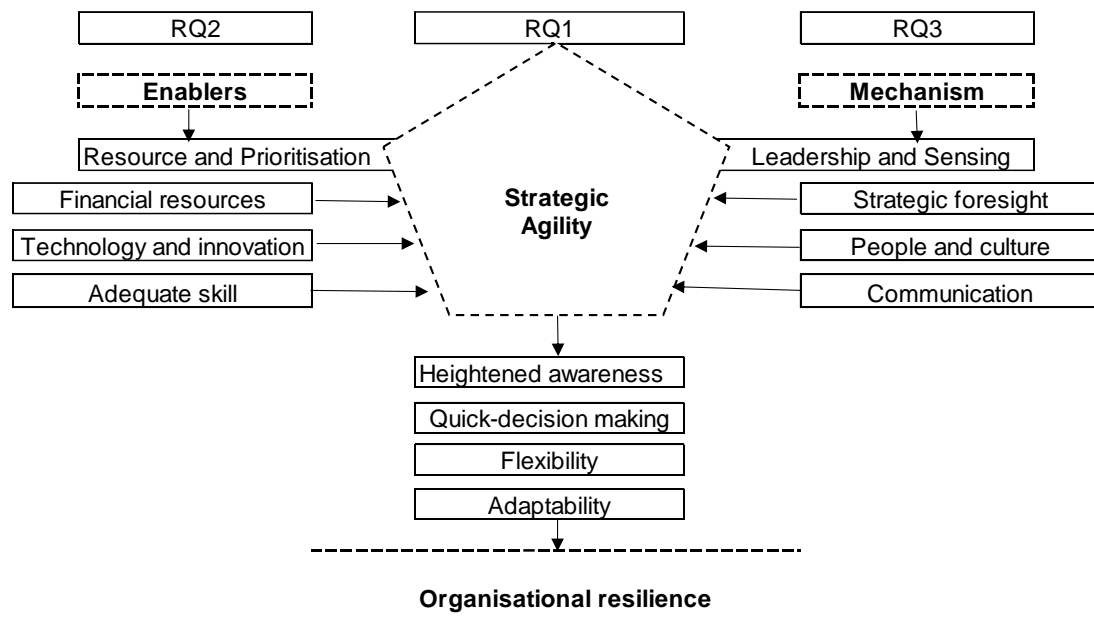

Figure 9: Conceptual Framework for Agility as a Driver for Resilience

Figure 10 above depicts the levers that must be activated to facilitate the influence of agility on organisational resilience. The factors that contribute to disruption are commonly identified as volatility, uncertainty, complexity, and ambiguity. These are exogenous elements that organisations lack control over yet exert a substantial detrimental impact on them. Organisations prioritise developing measures and strategies to mitigate the impact of interruptions.

The proposed framework suggests that strategic foresight outcomes build agility capability by providing awareness to senior leaders and stakeholders of the organisation who can

respond timeously and broaden and deepen the decision-making techniques. Additionally, the organisation can reconfigure its process, business model, and structure to make it adaptable and flexible to the changing market and customer needs, thereby maintaining its relevancy and competitive advantage during uncertainty (Haarhaus & Liening, 2020). As illustrated by the proposed framework in Figure 9, strategic foresight is an ongoing process that is integrated into the day-to-day running of the business and is at the top of the agility capability. Foresight and knowledge management must encompass part of the organisational process and be governed to ensure its ongoing effectiveness (Oliva et al., 2019).

Implementing agility as a core competency depends on crucial facilitators, including the financial capability to allocate resources towards technological investments that foster innovation. In addition, it is imperative for the organisation to acquire the essential competencies required to facilitate technological adaptation that encompasses the process of digital transformation. The optimisation of agility and effectiveness can only be achieved by utilising these resources.

