

UNIVERSITY OF KWAZULU-NATAL

The strategic impact of resilience on performance optimisation of small and medium enterprises (SMEs) in the Manzini region, Eswatini

**Julius Warren Kule
222127377**

A Thesis submitted in fulfilment of the requirements for the degree of Doctor of Business Administration

**Graduate School of Business & Leadership
College of Law and Management Studies**

Supervisor: Prof. MacDonald Kanyangale

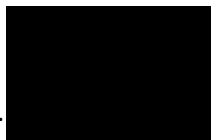
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DECLARATION

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..

DEDICATION

This thesis is dedicated to the Almighty God, the creator of all and giver of knowledge.

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ABSTRACT

Disruptions in the micro and business environments have highlighted the need to develop resilient capabilities to optimise the performance of SMEs. However, existing research findings on resilience remain inconclusive. This quantitative study investigated the strategic impact of resilience on the performance optimisation of SMEs in Eswatini. A gate keeper's letter was obtained granting permission to collect data. Using a cross-sectional design, census sampling and self-administered questionnaires, data was collected from 206 owners/managers of SMEs in the Manzini region of Eswatini. Cronbach's alpha was used to test reliability while confirmatory factor analysis was used to validate the findings. Data was analysed using descriptive and inferential statistics. Before the analysis, the study conducted fit indices to determine the appropriateness of the data with the selected analysis method. All fit indices showed positive results, thus allowing the analysis to proceed using structural equation modelling (SEM). Data on gender, age, highest level of education, role in the SME, number of years in role, age of the business, and whether the company is involved in planning were descriptively analysed. Five hypotheses were tested for significance in inferential statistics. Pearson's correlation coefficient, multiple regression analysis and (SEM) via lavan package syntax from R-studio in JASP 0.18.2. Results of the study revealed a significant relationship between resilience and performance optimisation of SMEs in the Manzini region, Eswatini. The tested, integrated model showed that strategic foresight and absorptive capacity have a direct and significant relationship with performance optimisation of SMEs, while strategic orientation was determined to predict the resilience of owners/managers of SMEs. However, defender and reactor orientations were dropped for linear regression analysis because of poor factor loading. The study developed an integrated resilience model with a multi-dimensional perspective to optimise the performance of SMEs, incorporating strategic orientation, strategic foresight and absorptive capacity. The study contributes knowledge on SME resilience and performance by developing an integrative model of SME resilience. The model is useful to future researchers, policy makers, owner-managers and is recommended for adoption in Eswatini and similar contexts because of its holistic nature in understanding and creating resilience in SMEs. Future areas for research are highlighted.

Keywords: Absorptive capacity, performance, resilience, strategic foresight, strategic orientation, Eswatini.

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CHAPTER 1: INTRODUCTION OF THE STUDY

“Research is seeing what everybody else has seen and thinking what nobody else has.”...

Anonymous

1.1 INTRODUCTION

The World Trade Organisation Report (2023. p.66), reported that micro, small and medium enterprises (MSMEs) are vital for job creation, especially in developing economies, as they account for a significant proportion of businesses and employment. In developing economies, MSMEs export 11 percent of their sales on average, compared to about 33 percent of exports from their large counterparts (World Trade Organisation Report, 2023). Knight and Cavusgil (1996), argue in their article, “The born global: a challenge to traditional internationalisation theory” that there are two types of enterprises: the small traditional enterprises that make goods inherited from past generations and, the modern enterprise that uses high technology, in search of new markets to maximise efficiency. The conventional firms venture in a slow process of internationalisation while the born-global enterprises are different and engage in internationalisation early on and have a global vision of their markets. Authors such as Knight and Cavusgil (1996), McKinsey and Company (1993), and Rennie (as cited in Rodríguez-Serrano and Martín-Armario, 2019) have highlighted the importance of small born-global firms.

According to Murat and Algan, (2019), twenty percent of new small and medium enterprises (SMEs) in developed countries suffer from mortality within the first two years, while 50% last for less than 5 years with 10% being able to survive for more than five years. SMEs face various challenges to survive in a volatility, uncertainty, complexity, and ambiguity (VUCA) context. For example, Murat and Algan, (2019) argue that SMEs face challenges to survive in a VUCA context. Environmental VUCA has made it impossible to determine and predict how disruptions due to changes will affect organisational activities (Yilmaz-Borekci-Say & Rofcani as cited in Sezen-Gültekin et al., 2020). Although SMEs operate in a VUCA environment, few SMEs survive after a disruption (Fatoki, 2018).

The emergence of COVID-19 created unprecedented uncertainty (Sharma et al., as cited in Simms et al., 2022), causing global lockdowns, disrupted travel and supply chains as well as affecting social activity and behaviour (Evans; Sharma et al., as cited in Simms et al., 2022). COVID-19 dramatically changed the economic conditions in which micro, small, and medium (MSM) businesses operate, creating a new way of thinking about the business

processes in response to disruptions (Brown et al., 2022). Kerry et al., (2022), opine that the ability of an organisation to respond to a crisis is vital to ensure business continuity. This view is supported by Linnenluecke (as cited in Brown et al., 2022), who advanced the view that whilst unexpected disruptions take many organisations by surprise, some organisations can withstand disruptions. In their study entitled ‘Uncovering the effectual-causal resilience nexus in the era of COVID-19: A case of a food sector SMEs’ resilience in the face of a global pandemic in the UK’, Simms et al., (2022), argue that businesses around the world have been confronted by unexpected disruptions affecting the way they operate. Thabiso and Sphehile (2023) argue that COVID-19 pandemic has had a significant impact on SME’s financial resilience in South Africa, with many experiencing a decline in sales and cash-flow. These authors further advance the view that understanding the variables influencing SMEs’ financial resilience is crucial in enabling them to make informed decisions.

The emergence of COVID-19 presented an opportunity for the academic community to understand the impact of global phenomenon on SMEs and how firms responded to such global disruptions (Kerry et al., 2022). Although SMEs have been facing financial and non-financial challenges, COVID-19 introduced additional uncertainties regarding how to maintain business continuity amidst disruptions. The disruption of SME activities calls for expertise, resilience, and perseverance at the managerial level of the organisation to enhance resilience and boost productivity (Zutshi et al., 2021). Organisational resilience is linked not only to respond to changes in the environment but to events that may affect the stability and security of the organisation (Annarelli & Nonino as cited in Iborra et al., 2020). To maintain stability and security, firms must be able to resist, respond and recover from disruptions. A study by Sara et al., (2020) entitled “Staying alive during an unfolding crisis: How SMEs ward off impending disaster in Sweden” argue that although SMEs require external support, it is important to ask what roles they play in managing crisis. This view is supported by Burnard and Bhamra (as cited in Simms et al. (2022) who argue that disruptions offer researchers the opportunity to investigate how firms react to disruptive events using resilience lenses. Mithani (as cited in Simms et al., 2022), advises that in studying how firms respond to disruptions, resilience should be considered a dynamic process where disruptive events are ongoing rather than static. This view, therefore, allows researchers to gain critical insights into how SMEs have been affected by disruptions as well as develop knowledge of business capacity building for business recovery and resilience in crisis. To resist and react to high levels of threats, and uncertainty requires a certain capacity that provides SMEs with the

security, stability, and the perception that they can withstand disruptions (Iborra et al., 2022). To withstand disruptions, organisations must promote learning, through absorptive capacity (Cheng & Lu, 2017; Cohen & Levinthal 1990; Goail & Al-Hakimi, 2021a).

Whereas absorptive capacity (AC) is essential to promote learning (Cheng & Lu, 2017, Cohen & Levinthal, 1990, as cited in Goail & Al-Hakimi, 2021a), AC has been explored in connection with supply chain risk and uncertainty. This stream of literature demonstrates that acquainting, assimilation and exploiting external knowledge is particularly important when firms face disruptions (Gölgeci & Kuivalainen, 2020; Miroshnychenko et al., 2020). However, the influencing role of absorptive capacity is still limited, thus calling for further research (Goail & Al-Hakimi, 2021a). Iborra et al. (2020) argue that small and medium enterprises need to be able to resist and react when faced with disruptions. They must be able to resist, respond and recover when disruptive events threaten their existence.

However, Iborra et al. (2020) argue that studies on firm level antecedents of resilience offer contradictory propositions (need for experimentation and reliability). The study by (Minovic et al., 2016a) entitled, “Strategic Orientation of Small and Medium Enterprises (SMEs): Empirical Research in Serbia” found that literature dealing with the strategic orientation of SMEs in both developed and developing countries is extensive. However, Zack (as cited in Minovic et al., 2016a) argues that strategic advantage may come from more than knowing competitors, although such a link between strategic orientation and competitive advantage is not articulated.

Contextually, the SME sector of Eswatini, as highlighted by the Eswatini’s Poverty Reduction Strategy and Action Programme of 2005 (PRSAP) is the primary source of livelihood for the poor, unemployed, women, school leavers and disadvantaged members of society (Alliance for Financial Inclusion, 2018; Eswatini National Development Plan, 2019). Since the sector employs people who cannot find jobs in the formal sector, the SME sector has been labelled a great potential for alleviating unemployment and poverty. The 2013/2014 Eswatini Ministry of Labour and Social Development labour force survey revealed that unemployment is at 28.1% (FinScope, 2017). This unemployment rate necessitated the need for government and development partners to offer support to SMEs to help address social challenges as well as attract other forms of investments. To boost the productivity of SMEs, several initiatives such as incubation offered by SEDCO and Youth Enterprise Fund to grow the sector has been implemented (Eswatini National Development Plan, 2019). Despite such

interventions, the SME sector is still wrought with high mortality and low productivity. On the international scene, the growing yet limited scholarship in unravelling the context of disruption in SMEs falls short of developing comprehensive recommendations that would boost their performance while enhancing their creativity and resilience. Therefore, this study seeks to develop a multi-dimensional resilience model to optimise SME performance. Incorporating variables such as strategic foresight, absorptive capacity, and strategic orientation in the model enhances the understanding of how these variables contribute to the ability of SMEs to adapt, withstand and thrive in the face of uncertainties. The introductory chapter discusses the historical origin of small and medium enterprises and the current state of knowledge in the field, highlighting gaps in existing research, and demonstrating the significance of the study. In pursuit of this aim, the introductory chapter presents the background of the study, the statement of the problem, the contribution of the study, the purpose of the study, the objectives, and the hypotheses of the study. The chapter also presents the significance, limitations, and summary of the chapter.

1.2 HISTORICAL ORIGIN OF SMALL BUSINESSES

Historically, multinational companies in the developed world started as small cottage industries or organisations (Samuel, 2017). For example, in Italy, the fashion industry was built on the backbone of “mom and pop” cottage industries (Torkinlampi, 2017). In China, the last two decades have witnessed a remarkable rise of this country as a global economic powerhouse. The growth of the Chinese economy resulted from carefully planned business planning and execution. China has become the world’s “work-house” because of its low-tech manufacturing activities. From a state-controlled socialist state to a country that has adopted a market-oriented approach to penetrate global markets.

SMEs continue to play a significant role in the transformation of the Chinese economy, the government of China integrated the SMEs agenda in its national and social development strategic planning, eventually leading to the development of numerous legislations that promote SMEs (Muriithi, 2018). For example, between 2002-2014, the Chinese government promulgated SMEs’ promotional law. The law focused on improving policies and measures geared towards developing SMEs while ensuring an environment for SMEs to grow while pursuing innovative initiatives. Other structural changes took place between 2016-2020. The 13th and 14th Five-Year plans provide guidance to reforms in legislation and the financial sector to promote SMEs so that they participate in the economy ((Xinhua News Agency, 2021). In Britain, the Industrial Revolution did not begin with large-scale manufacturing.

Most factories/businesses started as primary investments, like spinning Jenny and flying shuttles that dramatically accelerated productivity in the textile industry (Samuel, 2017; Torkinlampi, 2017).

In Africa, the needs assessment study on policy and institutional reforms for SME development in Africa region by the Japan International Cooperation Agency (JICA) of 2005 shows results of SME policy reforms in South Africa, Tanzania, Uganda, Ghana, Nigeria and Cameroon. Generating recommendations to spur the promotion of the SME sector was a key objective of the study (Japan International Cooperation Agency, 2005). In South Africa, the study revealed that although the SME sector was neglected before 1994, the post-apartheid Government of South Africa prioritises SMEs. Policy reforms include access to finance, market access and local business promotion policy. In Tanzania, the SME policy was developed in 2003 by the Ministry of Industry and Trade (MIT). The government has made a deliberate effort to address challenges associated with access to finance and the promotion of SMEs by local authorities. Although reforms have been made, access to finance is still a challenge. Much as Uganda has no explicit SME policy, several policies are directed towards SME development. Although reforms in the financial sector have taken place since 1992, the financial and banking sectors underdeveloped. The report further revealed that although efforts exist to support SME development, local governments are most concentrated on providing basic infrastructure rather than on issues that directly affect the growth of SMEs. However, due to Uganda's economic structure, which is characterised by many micro-enterprises, assistance to improve the SME sector is urgent.

Ghana has had a long history of policy development since 1981. The National Board for SMEs Act of 1981 was enacted to establish an organ for the development of the SME sector. Presently, SME policies and strategies have been included in the Private Sector Development Strategy, with a key focus on alleviating challenges within the private sector. Regarding Nigeria, the development of the SME sector is pivotal to increasing employment for young people. The National Economic Development Empowerment and Development Strategy (NEED) focused on promoting the SME sector. Other reforms, such as the formation of the Small and Medium Enterprise Development Agency (SMEDAN), were completed in 2003, with a mandate to promote SMEs (Japan International Cooperation Agency, 2005). With regard to Cameroon, there is no specific law that is aimed at promoting SMEs. What exists is the Investment Chart (IC). The IC is a law aimed at promoting investment from a board and within the country.

In the early days, Joseph Schumpeter (as cited in Herr and Nettekoven, 2017) advanced the view that a firm is innovative when it creates new combinations of production factors. The introduction of new goods or new goods with better quality forms the mantra of an innovative firm. In ancient times “Schumpeterian firms triggered changes and, in this way, developed the productive power of the economy”. According to Herr and Nettekoven (2017), Schumpeter advanced the idea of “creative destruction” or that creative firms led to the “destruction” of existing structures, including firms that cannot adjust.

By nature, SMEs are Schumpeterian, although most in developing nations are driven by poverty (Herr & Nettekoven, 2017b). According to Hobday and Perini (as cited Herr & Nettekoven, 2017), “there is a major difference between a business of whatever form and being an entrepreneurial in the sense of being a carrier of new technology, skills, and capabilities.” Herr and Nettekoven (2017) argue that there are three groups of SMEs. First, Schumpeterian SMEs focus on innovation and creating something new. Second, there is the category of SMEs which are called normal SMEs. These SMEs are adaptive in nature to changes brought about by the creative destructive nature of the Schumpeterian SMEs. Such SMEs mainly react to pressures from competitors although unfortunately, do not change or innovate their businesses of their own accord. The last category of SMEs is poverty-driven SMEs, which are the result of a lack of economic development combined with a lack of employment opportunities and an insufficient welfare state. This category of SMEs lack innovative capacity and potential to innovate or increase productivity. These SMEs survive based on cheap labour characterised by child labour with exploitative working conditions. SMEs in this category make very little and sometimes no contribution to economic development (Herr & Nettekoven, 2017). This view is supported by a study by Beck et al., (2003) who established that there is no significant relationship between SMEs and poverty alleviation. The study also established that there is no significant association between the size of the SME sector and income of the poorest quintile of society. Studying the categories of SMEs is significant because it provides relevant information on how such firms can be upgraded in developing countries to spur economic growth and innovation. Since resilience enables firms to establish mechanisms to recover from disruptions, which can, in turn lead to innovation and increased productivity (Herr & Nettekoven, 2017a). Indeed, this view was discussed by Schumpeter (as cited in Herr & Nettekoven, 2017a), arguing that a firm is innovative when it creates new combinations of production factors. Such productive factors may include introducing new goods, improving the quality of existing ones, or reorganising

the firm. Fairlie and Fossen (2018) state that a common finding in entrepreneurship literature is that business creation increases in recessions. This way, the counter-cyclical pattern is examined by separating the creation of business into two: “opportunity” seeking and “necessity” entrepreneurship. Opportunity-seeking entrepreneurship involves business creation when an entrepreneurial opportunity is caused by random shocks in the economy, igniting an increase in demand. Robert and Frank (2018) further argue that individuals who are initially registered as unemployed before starting business fall in the category of necessity entrepreneurs. The criticism of this categorisation is that it is subjective because the concept of unemployment is relative in its definition. However, opportunity-seeking SMEs thrive better in disruptive environments (pro-cyclical) than those established to alleviate poverty (counter-cyclical). Zervos (as cited in Beck et al., 2003) disagrees with this view because SMEs across different countries cannot be assumed to be the same. Contextual variables play a significant role in influencing the behaviour of SMEs and their impact on economic growth.

SMEs historical origin remains precisely unknown because they have existed in different forms. Throughout the world, SMEs have been recognised as a vital element of world economies, especially in developing countries (Runde, 2018). During ancient times, small businesses in the form of artisans, craftsmen, and traders in countries such as Mesopotamia, China (Zhang et al., 2015), and Egypt played a significant role in the trade and commerce of such economies. In medieval Europe, guilds emerged as entities responsible for protecting the interests of artisans and craftsmen (Bosshardt & Lopus, 2013). To protect their interests, guilds provided training, instituted standards, and supported the growth of small businesses.

The 18th and 19th centuries introduced enormous changes to the economies of the world, especially in Europe where the industrial revolution was taking shape. Although the Industrial Revolution ushered in the development of large-scale industries/businesses, small businesses continued to thrive in certain sectors, especially textiles, local services, and crafts, while some struggled (Mokyr, 2006). According to Mokyr (as cited in Ahlstrom et al., 2019a), an intellectual debate on the relationship between the Industrial Revolution and entrepreneurship has become prominent. Mokyr (as cited in Hodgson, 2022) argues that people choose ideas consistent with their beliefs. Innovation is a result of replication. Mokyr (as cited in Ahlstrom et al., 2019) argues that spurred by inventions, and new venture creations, new industries may alter the economic landscape of many societies. Ahlstrom et al. (2019), argue that research has focused on concepts of organisation and their output, such as innovation and new venture creation as key drivers of economic growth. New organisations

and established ones interact, leading to the creation of a new normal that leads to the creation of new solutions, products, business models and markets (Schumpeter, as cited in Ahlstrom et al., 2019). Morkyr (2006) raises a fundamental question: does entrepreneurial behaviour engender economic progress and technological change, or do entrepreneurs respond to opportunities emerging from new techniques and markets? After World War II, countries renewed their focus to build their economies, with most countries adopting capitalism. To speed up the recovery process after the devastating war, SMEs were again found to be the engines for economic transformation, creating employment opportunities, and fostering innovation and economic growth. The years preceding World War II were marked by the unprecedented speed of economic recovery from the most devastating conflicts (World Economic and Social Survey, 2017).

In Africa, Green (2015) argues that many indigenous economies had vibrant entrepreneurial cultures before the arrival of colonial powers, with most Africans engaged in hunting, agriculture, mining and small-scale manufacturing. According to Green (2015), before the arrival of colonial powers, “Africans were innovative and good at adapting. African production systems were flexible with capacity to deal with the existing conditions. As a Malawian saying goes, *it is people who make the world: the bush has wounds and scars*”. However, African flexibility and adaptation did not permit them to transform nature on a large scale because, like most parts of the world, economic development was not advancement to lead to the production of sophisticated tools and techniques (Green, 2015). SMEs in precolonial Africa played a significant role in boosting local economies and acting as vehicles for community livelihood. Land as a factor of production supported economic activity. Austin (2008) argues that pre-colonial Sub-Saharan Africa was characterised by land abundance and labour scarcity, a view that appears to hold today. Post-independence African nations have prioritised industrialisation and economic growth as avenues for transforming their economies. SMEs have been recognised as the backbone of the world economy, accounting for most businesses in virtually every nation (Abrokwah-Larbi, 2023; Samuel, 2017). SMEs constitute about 90% of the private sector in developing nations, creating 50% of the jobs in their economies, and 80% in Africa (Runde, 2018). In the 1980s and 1990s, the World Bank-driven Structural Adjustment Programmes (SAPs) instituted several structural programs to enhance the economic growth of African economies. The key focus was to liberalise economies and promote private sector-led growth. The underlying principle was to restructure the countries’ productive capacities to increase efficiency and restore growth

(Husain, 1993). Like many imported economic strategic interventions, the impact of SAPs on SMEs in African economies was mixed, resulting mainly from low government expenditure and increased competition from large organisations due to the liberalisation of the economy (Michael & Murat, 2019).

To-date, with the emergence of information communication technologies, and the liberalisation of global economies, there has been a remarkable increase in the recognition of SMEs as drivers of economic growth in developing nations. Governments in developing countries specifically in Africa have increased support to SMEs through deliberate initiatives such as access to finance, training in functional areas of business, as well as business incubation (International Trade Centre, 2022; Runde, 2018). The success stories of the Chinese economic transformation have inspired many sub-Saharan countries to up their support to SMEs that are presently labelled as engines for economic transformation (Muriithi, 2018). The development of mobile technologies and digital transformation have ushered new opportunities for SMEs to access markets, connect with customers and scale their businesses. Government institutions have increased their support towards creating an SMEs enabling environment to thrive and contribute to sustainable economic development (International Trade Centre, 2022; Organisation for Economic Cooperation and Development, 2000). Technological advancements have further shaped the nature and growth of SMEs in Africa enhancing their ability to adapt to new market realities, thus, leveraging technology to launch new products and expand their operations across different markets (Organisation for Economic Cooperation and Development, 2000).

Av (2020) and Puumalainen et al., (2023) argue that there is a correlation between crises and the number of SMEs. Many of the micro enterprises in the informal sector are a result of people in crisis situations trying out something to survive during positive economic development, unfortunately, poverty-driven SMEs disappear since they tend to provide bad working conditions, leading to exploitation of the owners and those who work for them (Herr & Nettekoven, 2017b). Kanyangale and Pearse, (2012) agree with the view that most poor people work in the SME subsector, and that governments, especially in developing countries, use the sector as a vehicle for fighting poverty and enhancing economic development.

In Europe, as much as 99% of all firms in member states would be considered SMEs (Di Bella et al., 2023). In Germany, Herr and Nettekoven (2017) were able to differentiate between two types of start-up businesses: opportunity start-ups and Schumpeterian start-ups.

While the motive for starting a new start-up in Germany was to achieve some level of innovation (46%), the opposite is true in most developing countries. In their study, Di Bella et al., (2023) further established that in Germany, only 25% of the respondents revealed that they established start-ups as an alternative source of income, and 29% for other reasons. This is in contrast to what happens in Africa, with SMEs contributing over 80% of total employment in many sub-Saharan economies (Runde, 2018), 60% and 70% of employment in the OECD(OECD, 2000). To drive innovation and spur economic development, most policy-driven initiatives have focused on improving the capacity of SMEs. Despite efforts to develop specific policies focusing on SME growth, Dalbeerg Global Advisors' report on SMEs suggests that the role of the private sector in enhancing economic growth is underrated (Ndiaye et al., 2018). Policy decisions have focused on up-grading SMEs from informal and small to a different stage with the capacity to contribute to economic growth. Four forms of upgrading SMEs include: a) the desire for new products, b) process upgrading, c) functional upgrading that focuses on improving value chain activities from informal and manual to the use of relevant skills, and, d) inter-sectoral upgrading which ensures boundary-spanning activities (Humphrey as cited in Herr & Nettekoven, 2017). While the historical origin of SMEs is insightful, it is crucial to also delve into the size-related perspectives of enterprises.