The effective implementation and practice of agility within an organisation relies on ongoing strategic anticipation, a harmonious and empowering corporate culture, and effective communication with both internal and external stakeholders. The responsibility for this function rests with the senior leaders within the business, which is why the guiding framework has been specifically tailored for their use. Moreover, the framework has been developed by incorporating insights from seasoned executives, drawing upon their extensive commercial acumen and expertise.

Ultimately, the framework suggests that organisational resilience will be restored when the three levers (capability, enablers, and mechanisms) are pulled. This framework is intended as a guideline, and the researcher notes that certain elements may differ depending on the size of the organisation and the industry in which it operates.

7.3 Practical implications of the study

The impact of uncertainty and volatility is a known phenomenon in business, particularly after the COVID-19 pandemic. In addition, the impact on resilience has been extensively

researched by scholars, with findings that indicate that uncertainty has negatively impacted resilience.

Findings from interviews further substantiated this assertion by scholars as they shared their experiences and insights on how the uncertainty brought by COVID-19 impacted organisations. In certain instances, the senior leaders interviewed made references to other forms of disruption that impacted the business model and continuity of organisations, confirming the latitude of disruption and its impact on business continuity.

The research study provides systematic and coherent guidance for senior leaders on enablers and mechanisms that must be in place to ensure the adoption and implementation of agile practices within organisations during uncertainty. The implementation of problem-solving strategies by businesses significantly impacts their resilience, as highlighted by Acciarini et al., (2021).

The participants propose the establishment of dynamic core skills, the cultivation of human capital, the efficient utilisation of emerging technology, the adoption of beneficial tactics, and the development of novel organisational structures and culture. Additionally, it is recommended that organisations develop a strategic long-term perspective and employ foresight to effectively manage the trade-off between short-term and long-term requirements.

Using strategic foresight enhances the organisational capacity for adaptability, a critical determinant of agility (Oliva et al., 2019). Moreover, applying strategic foresight exerts a substantial influence on the rationality of decision-making, thus enhancing the quality of the decision-making processes undertaken by senior leaders.

This approach will enable enterprises to successfully navigate through moments of disruption and transition, ultimately establishing a new state of equilibrium inside the firm. The imperative for incorporating agility into business models and prioritising customer-centricity indicates that organisations are embarking upon a period characterised by ongoing transformation.

7.3.1 Use for senior leaders in decision-making

The study provides systemic and coherent guidance to senior leaders, enabling them to

make well-informed decisions in driving the organisation's objectives. The process of scanning, a key component of strategic foresight, empowers senior leaders to expand and enhance their decision-making capabilities, enabling them to recognise and understand shifts occurring within their operating environment.

Strategic foresight informs the organisation's dynamic and agile capabilities, which are key drivers of competitiveness in volatile markets. It contributes to integrating the organisation's core competencies, skills adequacy, culture, and leadership to attain its goals and strategies (Oliva et al., 2019).

7.3.2 Driving customer centricity

The purpose of a company is to create and serve a customer, which is achieved by maintaining a value proposition with the objective of creating value for the customer (Fjeldstad & Snow, 2018). The generation of awareness through the strategic foresight process contributes to the production of value for customers by ensuring the maintenance of adaptable and flexible business models. Moreover, as emphasised by the participants in this study, the practice of strategic foresight promotes the development of innovative solutions that offer a competitive advantage by meeting customers' evolving wants and demands.

7.4 Limitations to the research

The study inherently has several limitations due to its generalisability and interpretation. Furthermore, more focused research examining individual businesses could yield additional insights in identifying industries that have greater resilience in uncertainty. Additional limitations to this study are discussed in the preceding paragraph.

7.4.1 Time horizon

A cross-sectional study was performed where the data was collected through interviews once and at a point in time. Because the research is conducted in such a brief period, there may be limitations on the scope of the information gathered.

7.4.2 Researcher's bias

The researcher recognised the risk of researcher bias and conducted semi-structured interviews in accordance with prepared interview guidelines designed to reduce the researcher's bias.