The review reveals that SMEs have historically originated from small, cottage industries and have evolved across various global contexts, playing a vital role in economic development, particularly in developing countries. For instance, Italy's fashion industry(Torkinlampi, 2017) and China's manufacturing sector highlight the transition from small-scale operations to major economic contributors. The significance of SMEs is underscored by their adaptability and resilience, which are essential for performance optimization. In Africa, SMEs have been central to economic reforms and employment, albeit challenged by financial access and policy support. The historical role of SMEs in economic recovery post-World War II and their prominence in modern economies, as seen in Europe and Africa, demonstrate their capacity for innovation and economic transformation. Understanding these origins and contextual factors is crucial for exploring how resilience can enhance SME performance, leading to economic growth and innovation.

1.3 UNDERSTANDING THE CONCEPT OF SMES

To understand the meaning of SMEs, it is vital to acknowledge that there is a lack of consensus on the definition and existence of a multi-dimensional approach to depict the different enterprise sizes (Berisha & Pula, 2015). A critical challenge in understanding SMEs

has been the absence of a universal definition of an SME (Ardic et al., 2011). The 2019 World Bank report on Support for SMEs: a synthesis of evaluative findings, accepts the fact that there is no single standard definition of SMEs. The World Bank research studies either conflict with its own definitions of small and medium enterprises (SMEs) or use definitions that conflict with World Bank's country-specific definitions, thus making it difficult to generalise the findings of studies that are based on unstandardised definitions of small and medium enterprises (International Bank for Reconstruction and Development, 2019). Despite the lack of a standard definition of SMEs, the definition's significance is inalienable (Berisha & Pula, 2015).

Different countries have adopted different classifications of SMEs based on criteria relevant to their national contexts. This approach stems from recommendation number 189 of the International Labour Conference (ILC) on job creation in SMEs that encouraged all states to define SMEs using appropriate criteria that reflect national social and economic conditions (ILC, 1998, para 1, as cited in (White, 2018)). While it is essential to define SMEs in view of "global" variables, the World Trade report, levelling the field for SMEs recognises the definition of SMEs based on national/country conditions (World Trade Organisation, 2016). This view is equally established by Ayyagari et al., (as cited in White, 2018)) who found significant variations in the size and economic activity of the SME sector across countries.

The conceptual challenge in defining SMEs is highlighted by Kanyangale and Pearse (2012) who attempted to discuss the potential pitfalls of defining SMEs. They argue that there is a lack of consensus in defining SMEs, and that some of the definitions used become easily outdated. They also argue that the concept of SMEs has an implicit assumption of a continuum showing progress from one stage to the other. This is debatable since firm size is a question of the objective of the firm. Although Kanyangale and Pearse (2012) argue that some of the definitions become easily outdated, they still used an old definition by Bolton's (1971). Secondly, asking the question "what is an SME?" with a view that most definitions of SMEs easily become outdated complicates the debate on what an SME is. Perhaps Simon (2018) and The World Bank Support for SMEs (2019) should provide guidance on defining and classifying SMEs, based on contextual variables. Despite a plethora of definitions and conceptual variations in what an SME is, the following section presents a discussion on the quantitative orientation to understanding SMEs.

1.4 QUANTITATIVE APPROACH TO UNDERSTANDING SMES

According to Bishkek and Dyikanov, (2017), the Bolton Committee's report on small business of 1971 is considered as one of the broadest and oldest sources of small business definitions and conceptualisation. The Bolton Committee report issued multidimensional definitions of small businesses; economic and statistical criteria (Bishkek & Dyikanov, 2017; Bolton, 1982; Wapshott & Mallett, 2022). With regard to the economic definition, three criteria are considered. First, a small firm has a relatively small market share in the marketplace. Secondly, SMEs operate in a personalised manner, not through a formal management structure and are managed by the owners or part owners. The third owners make decisions based on their own discretion and free from external control. Post the economic definition, Bolton formulated a statistical definition which was designed to address three key issues: quantify the current size of the small firm sector and its contribution to the economy; compare the extent to which the small firm sector has changed its economic contribution overtime and; enable a comparison to be made between the contribution of small firms in one country relative to the other (Jane, 2001).

The statistical definition is presented in the Table 1.1 below;

Table 1. 1: Bolton Committee (1971) definition of small business in different sectors

Sector	Definition
Manufacturing	200 employees or less
Construction	25 employees or less
Mining and quarrying	25 employees or less
Retailing	Turnover of £50 000
Miscellaneous	Turnover of £50 000
Services	Turnover of £50 000
Motor Traders	Turnover of £100 000 or less
Whole sale Traders	Turnover of 200 000 or less
Road Transport	Five vehicles or less
Catering	All excluding multiples and brewery managed houses

Source: Bolton Committee (as cited in Bishkek & Dyikanov, 2017. p. 225)

The Bolton Committee raised significant challenges that small businesses face, many of which remain relevant today. However, criticisms have been directed at the report,

particularly noting that small firms were not a political priority at the time the committee convened (Wapshott & Mallett, 2022). Over time, UK political parties began to show interest in small businesses, focusing on reducing the state's role in industry while leveraging the private sector as a vehicle for economic growth. Wapshott and Mallett (2022) also highlight that although the Bolton Committee's focus was ground-breaking in its scale and emphasis on small firms, the dataset it utilized differed from what is available today.

Jane (2001) argues that Bolton's (1971) economic definition of SMEs, which describes them as being managed by their owners in a personalized manner rather than through formal management structures, contradicts its statistical definition of small firms as having up to 200 employees. Managerial appointments typically occur when a firm reaches a size of ten to twenty workers. Storey (as cited in Jane, 2001) supports this view, stating that once a business exceeds ten employees, the owners cease to be the sole decision-makers. Furthermore, if a business has over 100 employees, the concept of management through teams emerges, complicating personalized decision-making and necessitating more formal managerial structures.

Another criticism of Bolton's (1971) definition of small firms is that statistical definitions based on monetary units complicate comparisons over time due to currency fluctuations. Effective comparisons cannot be made without appropriate indices that account for price changes. Additionally, the Bolton report provides three different upper limits of turnover for various sectors and identifies two different upper limits for employees, making the definition complex and hindering comparisons across countries or over time (Storey, as cited in Jane, 2001).

The characteristics of the dataset influenced how definitive the committee could be in its conclusions. The lack of consensus regarding the dataset affected the committee's conclusions and the nature of the inferences drawn. A notable weakness of the Bolton Committee (1971) was its reliance on judgement rather than definitive evidence. Despite these weaknesses, the Bolton Committee report is well-recognized for drawing government attention to the needs and challenges of small businesses. Since the committee's report, there has been an increase in research focusing on SMEs and entrepreneurship (Enterprise Research Centre, 2022).

The question of firm size is subjective and debatable, as some firms grow faster than others. While some firms effectively understand and satisfy customer needs, others struggle to meet

their customers' demands, impacting firm growth. For instance, the classification of small and medium enterprises (SMEs) as either poverty-driven or Schumpeterian supports the notion that SMEs serve as the starting point for businesses, regardless of size (Kanyangale, as cited in Cosmas, 2019). The size and growth of a firm are specific to its type and purpose (Uddenberg, 2015). This argument is echoed by Davidsson et al. (as cited in (Uddenberg, 2015), who note that despite a wealth of literature on firm growth, no coherent body of knowledge exists to explain the differences in growth rates among firms. Hamilton (2012) argues that there is no unifying theory explaining firm size and growth; rather, existing explanations focus on the quantity of growth rather than the underlying reasons and mechanisms (Leitch, Hill & Neergard, as cited in Hamilton (2012).

Compounding these issues, Amr (2019) observes that data from developed countries indicate that entrepreneurial activities and the resulting jobs are more closely related to the age of enterprises than to their size. Young enterprises contribute significantly to job creation compared to older ones. However, this view is contested by Okun et al., (2010), who suggest that empirical research shows large firms tend to pay higher wages, attract more employees, and have a greater likelihood of survival than smaller firms. Therefore, policy interventions for young or micro-enterprises should be clearly defined to establish specific support measures (International Labour Organisation, 2015).

Owners and leaders of SMEs often establish businesses based on their courage and talent, with the strengths and weaknesses of these businesses reflecting those of their founders (Murat & Algan, 2019). Research in entrepreneurship and small business management recognizes "small firm" or "small and medium-sized enterprises" as critical concepts. Understanding these concepts is essential for conducting research in the SME subsector. (Senderovitz, 2009). According to Uddenberg (2015), there is no unanimous definition of SMEs, a view supported by Kanyangale and Pearse (2012), who also note the lack of consensus on SME definitions. Storey (1994) argues that Bolton's (1971) definition has been superseded by the European Commission (EC) definition of SMEs, which relies solely on employment criteria to classify firms into micro, small, and medium-sized enterprise. The European Commission (2020) defines SMEs as:

- Enterprises which employ fewer than 50 people, with an annual turnover and annual balance sheet not exceeding EUR 10 million.

- Enterprises which employ fewer than 250 people, with an annual turnover of not more than 50 million Euros with an annual balance sheet of not more than EUR 43 million.
- The third definition categories micro-enterprise as an enterprise that employs fewer than 10 people, with a turnover and annual balance sheet not exceeding EUR 2 million.

Storey (as cited in Jane, 2001), argues that the EC definition appears to be superior to the Bolton's (1971) definition because of three factors: 1) it is simple because it uses a single criterion (employment) to define SMEs rather than a multiplicity of criterion. 2) The use of 100 employees as a small limit is more appropriate. 3) SMEs are not homogeneous; thus distinctions are made between micro, small and medium-sized enterprises. A major criticism of the EC definition is that the definition is all embracing, categorising virtually all firms in Greece, Ireland, Spain and Portugal as SMEs (Storey, as cited in Jane, 2001, p.14). This makes internal comparisons within each country difficult to make. In Europe, some countries define SMEs from the perspective of people employed, up to 200 employees, with an annual turnover of EUR 40 million or less (Berisha & Pula, 2015a; Hamilton, 2012; Kalak & Hudson, 2017; Papastathopoulos & Beneki, 2010; Senderovitz, 2009). In the United States, SMEs are organisations with less than 500 employees (OECD, 2000). Although the term SME might appear to be simple to understand, defining it is complex. Drawing from the above, the figures used to define SMEs are not standardised. They vary from nation to nation, country to country (Senderovitz, 2009). Table 1.2 presents a comparison of definitions of SMEs from four agencies/bodies.

Table 1. 2: Definitions of SMEs compared

European Commission	The small business administration, USA	The Australian Bureau of statistics (ABS)	Statistics Demark
Defines an SMEs as;	Defines small firm as	Defines SMEs:	Defines SMEs:
Micro firms: up to 10 full-time employee and an annual turnover or balance sheet of up to €2 million	Manufacturing firms that employ a maximum of 500 people	Micro firm: less than 5 employees	Micro firms: up to 9 full-time employees
Small firms: employ up to 50, with an annual turnover and balance sheet of up to €10 million	Wholesale trade firms that employ a maximum of 100 people	Small firms: between 5-19 employees	Small firms: 10-49 full-time employees
Medium-sized firms: employ up to 250 people and an annual turnover/balance sheet of up to 50 million	Agriculture firms with a maximum of \$750.000 in average annual receipts Retail trade and most service firms: maximum of \$6.5 million in average annual receipts General and heavy construction (except dredging): average annual receipts of maximum \$31 million	Medium-sized firms: between 20-200 employees Large firms: more than 200 employees.	Medium-sized firms: 50-100 full-time employees
Up to 250 full-time employees			

Adopted from: Senderovitz (2009.p.985)

From the Table above, it is evident that the definition of small/SMEs for the EU, and Denmark are the same for all industries, while the Australian Business Statistics defines small or SMEs depending on the type of industry. Nevertheless, the four agencies use one or a combination of criteria to define SMES or small business: amount of total assets a firm owns, annual sales, and number of employees employed full-time, computed as a yearly average, including part-time. The formula requires that two part-time employees equal one full-time employee and the independence of the owner/management in running the firm (Senderovitz, 2009). Green, Kirkpatrick and Marinada (as cited in Kanyangale & Pearse, 2012b, p.355,) argue that “SMEs do not sit neatly as formal or informal, since they straddle the informal and formal sectors in their activities”. The section below presents an analysis of the quantitative definition of SMEs.

1.5 QUALITATIVE APPROACH TO UNDERSTANDING SMES

The “official definitions” presented in Table 1.2 are without criticism. Curran et al., (as cited in Senderovitz, 2009) argue that using size leads to heterogeneous qualitative understanding

of businesses. Curran's (1991) argument is that "small" should be used as a multi-dimensional term where the configuration of the firm should define it. Brytting (as cited in Senderovitz, 2009) brings to light the need to equally reflect on using qualitative measures to define SMEs. Although subjective, Kanyangale and Pearce' (2012) view that the concept of SMEs has an implicit assumption of a continuum of progressive growth in the life of the enterprise covertly adds another layer of both qualitative and quantitative factors in the definition of SMEs.

Senderovitz (2009) agrees with this view and proposes five differentiating characteristics of small firms from large ones: a) limited number of product and service offerings and know-how, b) inadequate resource and capabilities, c) weak management systems, d) unstructured and informal management style and, 5) relatives of the founder or the founder occupy senior management positions. Storey (1994, as cited in Av, 2020) distinguishes the characteristics of SMEs and large enterprises. To him, three key characteristics stand out: uncertainty, which is defined in terms of SMEs having a small market share where they are not able to influence the price level, limited customer base, and a diverse set of objectives that the owner wants to accomplish, innovation. SMEs are niche players as far as innovation is concerned. They are less likely to undertake research that leads to innovative products than large organisations. This view is controversial since studies on size and age have produced mixed results (Hamilton, 2012). Evolution is another factor considered; the evolution of SMEs with a picture of the firm going through the "metamorphosis" of a butterfly has been conceptualised by (Senderovitz, 2009). The objectives to transition from one stage to the other are equally driven by the firm's objectives. Hamilton (2012) believes that although some firms have an opportunity to expand their operations, they choose not to because of their unique problems or owner/founder's objectives.

Differences in the definition of SMEs extend in three flanks: definition by international agencies/institutions, country specific definitions (laws and policies) and by industry definitions. Therefore, finding a universal standard definition is complex for institutionalists, economics, academics and industrialists. To complicate the conversation, Nwankwo and Gbadamos (as cited in Berisha & Pula, 2015b) argue that companies that meet the criteria of Tables 1.1 and 1.2 are different from large companies and should therefore be labelled as enterprises (small and medium enterprises). One criticism of the quantitative approach is that although the number of employees constitutes an objective and easily applicable criterion, the number of employees is mainly dependent on the sector of the business hence making it

difficult to generalise across sectors (Berisha & Pula, 2015b). Berisha and Pula (2015) define SMEs by the number of employees is made complex due to part-time work, or seasonal employees. Innovations in management are creating a rather different scenario where the number of full-time employees is constantly decreasing as organisations find effective ways to produce with limited human resources. Other factors such as inflation, exchange rate fluctuations or differences in financial reporting create challenges in using quantitative definitions.

According to Ferreira Bashir (2018); Berisha and Pula (2015b), the main advantage of qualitative versus quantitative indicators in the definition of SMEs is the universality of the characteristics (organisational, cultural and strategic) used across the country or sector the SME operates. The qualitative aspects such as organisational, cultural and strategic characteristics provide ground to create a broader homogeneous perspective in the analysis of firms around the world. According to Berisha and Pula (2015b) measures in favour of SMEs that are based on standard definitions to improve their consistency, and effectiveness and to limit distortions of competition are preferred. Table 1.3 presents a comparison in qualitative indicators between SMEs and large organisations.

Table 1. 3: Qualitative indicators to discern SMEs from large companies

Category	SMEs	Large organisations
Management	Proprietor-Entrepreneurship	Manager-Entrepreneurship
	Functions linked to personalities	Division of labour by subject matter
Personnel	Lack of university graduates	Dominance of university graduates
	All-round knowledge	Specialisation
Organisation	Highly personalise contacts	Highly formalised communication
Sales	Comparative position not defined and uncertain	Strong competitive position
Buyer's relationship	Unstable	Based on long-term contracts
Production	Labour intensive	Capital intensive, economies of scale
Research improvements	Following the market-intuitive approach	Institutionalised

Finance	Role of family funds, self-financing	Diversified structure, access to anonymous capital market	ownership

Source: UNIDO (Yon & Evans , 2011, as cited in Berisha & Pula, 2015.p.22)

Mouhallab and Jianguo (2016) identified qualitative criteria to define small businesses which are legal form, the role of the owner, the firm's position in the market, the structure of the organisation, economic and legal autonomy. According to Blackburn and Kovalainen, (2009) these characteristics are essential for creating a distinction between small and large enterprises. However, despite the volume of definitions meant to shed light on what SMEs are, there is a tendency to accept quantitative criteria, the headcount or number of employees as a key determinant for categorising SMEs. For example, Berisha and Pula (2015) argue that there is a tendency to pursue definitions that outspread beyond border of a one country at the time when economic interaction is intense. Berisha and Pula (2015) agree with the European Commission's (2020) definition which integrates different countries' definitions of SMEs.

It is important to note that although the debate on the definition of SMEs ranges on, acceptable and consistent definitions are needed for international and time series comparisons, yet at the same time, small firm researchers need not be restricted by these parameters (Lu & Beamish, 2001). The SME sector is heterogeneous, therefore calls for modification of definitions depending on sectoral, geographic or other contexts in which the SMEs are being examined. Jane (2001) agrees with this view by suggesting that researchers will continue to use their own definitions of SMEs which are within their target group. For the purpose of this quantitative study, the definition of SMEs by the Government of SMEs in Eswatini was adopted. The legal definition of micro, small, medium and large enterprises focuses on size to define SMEs (Eswatini MCIT, 2018; FinScope, 2017). The size definition is based on the number of employees, value of assets and turnover as presented in Table 1.4.

Table 1. 4: Government of Eswatini's definition of SMEs

Category	Sub-category	Employees	Value of Assets	Turn-over
Micro-Enterprise	Informal	0	No Forma Registration	
Micro-Enterprise	Fom	0 to 10	Under E50.000	Up to E60.000
Small Enterprise	Formal	11 to 20	Over E50.000 to E2million	Up to E3 million
Medium Enterprise	Formal	21 to-60	Over E2 million to E5 million	Up to E8 million

Source: Revised Small, Micro and Medium Enterprises Policy of Eswatini(2018, p. 20).

The study of Small and Medium Enterprises (SMEs) incorporates both qualitative and quantitative definitions to provided a comprehensive understanding of the sector. Qualitative definitions focus on the characteristics and nature of the businesses, while quantitative definitions rely on numerical thresholds, such as employee count or annual turnover. Discussing these definitions highlights the diversity within the SME category, emphasising that it varies significantly across different contexts. This exploration establishes a theoretical foundation for adopting a country-specific definition, acknowledging the importance of local economic conditions and regulatory environments. Ultimately, understanding both perspectives is essential, as the appropriate definition can differ by context and influence the effectiveness of policies and interventions designed to support SMEs (Syamsuriana et al. 2020).

Using a definition that is tailored to Eswatini's context allows for deeper understanding of the SME subsector within the country and as such, targeted policies and programmes to support SMEs are developed based on their specific needs and challenges. Having reviewed the historical evolution/origin of small and medium enterprises (SMEs), quantitative and qualitative definitions of SMEs, the next section presents the concept of resilience within the context of SMEs.

1.6 THE NOTION OF ORGANISATIONAL RESILIENCE IN SMES

Having defined the SMEs as the context of this quantitative study, it is important to situate the phenomenon of resilience within the domain of SMEs, mindful that resilience has been researched for a long time in a variety of contexts and disciplines such as psychology, but is relatively new in business and management research (Duchek, 2020). Before situating resilience in the domain of SMEs, Linnenluecke (2017) argues that resilience in the discipline of business is fragmented across several decipherable research streams such as (1) organisational responses to external threats, (2) organisational reliability, (3) employee strengths, (4) the adaptability of business models, and (5) design principles that reduce supply chain vulnerabilities.

Regarding context outside SMEs, Kanyangale and Njoloma (2020) studied the resilience of Mzuzu university library in Malawi after experiencing disastrous fire and suggest that the three main perspectives of resilience are impact resistance and recovery, adaptation and anticipation. Ayala and Manzano, 2014) analysed the psychometric properties of the Connor

and Davidson Resilience Scale (CD-RISC) of 2003 in a sample of Spanish entrepreneurs. Connor and Davidson (as cited in Ayala and Manzano (2014) performed exploratory factor analysis using a sample of 577 adults. Their study yielded five factors labelled as personal competence, high standards, tenacity, trust in one's instincts, tolerance of negative affect, and strengthening effects of stress, positive acceptance of change and secure relations with others, as well as control and spiritual influence. In their study, Ayala and Manzano (2014) suggested a new set of constructs, hardiness (integration of goal-setting behaviour, commitment and decision-making when drawn into unexpected events), resourcefulness (possession of skills that enhance an SME's ability to handle adverse situations) and optimism (positive attitude of the entrepreneurs in the face of challenges or disruptive events) to measure resilience.

Nila (2023), in their analysis of three cases from USA, Taiwan and Indonesia on resilient practices of small businesses to survive from COVID-19 pandemic: perspectives from S-DL and social capital found that resilient practices heavily relied on various types of social capital(SC); relational, collective and generalisable to respond quickly to changes in demand, leverage ICT for marketing and sales as well as reconnect value networks. Relational SC is built through social networks that require actors to maintain relationships if they are to gain access to and mobilise resources. Brunie (cited in Nila, 2023) argues that collective SC is an important attribute of individuals with the capability to establish social contacts and maintain relationships for better access to resources. The last type of SC, generalisable relies on trust, and takes the form of the faith built by citizens in shared norms with society. This type of social capital reflects general readiness to cooperate among individuals (Nila, 2023). The three types of SC are helpful in explaining the decision making processes and practices in SMEs in integrating resources to cope with disruptions to ensure business operations (Nila, 2023).

As such, these resilient practices could be used to guide small and medium enterprises to cope with unanticipated disruptions. Taking the pandemic as the black "swan" phenomenon, for people who are still alive, the pandemic is rare but with significant negative consequences. Humans usually convince themselves that rare events such as COVID-19 are explained in hindsight or retrospective predictability (Nila et al., 2023). A few questions arise from the above analysis: how did people view the pandemic? how did people survive within their social context?, what lessons can be learned from their attempt to bounce back from the disruption? And lastly, how can resilience of people be enhanced? In every disruptive event,

people's experiences in their social contexts represent their views of regional, domestic and global situations.

According to Nila et al., (2023) small and medium enterprises (SMEs) inherently have certain limitations, such as inadequate standardised procedures, financial vulnerability due to limited capital and poor cash flow management. Resilience is highly desirable since it addresses the urgency to investigate vulnerable situations that SMEs face (Saad et al., 2021). According to Vorley (2018), there is no unified definition of resilience in the management and business field. Saad et al.(2021) advocate for systematically structuring research in the domain to advance in the general business and specifically the SME subsector. In their study on “improving the resilience of SMEs in times of crisis: The impact of mobile money amid COVID-19 in Zambia”, Nan and Park (2022) established that there is little evidence to suggest that Mobile Money improves the resilience of SMEs'. The study established that SMEs are more likely to experience catastrophic decline in sales than their larger counterparts.