7.4.3 Variations to forms of uncertainty

The primary objective of this study was to examine the effects of the COVID-19 pandemic as a demonstration of uncertainty in the business environment. The researcher acknowledges the wide-ranging relevance of various factors contributing to volatility, ambiguity, complexity, and uncertainty.

7.4.4 Location

The sample was obtained from the Eastern Cape and Gauteng regions in South Africa, limiting its generalisability to other continents. Moreover, the study was carried out across many industries, thereby employing a more comprehensive methodology. A targeted examination of the effects of uncertainty within a particular industry might offer more granular and distinctive strategies for enhancing agility and resilience.

7.5 Suggestions for future research

Upon considering the perspectives and opinions of the participants, it became evident that strategic foresight played a crucial role in fostering organisational resilience. Two crucial study elements have surfaced as significant topics that necessitate further investigation.

The study participants were drawn from several businesses. As the researcher interacted with them, it became apparent that there were consequences specific to each industry that should be considered. The telecommunications and banking sectors, which underwent digital transformation prior to the disruptive and urgent circumstances brought about by the COVID-19 outbreak, have shown greater resilience in mitigating the impacts of the disruption. The implementation of technology-driven investments and adaptations had already been established prior to the onset of the COVID-19 pandemic, enabling a prompter response, and subsequently mitigating the extent of its damage. The inadequate

participation of participants from the telecommunications and banking industries, with only two representatives each, hinders the ability to make meaningful conclusions about these industries though interest insight came to the fore. A suggestion for future research in this regard would be to understand how financial services industries have adopted digitization as capability to extend its competitive advantage.

Lastly, there is a consensus amongst scholars on the importance of strategic foresight in the turbulent environment. Future research could be on investigating the relationship between strategic foresight and resilience to extend on the work in that area. The researcher found that there was limited empirical evidence gathered in that area.

7.6 Conclusion

The study presented subjective criteria derived from senior leaders' thoughts and views. These factors were then included in a guiding framework that may be effectively utilised for adopting and implementing agile practices during times of uncertainty. A total of 14 semi-structured interviews were undertaken, yielding significant findings regarding the pivotal factors contributing to the augmentation of organisational agility through implementing agile practices.

The analysis of the findings and synthesis of the data were conducted, considering the literature study. This process aimed to identify important patterns and determine the major enablers and mechanisms contributing to adopting agile practices effectively. The study has substantiated that implementing agile practices fosters robust dynamic skills that guarantee organisational resilience in uncertainty. Significantly, agility was fostered by crucial factors such as financial competence, technological adoption, innovation, and sufficient skills. Furthermore, the effective adoption of agile methodologies relied on critical processes facilitated by senior leaders, encompassing strategic foresight, organisational culture, and communication.

This study provides senior leaders with a systematic and unified framework that enables them to make informed decisions to effectively accomplish organisational objectives. Strategic foresight plays a vital and ongoing role in organisational operations, enabling top executives to enhance their decision-making abilities and effectively recognise and comprehend trends within the operational environment.

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APPENDIX 1: CONSISTENCY MATRIX

Title: The mediating role of agile business practices in enhancing resilience during uncertainty: Senior leaders' perceptions

Research question	Sections in the literature review	Data collection tools	Analysis techniques
1) How does the attribute of agility enhance the capacity of an organisation to withstand challenges and disruptions in times of unpredictability?	Impact of uncertainty on organisations Organisational resilience Strategic agility	Interview guide Part a, b, and c	Thematic analysis
2) What are the key barriers to the successful adoption of agile practices within organisations?	Resource optimisation	Interview guide Part d	Thematic analysis
3) How do senior leaders influence the adoption of agile practices and foster a culture of resilience?	Strategic foresight	Interview guide Part e	Thematic analysis

APPENDIX 2: ETHICAL CLEARANCE

**Gordon Institute
of Business Science**
University of Pretoria

Wanda Lunika <24183467@mygibs.co.za>

Ethical Clearance Approved
1 message

Masters Research <MastersResearch@gibs.co.za>
To: "24183467@mygibs.co.za" <24183467@mygibs.co.za>
Cc: Masters Research <MastersResearch@gibs.co.za>

16 August 2023 at 08:35

**Gordon Institute
of Business Science**
University of Pretoria

Ethical Clearance
Approved

Dear Wanda Lunika,

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

You are therefore allowed to continue collecting your data.