Supporting SMEs has been recognised as an important device for dealing with socio-economic problems that affect developing countries (Page & Söderbom, 2015). The resilience of SMEs has been high on the agenda for academics and policy makers Saad et al. (2021a) leading to scientific and policy debate (Linnenluecke, 2017). Scientific and policy interest is present to urge a relevant extension of SMEs has been labelled as challenging (Dahlgaard et al., 2003). According to Sánchez-García et al., (2023) resilience is challenging for SMEs because their structure may not permit them to respond to external disruptions. Using data that was collected from 70 Spanish Tourism SMEs, the study revised understanding of resilience in the SME literature. Their definition states, in part, that “resilience is associated with feedforward, buffering, and feedback controls as critical factors demanding continuous coordination between operations and management mechanisms.” Thus, organisational resilience cannot be achieved independently at each organisational level. Rather, resilience can be enhanced by recognising the components that influence the operational units, coordination, and management to act under specific arrangements within the organisation that continuously seek balance (Katic & Agarwa, 2018).

Kanyangale and Njoloma (2020) define resilience as a strategic asset for preventing disruptions, while Hadi (2020) states that in business, resilience refers to the firm's ability to respond to threats. Although there are various conceptual differences in the definition of

resilience (Burnard and Bhamra 2011; Duchek 2020b), the concept is closely related to an organisation's ability to return to a better state after a disruption(s). Within the context of Small and Medium Enterprises (SMEs), Heeks and Spina (2019); Nan and Park (2022) define the resilience of SMEs as the "capabilities of SMEs to withstand and adapt to external shock." Bhamra et al., (2011) define resilience as the ability of a system. Duchek's (2014) definition of resilience is widely accepted in the study of resilience. Duchek (2020, p.220) defines resilience as "the ability to anticipate potential threats, cope with unexpected events, and to learn from these events in order to produce a dynamic capability that is directed towards facilitating organisational change". Tennakoon and Janadari (2021) argue that previous studies' definition of resilience lacks clarity in terms of interpretation and measurement.

According to Purwanti and Hapsari (2022), the organisation's ability to overcome threats and challenges within the organisation (adaptive resilience) while preparing (planned resilience) to overcome threats and challenges from the external environment is essential for SMEs. To better understand the relationship between resilience and SME performance, Purwanti & Hapsari (2022) suggest the adoption of a multidimensional rather than a unidimensional approach. The multidimensional approach allows for multiple viewpoints (adaptive and planned) to studying resilience. Alberti et al. (2018) argue that resilience is a capability that business organisations should have to face complex challenges. It is important to note that although the concept of resilience has been broadly used in general management and in small and medium enterprises, understanding the concept is very much fragmented with, unfortunately, limited work available to validate practically the concept. The survival of a business cannot be separated from the characteristics possessed by the entrepreneurs who run it. Contextually, the scope of the discussion on small and medium enterprises becomes more widespread in terms of objectives, risks and focus on growth (Suroso et al., 2017a). According to Pathak et al., (2023) SMEs are particularly vulnerable to external disruptions due to their limited resource position. The lack of resilience makes them vulnerable to external shocks.

Therefore, this study draws on the definitions of Branicki et al. (2018); Kanyangale and Pearse, 2012) to define resilience as the ability to rebound back from adversity, disagreement, and failure. The exclusion of other definitions of resilience is based on Saad et al. (2021) who established through their study on "conceptualising of SMEs' business resilience: a systematic literature review", that majority of publications centring on discrete/event driven

disruptions such as the financial crisis and natural disasters which might be temporary. Linnenluecke (2017) agrees with this submission and argues that improvements in understanding resilience were based on efforts by earlier studies to evaluate event-driven disruptions, which did not offer much in understanding resilience. From their analysis Littlewood and Holt (2018) raise a fundamental question that the current study shares: Is it possible to generalise understanding gained from temporal disruptions to the resilience of organisations in persistent and multi-faced disruptions which occur in most developing countries? Such questions aided in the decision to exclude some earlier definitions of resilience because they do not clearly conceptualise resilience in a persistent disruptive environment. The study overers that to mitigate against the effects of disruptive events, planning for crises is vital since small firms with effective planning mechanisms can manage crises and bounce back better (Betitski et al., 2022). The use of a multi-dimensional approach to building a resilience model is informed by Pathak et al.(2023) who argue that to adapt to the ever-changing conditions of the market, entrepreneurial thinking is necessary to provide a coherent set of guidelines for action, where entrepreneurial resilience refers to a set of qualitative and behavioural traits that helps to build a sustainable enterprise. Drawing from the above, this study focused on the strategic impact of resilience on SME performance optimisation, with absorptive capacity mediating the relationship between resilience and performance optimisation, while strategic orientation was used to predict the resilience of SMEs. Having discussed the concepts of SME and situated resilience within the domain of SMEs, the chapter presents an overview of SMEs in Eswatini.

1.7 OVERVIEW OF SMES SECTOR IN ESWATINI

SMEs play a significant role in helping to boost economic growth and development through job creation and provision of goods and services (Dlamini et al., 2020). This view is supported by Choto (2015, as cited in Thobile et al.,2020) who argues that a supportive and conducive environment for SMEs leads to job creation and economic development. The SME sector in Eswatini has been recognised as key agent for economic transformation. The sector currently employs about 41% of Eswatini's working age, and has the potential to employ over 65% of the country's working population (International Trade Centre, 2022). The SME country survey by the Government of Eswatini Centre for Financial Inclusion (2018) revealed that there are 25,947 registered SMEs in all sectors of the economy. Of the 25,947, 1144 are classified as high impact SMEs, 4240 as medium impact and the rest as low impact SMEs. In 2018, the government revised the 2004 SME policy to create an enabling and supporting

environment for an innovative and entrepreneurial SME sector (Eswatini MCIT, 2018). Some of the policy changes included reducing corporate tax from 27% to 12%, establishing the Eswatini National Industrial Development Company (ENIDC), Inhlanyelo fund and Imbita fund (Alliance for Financial Inclusion, 2018; Dlamini & Mohammed, 2018; Eswatini National Development Plan, 2019; Jiri, 2007).

These policy changes were aimed at aligning the SME sector with National Development plan 2019/2021-2022, the Financial Inclusion Strategy of 2017-2022 and the Strategic Roadmap (Making access possible) 2019-2023. To demonstrate Eswatini's commitment to boosting the SME sector, the government has been funding activities of the Small Enterprises Development Company (SEDCO) as well as offering "seed" capital to youth enterprises through the Youth Enterprise Fund program (Eswatini MCIT, 2018).

Despite the significant contribution to job creation and boosting production, , minimal growth and failure are a major concern within a supportive government framework and conducive SME environment. The above analysis presents an opportunity for scholars to undertake a study and develop a resilience model for the SME sector in Eswatini which takes into account the contemporary VUCA. It is important to note that participants in this study were drawn from 10 sectors: agriculture, information communication technology (ICT), construction, design and printing, events management, manufacturing, medical, property (real estate), retail and service. Although there are many definitions of SMEs, SMEs as used in this study, refer to enterprises which have existed for at least three years or more, are independent, owner/manager controlled with no external control and employee fewer than 200 people.

1.8 STATEMENT OF THE RESEARCH PROBLEM

Many developing countries are experiencing substantial economic changes, with small and medium enterprises (SMEs) increasingly becoming essential economic players, often overshadowing large enterprises. In sub-Saharan Africa, SMEs are vital for creating jobs and significantly enhancing the labor market (Suroso et al., 2017b). Their influence is strengthened by their adaptability and proactive approach, supported by government initiatives aimed at utilizing the SME sector for social and economic progress. On a global scale, SMEs represent the majority of businesses, responsible for over 50% of jobs and around 90% of private sector employment (Runde, 2018).

In Eswatini, a survey conducted by the Government Centre for Financial Inclusion (2018) found that while 70% of established SMEs have been in operation for over six years, almost

half of medium and low-impact SMEs are in either the start-up phase or striving for growth. Notably, 35% are developing risk management strategies, while 65% have not begun this process. The International Trade Centre (2022) reported that Eswatini's SME sector faced challenges in adapting to disruptions from Covid-19, with only 21% of surveyed firms able to customize their products. Additionally, 39% of registered businesses were non-operational from mid-2020 to mid-2021, with women-owned SMEs experiencing a higher risk of closure (43%) compared to male-owned counterparts (21%). The report also noted that 87% of surveyed SMEs were apprehensive about recovery, with 49% fearing potential business closure. In response, the Eswatini Ministry of Commerce, Trade and Industry (MCIT) updated the SME policy in 2018 to establish a cohesive framework for nurturing a profitable and entrepreneurial SME sector. However, prior government initiatives to enhance sector performance have often been inadequate, primarily due to a focus on larger enterprises (International Trade Centre, 2022). Furthermore, Swazi businesses face challenges related to insufficient market information, with fewer than 25% rating the availability of information about potential customers as satisfactory. This deficiency restricts SMEs' abilities to adapt their offerings, ultimately undermining their competitiveness. Despite the growing attention on resilience, research regarding this concept in SMEs within developing countries remains scarce. Resilience, defined as an organisation's ability to anticipate, prepare for, and respond to uncertainties (Serfontein & Govender, 2021), lacks a standardized measurement method, complicating the assessment of its effect on performance optimization (Hillmann & Guenther, 2021). Although empirical research on resilience has increased, its measurement and influence on performance optimization are still inconsistent and inconclusive (Saad et al., 2021). Prior studies have shown that attempts to create resilience measures are largely case-based and lack validation for SMEs in developing regions (McManus et al., 2007; Pettit et al., 2013). The connection between resilience and performance enhancement is not yet fully understood (Kanyangale & Njoloma, 2020; Kanyangale & Pearce, 2012; Nan & Park, 2022; Pathak et al., 2023; Sánchez-García et al., 2023a). Additionally, the use of strategic foresight (transformative resilience) has not been thoroughly explored (Almujaini et al., 2021; Dadkhah et al., 2018; Paliokaitè et al., 2014), and the role of absorptive capacity in this context remains under-examined. Although prior studies have revealed that strategic orientation enhances competitiveness, the impact of strategic orientation on resilience has not been clear (Cvijic et al., 2023). This leads to a crucial question: what resilience model can be developed and validated to enhance the performance of SMEs in Manzini, Eswatini? This quantitative study seeks to fill these gaps by investigating the relationships between

resilience, strategic foresight, absorptive capacity, and the strategic optimization of SME performance. Supporting SMEs in cultivating resilient strategies can play a significant role in the socio-economic development of Eswatini, while insufficient research and support may impede the country's economic growth objectives.

1.9 PURPOSE OF THE STUDY

The purpose of the study is to examine the strategic impact of organisational resilience on performance optimisation of SMEs in the Manzini region, Eswatini. To achieve this purpose, the study collected empirical data to test an integrated model that encompasses critical variables, including strategic foresight, absorptive capacity, and strategic orientation.

1.10 RESEARCH OBJECTIVES

To unravel the strategic impact of resilience on the performance optimisation of SMEs in the Manzini region of Eswatini, the following research objectives were formulated:

- a) To determine the impact of resilience on the performance optimisation of SMEs in Manzini region, Eswatini.
- b) To assess the impact of strategic foresight on performance optimisation of SMEs in the Manzini region, Eswatini.
- c) To examine the impact of absorptive capacity on performance optimisation of SMEs in the Manzini region, Eswatini.
- d) To determine the mediating impact of absorptive capacity in the relationship between resilience and performance optimisation of SMEs in the Manzini region, Eswatini.
- e) To determine whether strategic orientation predicts organisational resilience of SMEs in the Manzini region, Eswatini.

1.11 HYPOTHESES

Given the above research objectives in this quantitative study, the following were the statistical hypotheses(null) and their associated sub-hypotheses:

- a) H_{01} : There is no significant relationship between resilience and performance optimisation of SMEs in Manzini, Eswatini.
 - H_{01a} : Detectability has no significant impact on the performance optimisation of SMEs.
 - H_{01b} : Coping has no significant impact on the performance optimisation of SMEs.

- Ho_{1c}: Adaptation has no significant impact on the performance optimisation of SMEs.
- b) Ho₂: Strategic foresight does not significantly impact performance optimisation of SMEs in the Manzini region, Eswatini.
- Ho_{2a}: Discovery has no significant impact on the performance optimisation of SMEs.
 - Ho_{2b}: Planning has no significant impact on the performance optimisation of SMEs.
- c) Ho₃: There is no significant impact of absorptive capacity on performance optimisation of SMEs in the Manzini region, Eswatini.
- Ho_{3a}: Knowledge recognition has no significant impact on the performance optimisation of SMEs.
 - Ho_{3b}: Assimilation has no significant impact on the performance optimisation of SMEs.
 - Ho_{3c}: Applying has no significant impact on the performance optimisation of SMEs.
- d) Ho₄: Absorptive capacity does not mediate the relationship between organisational resilience and performance optimisation of SMEs in the Manzini region, Eswatini.
- e) Ho₅: Strategic orientation does not predict the resilience of SMEs in the Manzini region, Eswatini.
- Ho_{5a}: A prospector orientation does not predict the resilience of SMEs.
 - Ho_{5b}: Analyser orientation does not predict the resilience of SMEs.

1.11 SIGNIFICANCE OF THE STUDY

The complexity of the business environment has necessitated focused attention on business resilience and foresight as drivers of organisational performance. To survive, organisations must adapt strategic processes to find alternative solutions in the ‘new’ way of running business (Heredia et al., 2022). Therefore, this quantitative study is significant to owners/managers of SMEs, policy makers, researchers and the business community in the following key ways;

- A resilience model will provide valuable insights into the factors that contribute to the success and sustainability of SMEs. By understanding the role of resilience, strategic foresight, absorptive capacity and strategic orientation, owners and managers can

develop strategies to enhance their ability to adapt and overcome challenges so that they can achieve long-term growth.

- Policy-makers will benefit from a resilience model because it can inform the design and implementation of targeted policies that support and promote the resilience of SMEs. By understanding the factors contributing to SME resilience, policy-makers will create an enabling environment that fosters their growth, enhances their competitiveness, and contributes to Eswatini's economic growth.
- The study of resilience in the context of SMEs contributes to the existing body of knowledge on resilience theory and practice. By examining the relationships between resilience, absorptive capacity, strategic foresight, and strategic orientation, researchers will advance understanding of how these factors interact and influence the performance of SMEs. This knowledge may inform future research and contribute to the development of more effective strategies to enhance SME resilience. The study contribute to a deeper understanding of the factors that contribute to the resilience and success of SMEs. Students studying entrepreneurship, business, and management-related disciplines can gain valuable insights into the importance of resilience, absorptive capacity, strategic foresight, and strategic orientation in the context of SMEs. This knowledge can inform their future research interests.
- The resilience model will benefit the wider business community by providing insights and best practices that can be adopted by SMEs. By understanding the factors that contribute to resilience and success, other businesses can learn from these findings and implement strategies that enhance their own performance, adaptability and competitiveness.

1.12 DELIMITATION OF THE STUDY

This quantitative study is delimited in three ways. First, the study is deliberately confined to the geographical area of Manzini region of Eswatini. The selection of Manzini was because Manzini has the highest number of MSMEs in Eswatini (FinScope, 2017). Manzini has one of the highest numbers of working individuals, thus providing market opportunities for businesses (Government of Eswatini Centre for Financial Inclusion, 2018a). In this regard, the study excluded all the SMEs from other parts of Eswatini. Secondly, the study is also delimited based on enterprise size mindful that there are different types of enterprises in Eswatini. As such, the study focuses only on SMEs. In this way, the study has excluded the resilience of large domestic and multinational enterprises operating in Eswatini Lastly, the

study has not focused on all SMEs but rather only those under the support of the Youth Fund Project at the Ministry of Commerce, Industry and Trade and, Small Enterprises Company (SEDCO). The selection of SMEs under the two organisations was informed by a lack of a sampling framework. It is also important that since the Eswatini SME policy defines SMEs as transitory, it is arguable that several SMEs have transitioned from micro to small and so forth.

In terms of content, the quantitative study focused on resilience in the SME subsector. The quantitative study limited itself to data that was provided by participating respondents.

1.14 STRUCTURE OF THE THESIS

This quantitative study is divided into seven chapters, namely:

Chapter 1: Introduction and Background to the Study

Chapter 1 of the study presents a discussion of the background of the study, with specific reference to the historical evolution of small businesses, resilience and the definition of SMEs. The chapter also presents the statement of the problem, contribution of the study, research objectives and hypotheses of the study. Towards the end of chapter 1, the significance, limitations of the study and structure of the thesis are presented.

Chapter 2: Understanding Resilience

This chapter provides a comprehensive overview of the existing literature on resilience and relate resilience to performance optimisation. The review helps to identify what research has been conducted on the topic and what areas have not been explored yet. As a result, it was possible to state the research within the broader academic conversation and demonstrate its significance. To achieve this aim, this chapter unpacks the concept of resilience, theories, and measurements.

Chapter 3: Understanding Performance Optimisation

Chapter 3 demonstrates knowledge and understanding of existing literature on performance optimisation. The chapter presents a literature review on the historical origins of performance, theories of performance, measurement models of performance and a link between resilience and performance optimisation. The chapter reviews existing models of performance and integrates them with the models of resilience to propose a multi-dimensional conceptual model of resilience for SMEs in Manzini region, Eswatini. The result

of the two literature review chapters is a conceptual framework of resilience for SMEs to be tested in Manzini, Eswatini.

Chapter 4: Research Methodology

The chapter explains and justifies the methods and techniques used in the study. It provides a detailed account of how the research was conducted, thus, allowing readers to evaluate the reliability and validity of tools and methods used. The chapter begins by presenting the philosophy that the study adopted. Research philosophy is important because it provides a foundation for understanding the nature of knowledge, the methods of inquiry and the underlying assumptions that guided the study. The inclusion of a research philosophy helped the research to determine the tools and methods for data collection as well as the methods of analysis that were adopted. The study adopted a positivism paradigm because of its emphasis on objectivity, and ability to predict phenomena and explain relationships among variables, and test hypotheses.

Chapter 5: Presentation of Results

This chapter presents the findings and draw conclusions regarding the hypotheses in this quantitative study. It involves the systematic examination, organisation, and interpretation of data to identify patterns and relationships among variables. To achieve this aim, the chapter presents respondents' demographic data, validity and reliability analysis, and descriptive statistics per variable. The chapter proceeds by presenting fit indices for each variable. The purpose is to determine the goodness of fit of the proposed model for the data. To assess the measurement properties of a set of observed indicators to determine if they adequately represent a single underlying dimension. Further, to achieve the aim of the chapter, the chapter presents results of the test of hypotheses as well as the structural equation model. This provides ground for the discussion of results in Chapter 6.

Chapter 6: Discussion of Results

This chapter aims to present a discussion of findings to interpret and explain the results obtained from the analysis of data. It provides an opportunity to discuss the implications, significance and limitations of the findings. To achieve this aim, the discussion of findings is presented in relation to the research objectives and the hypotheses that were tested. A link between the study's findings and existing knowledge on the relationship between the

variables of the resilience model and performance optimisation is presented. The discussion engages other authors to give meaning to the findings of the quantitative study.

Chapter 7: Conclusions

The aim of this chapter is to provide and summarise the findings of the study. It involves restating the key results and highlighting the most significant findings that address the research objectives. To achieve this aim, the chapter presents the limitations, conclusions, and summary of the findings. It also clarifies the contribution of this quantitative study to existing body of knowledge and ends with the presentation of recommendations.

1.15: SUMMARY OF THE CHAPTER

Chapter one presented the introduction of the study to lay a foundation for understanding the strategic impact of resilience on performance optimisation of SMEs in the Manzini region of Eswatini. The Chapter presented the context and background of the study revealing that although resilience has been identified as an important concept that enables organisations to bounce back from disruptions, understanding what organisations do to become resilient remains an area of interest for research. The historical evolution and the definition of SMEs are presented. Examining the historical origins of SMEs enhanced the researcher's ability to trace the evolution of SMEs over time. This includes understanding the factors that led to the emergence of SMEs. The chapter provided insights into the challenges and opportunities faced by SMEs throughout history. The research problem, objectives of the study, hypotheses, significance and limitations of this study are discussed in this chapter. Acknowledging the limitations of the study demonstrates transparency and honesty. For this quantitative study, presenting the limitations of the study shows that the researcher was able to critically evaluate tools and methods used as well as being aware of potential weaknesses. This way, the introductory chapter presents a case for the study and development of policy-specific interventions for SMEs.

CHAPTER 2: UNDERSTANDING RESILIENCE IN SMES

“The resilient organisation integrates two domains by actively and consciously creating two systems; the performance system and the adaptation system...” Dean Robb

2.1 INTRODUCTION

The unprecedented global crisis caused by the COVID-19 pandemic calls on businesses to develop resilient capabilities if they are to transition to the post-COVID-19 era. To understand the concept of resilience, it is critical to first understand the evolution of resilience, strategic foresight, absorptive capacity and strategic orientation before integrating and conceptualising them into the phenomenon of organisational resilience. The aim of this chapter is to unravel concepts of resilience, absorptive capacity, strategic foresight, and strategic orientation which are core to understanding the concept of organisational resilience in optimising the performance of small and medium enterprises (SMEs). To achieve this aim, the evolution of resilience and its relationship with strategic foresight, absorptive capacity, and strategic orientation will be presented. Notably, the chapter seeks to also present the relevance of the relationship among the four concepts on performance optimisation of SMEs before presenting a summary of the chapter.

2.2 UNDERSTANDING THE EVOLUTION OF RESILIENCE

Why do some organisations cope with environmental turbulence better than others in the same industry? How do new ways of organisational working evolve? To answer these questions, it is essential to analyse the evolution of resilience. Understanding the evolution of resilience is critical in providing insights into the mechanisms that govern how organisations produce new architecture to survive in an adverse environmental situation. Environmental disruptions have been defined as transient perturbations whose occurrence is difficult to foresee and whose impacts on organisations are disruptive and potentially enormous (McCarthy et al., 2017).

The term resilience comes from the word “resilire” which means to jump back (Xiao & Cao, 2017a). In the early days of its evolution, Holling (1973) advanced that resilience determines the persistence of relationships within a system. Resilience is an essential measure of the ability of a system to absorb changes in the state of variables. Lawrence, (2022) defines resilience as not impermeable to disruption. “It is the capacity for recovery and maintained adaptive behaviour that may follow initial retreat upon initiating a stressful event”. This definition draws attention to two things: first, adaption is not a display of heroic capacity, but rather the ability to respond to evoke internal capacities to respond to a disruption. Secondly,

to be resilient, an entity should be able to demonstrate functional adequacy, an entity's ability to maintain its internal functioning notwithstanding a disruption. For Hillmann and Guenther (2021), resilience is defined as capacity, capability, characteristics, outcome process or type of strategy. For Kobasa, Maddi and Kahn (as cited in Lengnick-Hall et al., 2011), resilience implies an entity's ability to rebound from a disruption. This view calls for adaptive interpretation and actions. This view takes the orientation of physics in which resilience is defined as an object's ability to regain its original shape after being stretched. As the concept of resilience gained traction, with its emphasis on an entity's ability to bounce back from disruptions, the traditional approach to risk management also evolved, leading to a more integrated and holistic view of organisational risk.

Traditionally, the concept of risk management as an integrated and holistic organisational-wide concern gained traction in part due to the interrelated nature and complexity of the internal and external organisational environment. With time, the concept of risk management morphed into Enterprise Risk Management (ERM) with a focus on organisational risk management processes rather than focusing on individual risks. This metamorphosis resulted in a new perspective of enterprise management with a bias towards the management of opportunities as well as hazard risks (Louisot, 2015).