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

Ethical Clearance Form

Kind Regards

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

APPENDIX 3: CONSENT FORM SENT TO PARTICIPANTS

**Gordon Institute
of Business Science**
University of Pretoria

I am currently a student at the University of Pretoria's Gordon Institute of Business Science(GIBS), and I am completing my research in partial fulfilment of a Master of Business Administration (MBA). I am conducting research to understand how agile business models contribute to the resilience and effectiveness of organisations. The research consequently aims to contribute to literature by exploring senior leaders' perceptions on key drivers for resilience in organisations during periods of uncertainty such as the Covid-19 pandemic and disruption.

Senior leaders are responsible for making decisions about the organisation's business model and resilience. Their perspectives are therefore essential to understanding how agile business models can be used to enhance organisational resilience.

You are requested to participate in the interview. Our interview is expected to last for 45 minutes.

Please be advised that your identity and the information that will be collected during the interview will be kept confidential and anonymous. Your responses will be recorded to reflect the true intentions of your responses and captured without manipulation. All data will be reported without identifiers. Your participation is completely voluntary, you may refuse to participate without penalty, and you are free to withdraw your participation at any point during this process.

If you have any concerns, please contact me or my supervisor, using the details providedbelow:

SUPERVISOR: **RESEARCHER:**

Email: **Email:**

Mobile number: +27 83   **Mobile number:** +27 72

As a way to show that you do give consent to fully participate in this study, please sign on the space provided below:

RESEARCH RESPONDENT'S SIGNATURE: _____

APPENDIX 4: INTERVIEW GUIDELINE

Details about the participants

Name:

Role/Position:

Organisation:

Industry:

Part a: Background context

1. How have periods of uncertainty, such as the COVID-19 pandemic, affected organisations and the business environment?
2. What were the most significant challenges or unknowns that organisations dealt with during this time?
3. Would you say organisations operating after the pandemic adopted agile business models?

Part b: How well agile business models work

1. What are the characteristics of agile business models?
2. How does an agile business model contribute to the organisation's ability to adapt and recover during disruptive events?
3. What role do senior leaders play in driving the adoption of agile practices and fostering a culture of resilience within the organisation?

Part c: Organisational resilience

1. How did your organisation's ability to handle the pandemic change after it adopted agile business models?
2. Did these models help your organisation change its strategies, processes, or products to respond to changes in the market? If you answered yes, please provide examples.
3. What does organisational resilience mean to you, and how would you define it?
4. Is there a link between resilience and the adoption of agile practices?

5. How did an organisation's ability to handle the pandemic change after adopting agile business models?

6. Did these models help organisations change strategies, processes, or products to respond to changes in the market? If you answered yes, please provide examples.

Part d: Challenges and lessons learned.

1. What are the key barriers of agile business models?

2. What are the challenges of implementing agile business models in organisations?

Part e: Future considerations

1. How will agile business models fit into the organisations' plans and operations after the pandemic?

2. Do you have any suggestions for changes or improvements that could help agile business models work better in the future?

3. What advice or insights would you offer to other senior leaders looking to enhance their organisation's resilience by adopting agile practices?

APPENDIX 5: CODING AND THEME PATTERNS

Illustration of themes that emerged from data analysis extracted from Atlas.ti software.