In line with new and emergent reactions to organisational dynamics, a more integrated and disciplined approach to managing risk, organisational resilience gained attention in the world of practice and academia. The birth of the concept gave rise to a better understanding of organisational operating environment, challenges, risks as well as opportunities, enabling organisations to prepare for potentially disruptive events and coping effectively as well as adapting to emergent conditions (McCarthy et al., 2017). Historically, resilience has resulted from a chain of knowledge transfer processes between diverse fields of knowledge and science. Transfer of knowledge, information, experiences and integration of ideas have occurred between fields such as physics, applied mechanics and material sciences and also, in fields such as physiology, psychology, biology and ecology, hence the term resilience has developed into a multidisciplinary concept with paradigmatic aspirations (Gößling-Reisemann et al., 2018). It has been argued that the proliferation of the term, increasing complexity coupled with blurriness of the meaning of the concept are responsible for the various definitions and its conceptualisation (Gößling-Reisemann et al., 2018). Although several studies have endeavoured to understand the discourse of resilience, the history and

meaning of resilience remain blurred. Despite such challenges, the section below presents the intellectual roots of resilience.

2.2.1 Intellectual roots of resilience research

The concept of resilience appears to have emerged in the year 1430 in the late medieval and early modern French. In the early medieval and French systems, the word emerged from the judicial system that related to matters of contracts. Whenever a contract was terminated, there was a need to restore the original legal situation (Gößling-Reisemann et al., 2018).

Historically, the term resilience originates from the English philosophy of Francis Bacon, who introduced resilience as “a metaphorical abstraction when he undertook a comparison of mechanical, optical and acoustic feedback in *Sylva Sylvarum* in the Ten Centuries”. It is reported that he showed no interest in the “individual rebound of phenomena, instead, he established the physical tradition of the resilience notion (Gößling-Reisemann et al., 2018). Bacon’s definition of resilience was later taken over by Johann Amos Comenius and published (1633, p.174 & 189) in his “Synopsis of Physicks”, released in 1633 in English and Latin. From this publication, the term “resilientia” or “resilience” became known (Gößling-Reisemann et al., 2018).

According to Gößling-Reisemann et al. (2018), the 18th century saw a resurgence of resilience terminology in mathematics and material sciences. Central to studies in the 1800s was to determine the breaking strength of beans and metal cylinders (Young, as cited in Gößling-Reisemann et al., 2018). The findings of in 1807 revealed that, “resilience was the ultimate capability of a material to withstand moving force or a falling weight” (Gößling-Reisemann et al., 2018). Although efforts had been made to understand the concept of resilience, research efforts that proceeded with Young’s (1807) work did not bear much fruit in defining and providing a clear conceptualisation of resilience. It appears understanding of resilience was field-specific with no generalisable definition.

In the 1960s and 1970s, research efforts provided a foundation for understanding resilience (Hepfer & Lawrence, 2022). The definition of resilience emerged from three disciplines: psychiatry, psychology and engineering.

Firstly, several studies were conducted in the field of psychiatry. Extensive research on people with schizophrenia opened up the possibility of individual resilience and recovery from a perceived psychological disorder (Luthar et al., 2000, as cited in Hepfer & Lawrence, 2022). In the early days of research in psychiatry, two streams emerged in understanding

psychopathology, structural and dynamic (Norman, 1973). The first stream, structural emphasised paying attention to systems, diagnosis, and classification of phenomena/things. This view provides a structured approach to synthesise knowledge into a formal model that captures the process of learning. Although, it might appear that formal structures that capture and synthesise knowledge exist, there remains sufficient gaps in knowledge and the processes of knowledge acquisition.

The second stream, dynamic focuses on the patient in the present only as way to move back to the past to gain an understanding of the origin of the phenomenon. The study by Norman (1973) on children of mothers with schizophrenic conditions found that children born of such mothers thrived despite the risks they faced. Children born of mothers with this condition seemed to develop in healthy, positive ways despite growing up in an environment of deprivation, trauma, and stress. The findings of Masten (2001) overturned many negative assumptions about the development of children growing up under deprivation and adversity. His findings further brought to light that earlier assumptions about children born of mothers with Schizophrenic conditions were not only wrong but also misleading. Instead, Masten (2001) revealed that there was something fundamentally unique about the children born of mothers with schizophrenic conditions. The findings by Masten (2001) provide relevant insights into naturally occurring resilience and how, individuals at risk can alter their course when they develop competencies to deal with disruptive events. Also, the study highlights the importance of risk pioneering investigators who established the role of resilience in enabling children to flourish in the face of disruptive circumstances (Masten & Coatsworth, 1998).

The second stream of definitions emerged from psychology. An earlier edition of the American Psychology (APA) Monitor (Masten, 2001) was about the invulnerable. In his “Myth of the Invulnerable Child”, Pines (1975) presents an analysis of how humans have the capacity to thrive under uncertain and yet disruptive conditions. This analysis concludes that there is something unique, innate, and trait-like about humans that makes them invulnerable, that resides deep in the strands of Deoxynucleic Acid (DNA). This study offers important lessons for those who seek to improve “odds of good development outcomes” through policy. Although the study was conducted on “the development of competence in favourable and unfavourable environments, lessons from research on successful children, policy and structure play a fundamental role in enabling organisations to reduce risk, boost resources and facilitate protective processes against adversity. Another strength of the psychological view is

that there is growing respect for the need to address challenges that affect the implementation of change in the dynamic system in which children or organisations develop (Masten, 2001).

According to Pines (1975), resilience is a phenomenon that results from basic human adaptation. He argues that if adaptation systems are protected and structured in good working order, human development becomes apparent in the face of a disruptive event. The risk for development challenges becomes eminent if adaptation systems are impaired in a complex, uncertain, and fast-changing environment. On its part, the Washington Post of March 7, 1975 (Masten, 2001) carried the headline..."Trouble's a Bubble to Some Kids". In the article that followed the headline, the Washington Post indicated that *the idea of resilient children as remarkable individuals possessing extraordinary strength or inner resiliency has lingered*. This view holds that it is necessary to learn how to create change so that the odds of favourable development can be ensured. It should be noted that although humans develop multiple prevention and intervention methods, it is not clear what methods of presentation and intervention are appropriate for a given situation. It is argued that resilience is an inferential construct that involves human judgement about desirable and undesirable outcomes, as well as what one or the organisation defines as risk (Gewirtz, 2006).

Norman's (1973) analysis of resilience of children at risk entrenched faith in the potential of human resilience. Kagan (as cited in Hepfer and Lawrence, 2022) advances that earlier studies on resilience in the medical field to a questioning of the "recorder" theory of development. The recorder theory assumes that from the first day of life, the human brain permanently records every experience human encounter somewhere in the brain. Masten (2001) advances the concept of "ordinariness" of individual resilience. His findings show that an examination of converging findings from people and variable-focused disruptive phenomena suggests that resilience is prevalent and arises from normative functions of human adaptation. Masten's (2001) conclusion was that resilience is made of ordinary and not extraordinary processes that offer a detailed yet exciting outlook of human adaptation.

Drawing from organisational studies on resilience, an individual concept of resilience was considered as a property of families (Ledesma, 2014). Thriving at family and individual levels has prompted researchers to explore perspectives to seek an answer to the question..."Why do some people thrive following adversity and others do not?" (Ledesma, 2014) explain three sources of individual resilience: a) personal values represent what matters most to an individual, b) personal efficacy that represents a belief in one's capacity to accomplish goals

that are challenging. It encompasses a sense of self-confidence and a strong connection to others to gain support), c) personal energy, which refers to the resource that individuals draw upon when they want to act to do what they planned to do to avoid disruption (Simmons, 2011). The three sources are sometimes called “fuel” sources. As individuals recover from adversity, his/her resilience capacity is expanded through strengthening the three sources of resilience, which in the end, provides more fuel for the individual to face the future. According to Patterson, a family’s resilience in relation to a family describes its ability to restore the balance between demands and capabilities after a disruption among family members and, between the family and its community. Patterson and Keller’s (2005) views are significant because they highlights the importance of transitioning from one level of resilience to the other (recovery, learning and maturity) in building resilience capacities. Resilience capacity is determined by where in the cycle the individual finds himself. Thus, if an organisation is unable to adapt to its challenging experience, it will most likely sink into dysfunctional levels of performance, thus not being able to cope during a disruption. However, a noticeable weakness of this view is its focus on individual rather than team/organisational resilience. It is unclear how individual resilience translates into firm-level resilience and, how personal value a component of “fuel sources” becomes organisational value.

McCarthy et al. (2017) and Norman (1973) argue that the term resilience rather than invulnerable has been adopted in recent studies. Using the term resilience leads to a greater understanding of the concept. It has been established that, resistance to stress is relative, not absolute and resistance is both a result of innate laws and forces of nature (environment). The degree of resistance varies over time, and, it is a natural process to respond to changing circumstances where several factors (both internal and external) combine to produce the illusion of “invulnerability”(Mandie, 2015; Rutter, 2015). From Rutter (2015), it is safe to state that there is nothing like the invulnerable. Resilience is neither a trait nor the pursuit of a static process to bounce back. If resilience was a trait and environment, humans should be able to manipulate and manage change without risk of failure. This view of resilience brings to light the fact that the environment, and thus is a catalyst for resilience. Resilience is, therefore, not the “chemistry of the moment”, instead, it is something that may be evident at different times in one’s life. The existence of adoptive/adaptive capacity may not necessarily represent a risk. Resilience may result from factors beyond the desire to respond to risk. The concept of protective factors and the impact of risk factors are context-specific. The concept

of universal lists of risk and protective factors provides a general guide but fails to consider the unique circumstances of each organisation, which are responsible for individual differences (Rutter, as cited in Mandie, 2015). Although this view holds that the environment is a catalyst for resilience, critics argue that adaptation and reaction to disruptions is an individual function.

According to Rutter (2015.p.34) *“resilience is an interactive concept concerned with the combination of serious risk experiences and relatively psychological outcomes despite those experiences.”* Rutter’s (2015) research points to the fact that resilience is not related to an individual’s psychological traits, but rather an individual’s ability to appropriately respond to environmental change using the right resources. Thus, at the individual level, differences in responding to situations could result from variances in an individual’s genetic structure and the psychological responses to disruptions. Therefore, it is the environment, rather than the individual that triggers a reaction to a disruption. Although this view has stood the test of time, it has failed to take note of the role of preparation in responding to and managing disruptive events, a view that most strategists and management practitioners hold (Lengnick-Hall et al., 2011a; McCarthy et al., 2017). Nonetheless, Rutter (2015) presents an interesting foundation for analysis and states in part that, “resilience is not the chemistry of the moment, but something that may be more evident at different times in one’s life”. In sum, organisational and psychological studies agree that resilience focuses on organisational/individual response to a disruption but differ in terms of how each entity responds to a crisis (Allen et al., 2014a; Kanyangale & Pearce, 2012; Olsson et al., 2015; Van Breda, 2018). A key criticism of these studies is the emergence of words such as “invulnerable.” The use of this statement was misleading because it implied that risk evasion was absolute and unchanging. Another noticeable weakness of this view is the assumption of “good or bad environment” and that firms in suitable environments perform better than their rivals in bad environments. According to Gewirtz (2006), children develop resilience through natural processes, while others need help.

The third stream of definitions emerged from physics. In physics, resilience as a concept emerged in the late 1960s and early 1970s. Chen et al.(2021) defines resilience as the ability of a system to cope with change. Holling (as cited in Chen et al., 2021) states that in the mid-1980s, the concept of resilience began to penetrate the field of ecology. In Holling’s (1973) article entitled “Resilience and stability of ecological systems”, resilience was introduced into the study of ecological environments, which refers to the ability of an

ecosystem to recover to its previous state after a devastating effect. In the ecological environment, the concept of resilience means the ability of an ecosystem to recover to its previous state after being damaged. According to Lengnick-Hall et al. (2011), the 1990s saw the concept of resilience gain popularity among scholars, who studied how organisations respond to post-disruptions.