Research questions	Themes	Code	No. of codes
Research question 1	Adaptability	○ Business continuity	1
		○ Collaborate	2
		○ Competitiveness	3
		○ Consequences of not being agile	4
		○ Consultative	5
		○ continuous thinking	6
		○ Improved systems and processes	7
		○ Improvements	8
		○ new ways of working	9
		○ Reconfigure	10
		○ Refocus	11
		○ Remodel	12
Research question 1	Agile business practices	● Agile	13
		● Agile strategies	14
		● agility	15
		● Capability	16
		● Efficient	17
		● Enforced change	18
		● new global workforce	19
		● New way of thinking	20
		● Openness	21
		● Organisational policies	22
		● Pivot	23
		● Proactive	24
		● redefine	25
		● Reduced cost of doing the work	26
		● Success	27
		● Transform	28
		● Resilient	29
		● Quick decisions	30
Research question 1	Flexibility	● Flexibility	31
		● Rigid	32
Research question 1	Heightened Awareness	● Economic environment	33
		● Economy	34
		● External factors	35
		● Know your business	36
		● Outward looking strategies	37
		● Relevancy	38
		● Market	39
		● Market changes	40
		● Problem solving	41

Research question 1	Impact of uncertainty	○ Aftermath of covid	42
		● Business disruptions	43
		● Business performance	44
		○ Costs increased	45
		○ COVID impact	46
		● Diversify	47
		○ globalisation	48
		● HR	49
		● Human element	50
		● Impact of Disruption	51
		● Impact on customers	52
		● Impact on suppliers	53
		● Inability to plan	54
		● Industry specific	55
		● Negotiation	56
		● Operational model	57
		● People	58
		● Productivity	59
		● Regulation	60
		● Retrenchment	61
		● Uncertainty	62
		● Work from Home	63
Research question 1	Quick response	○ Quick response	64
		○ respond	65
		○ Survive	66
Research question 2	Resource optimization	● Adequate skill	67
		● capacity	68
		● Capex	69
		○ Critical skill	70
		● Financial capability	71
		○ good implementation	72
		● Resources	73
Research question 2	Barriers of implementing agile strategies	○ Bureaucracy	74
		● Challenge	75
		● Challenges	76
		● Legacy issues	77
		● Loadshedding	78
		● old way of work	79
		○ Policy	80
		● Resistance	81
		● Size of organisation	82
Research question 2	Financial Capability	● Commercial viability	83
		● Financial implications	84
		● Leverage	85
		● Liquidity	86
		● Strong balance sheet	87
Research question 2	Technology	● Adoption	88
		● AI adoption	89

		● Early adopter	90
		● Infrastructure	91
		● innovation	92
		● Innovative	93
		● Late adopter	94
		● Technology adoption	95
		● technology investment	96
Research question 3	Role of senior leaders	● Advise to senior leaders	97
		○ balancing effect	98
		● Buy in of team	99
		● Characteristic of good culture	100
		○ comfortable environment for employees	101
		○ Communication	102
		○ Critical thinking	103
		○ Culture	104
		○ Direct communication lines	105
		● Drive strategy	106
		○ empower staff	107
		● Good client relationships	108
		● leadership	109
		○ Listen to people's ideas	110
		● Long term partnerships	111
		● open communication	112
		● Open to change	113
		● Responsive leadership	114
		● Right Information	115
		● senior leader	116
		● Significant role	117
		● Stakeholders	118
		● Top-down approach	119
		● Transparent	120
		● Trust	121
Research question 3	Strategic Foresight	● Awareness	122
		○ continually changing	123
		○ Contract income	124
		○ customer centricity	125
		● Diverse workforce	126
		● Focus on core	127
		● Foresight	128
		● Impact assessment	129
		● Industry knowledge	130
		● Inward vs outward approach	131
		● Long-term view	132
		● Plan	133
		● Preparedness	134
		● Research and development	135
		● Scanning environment	136
		● Scenario planning	137

Sensing	138
Sound decision	139
Unforeseen	140
Unpredictable	141

Network group from Atlas.ti