While Rutter presents a valid argument regarding resilience, it should be noted that resilience is not merely an interaction of experiences and outcomes; it also encompasses the proactive strategies individuals and organisations implement to prepare for potential disruptions. Rutter's (2015) research points to the fact that resilience is not related to an individual's psychological traits, but rather an individual's ability to appropriately respond to environmental change using the right resources. In my view, capacity can be significantly enhanced through preparation and training. Thus, at the individual level, differences in responding to situations could result from variances in an individual's genetic structure and the psychological responses to disruptions. However, it should be noted that it is also the individual's preparedness that influences these responses, suggesting a more dynamic interplay between personal attributes and environmental factors.

Holling (1973) recognises that the natural world is not very homogeneous over space. He argues that biological elements have different characteristics that are linked by biological and physical means. A lack of homogeneity in nature implies different reactions to environmental changes. In a way, this argument gives credence to studies by Masten (2001) and Norman (1973) whose results indicate that resilience is not a demonstration of heroic capabilities, but rather a result of individual abilities and overall interest in the disruption. For example, Holling (1973) states that stability in mathematics takes conditions that ensure equilibrium. In ecology, this is quite complex where attention has been paid to issues around persistence and the probability of extinction. Holling (1973) argues that ecological systems are measured in terms of their resilience and stability. To him, resilience determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes. Therefore, resilience is perceived as property and stability due to a material/thing's capacity to withstand disruption. Of interest is whether a resilient system has the capacity to future-proof against disruptions or not. The answer is certainly no. A system can be resilient but still show a very high degree of instability. As earlier mentioned, disruptions affect the responsive nature of organisms. It does not necessarily extinct them but rather affects their resilience capacity as well as the speed with which organisations quickly respond to

disruptions. A criticism of this view is the assumption that resilience concepts in the natural sciences can be extended to other disciplines such as business and management. The functioning of machines is different from how social entities respond to disruptions (Olsson et al., 2015). Therefore, the idea of spatial scales does not apply. Instead of seeing resilience as a unifying concept, resilience should be seen as ontological, with varying applications.

2.2.2. Towards the definition/meaning of resilience

Resilience and stability are rapidly becoming catchwords when it comes to managing organisations to recover from disruptions (Bahadur et al., 2010). The rise in the use of resilience within an organisational context relates quite well to its semantic ability to respond to the fluid nature of issues that involve the organisational ability to anticipate, cope, and adapt to disruptions. Although the term resilience has been overly used, researchers have focused on organisational ability to return quickly to previous conditions. The emphasis on bouncing back evident in definitions of resilience depicts narrow usage and contextually limited application of this phenomenon (Bahadur et al., 2010).

To understand resilience, there is need to understand the term system's state (Zohuri & Moghaddam, 2018). "A system's state is the general configuration that system is currently in it". What qualifies as a state of change depends on how we define the system. Zohuri and Moghaddam (2018) argue that, *since there are many ways of defining a system, it is not surprising that there are many definitions of its state*. Mcmanus et al. (2007) clearly state that there is little consensus regarding the concept. With his psychological view, Mcmanus uses a multi-dimensionanl view of resilience while most researchers use a unidimensional view of the concept. What is equally not clear is how organisations can achieve some level of resilience and stability. From the aforementioned, McManus et al. (2007) define resilience as a function of; a) situation awareness, b) management of keystone vulnerabilities and, c) adaptive capacity in a changing and unpredictable environment.

First, situation awareness denotes understanding perceptions of the organisation's operating environment (McManus et al., (2007). Situation awareness implies being aware of; the ability to look forward to opportunities as well as potential crises, a broader understanding of factors that trigger crises, the ability to understand crises and their likely impact, increased awareness of resource availability as well as being aware of the requirements to bounce back from a crisis. Indicators of situation awareness include; roles and responsibilities, understanding of hazards and consequences, connectivity awareness, insurance awareness and recovery

priorities. McManus et al. (2007) opine that being aware implies taking note of expectations, and commitments to stakeholders who might be internal or external, regarding the management of crucial vulnerabilities (buildings, communication systems, critical supplies, individual managers etc). McManus et al. (2007) state that this dimension of resilience clarifies those aspects of an organisation, operational and managerial, that present a greater chance of causing negative effect in a crisis.

Secondly, management of keystone vulnerabilities focuses on the components of an organisational system with the potential to cause significant negative impact. The resilience indicators for this dimension include; planning strategies, participation in exercises, capability and capacity of internal resources, capability and capacity of external resources, and organisational connectivity. These indicators are key in determining the resilience profile of an organisation.

The third aspect is of adaptive capacity which deals with dimensions of culture and dynamics of an organisation that allow it to make decisions in a timely and appropriate manner both in routine as well as disruptive times. Five indicators were identified under adaptive capacity; silo mentality, communication and relationship, strategic vision and outcome expectancy, information and knowledge, leadership, and governance structure. From the analysis above, it is important to argue that when an organisation is identified as resilient, implicitly, such as organisation exhibits situation awareness, understanding of the major areas that are susceptible to attack by disruptions and the organisation's ability to adapt to change (McManus et al., 2007). Although McManus seems to present a clear dimension for measuring the resilience of an organisation, his analysis falls short of introducing the concept of stability. Resilience does not necessarily translate to stability. An element might be resilient, but fail to maintain stability (Holling, 1973). Resilience is not a display of heroic capabilities, but rather an individual or organisations perceives the impact and other antecedents at play. Of significance, Mcmanus et al., (2007) provides useful dimensions and definition of resilience.

According to Masten (2001,p.206) “resilience is a class of phenomena characterised by good outcomes in spite of threats to adaptation of development”. Ledesma(2014), coping, adaptation and persistence are key tenets of a resilient organisation. Thus, from an organisational point of view, understanding the environment rather than the nature of the environment enables firms to develop resilient capabilities. Ducheck (2020b) states that

organisations should possess capabilities such as coping to realise the full potential of resilience, while Pelling (2003, as cited in Karman, 2020) argues that coping with adapting to stress or reaction are key capabilities for an organisation to bounce back after a disruption.

Thus, firms with a clear understanding of the environment can reduce risks, boost resources, and promote competences that build a strong foundation for future development. Bartlet (1994), Kaplan (1999) and Tarter and Vanyukov (1999) all as cited in Kolar, 2011) argue that the term resilience has become overused without being accompanied by critical theoretical explanations. Liebenberg and Ungar (as cited in Kolar, 2011) advances the view that the definition of resilience remains conceptually fuzzy with little consistency in its operationalisation. To highlight the weaknesses in the definition and operationalisation of the concept of resilience, Liebenberg and Ungar (2009) state that the concept has been used to describe both positive development and thriving under stress. They note that, these applications require two different benchmarks for identifying resilience. A key question that emerges is, is merely positive adaptation enough? Should adaptation be exceptional? The other question is how is positive and exceptional adaptation differentiated? With these questions, the definition of resilience fails to reveal whether resilience is a matter of degree or not (Kolar, 2011).

To understand the trends in the conceptual debate on resilience, Table 2.1 presents definitions of resilience from different authors.

Table 2.1 presents selected definitions of the concept of resilience from the context of SMEs.

Table 2. 1: Definition and conceptualisation of resilience

Author	Resilience is defined as....	Key aspects of the definition
Acquaah et al.(2011)	The capability of firms to persist in the face of substantial changes in the business and economic environment and the firm's ability to withstand disruptions using different strategies (p.5528).	Firm-level capability of resistance and recovery
Horne and Orr (1998)	Resilience is a fundamental quality to respond productively to significant change that disrupts the expected pattern of events without engaging in an extended period of regressive behaviour (p.31).	Quality of resistance and recovery
Adnan et al. (2016)	Ability to sustain income and as strategies to develop the spirit of social duty despite cultural and social barriers to women entrepreneurialism(p.4).	Recovery
Somers (2009)	Resilience "is more than mere survival; it involves identifying potential risks and taking proactive steps to ensure that an organisation thrives in the face of adversity" (p.13)	Multi-dimensional, embrace anticipation and adaptation
Akgun and Keskin (as cited in Yüksel et al., 2021)	The ability to absorb shocks effectively while developing situation-specific responses to engage in transformation activities to capitalise on disruptive events (p.82).	Cognitive, behavioural and contextual
Aleksić et al. (2013)	"The capacity to withstand systematic discontinuities and the capability to adopt to novel and yet risky environment."(p.2)	Capability, resistance and adaptation
Alonso and Bressan (2015)	Refers to the ability to survive, adapt and thrive despite the challenges (p.193)	Capability to coping and adaptation
Amann and Jaussaud (2012)	A firm's ability to take situation-specific, robust and transformative actions when it confronts unexpected and complex events that have potential to jeopardise its long-term survival and performance (p.5).	Ability to take situation-specific, robust and transformative actions
Sanchis and Poler (2014)	"The ability to withstand systematic discontinuities and adapt to new risk environments so that the enterprise can uncover and adjust to continually changing risks, endure disruptions and create advantages over less adaptive competitor" (p.1-2)	Ability to withstand systematic discontinuities and adapt to new environments
Ates and Bititci (2011)	A firm's capacity to survive, adapt and grow in the face of crisis (p.5601-5618).	Capacity to survive, adapt and grow
Biggs et al.(2012)	A firm's capacity to survive and adapt to challenges as well as maintain stability (p.423).	Capacity to survive and adapt
Branzei and Abdelnour (2010)	"The psychological mechanisms of positive adaptation"(p.2).	Individual-level psychological mechanism and adaptation

Burnard and Bhamra (2011)	An organisation's ability to withstand disruptions and the capacity to adapt to new risk situations (p.5583).	Ability to withstand disruptions
Carvalho et al. (2016)	The system's ability to return to its original state or a new one after experiencing a disruption (p.6)	Capacity to bounce back to an original or new state
Cheese and Cheese (2016)	Managerial response of vulnerabilities and adaptive response in the turbulent environment (p.328).	Behaviour and culture
Chiesei (2014)	A firm's ability to survive and adapt despite the global recession and to survive a disruption (p.457-469)	Ability to survive and adapt
Conz et al. (2014)	The capacity of an enterprise to renew itself through a series of innovative strategies (p.6)	Capacity to renew
Demmer et al (2011)	An SME's capacity to survive in a globally disruptive environment (p.5395-54133)	Capacity to survive
Dumistrascus and Dumistracus(2016)	An organisation's ability to modify its business model in the face of multiple changes (p.69-85).	Ability to modify business model
Gray and Jones (2016)	A firm's capacity for innovative performance (p.11).	Capacity to innovate
Gunasekaran et al.(2011)	"Adaptability, sustainability, vulnerability, responsiveness, and competitiveness in evolving turbulent global markets" (p.6811).	Adapt, survive and grow
Hamel and Valikangas (2003)	A firm's capacity for continuous reconstruction and its strategic response and fitness to shocks from the outside environment (p.5265).	Capacity for continuous reconstruction
Huggins and Thompson (2015)	Ability to bounce back from shocks (p.25).	Ability to access new ideas, knowledge and people
Lampel et al.(2014)	Capacity to perform well despite disruptive events (p.66-72)	Capacity to perform well
Lengnick-Hall et al.(2011)	Ability to survive and thrive in the face of disruptive events (p.2)	Ability to rebound
Ortiz-de-Mandojana and Bansal (2016)	The ability to lower financial volatility, record higher sales growth, and higher chances of survival despite shocks (p.6).	Anticipate, avoid and adjust
Tortensson et al.(2014)	A firm's capacity to survive, adapt and grow (376)	Ability to restore proper order in terms of organisation systems
Pettit et.al.(2013)	The balance of capabilities and disruptions to achieve the desired long-term performance results (p.46-47).	Capability to achieve long-term results
Sanchis and Poler (2014)	Ability to return to a normal state of operation despite disruptions and threats which the business faces (p.3).	Meaningful response to change
Tognazzo et al (2016)	The ability to bounce back, forward, and maintenance of functions over time in the face of economic crises (p.769-790).	Ability to bounce back, forward

Source: Saad et al.(2021, p.9-10)

Based on Table 2.1, the two main issues of resilience are clear and significant for individuals interested in researching organizational resilience. First, resilience is a combination of portfolios of capabilities (Saad et al., 2021). Authors like Markman and Venzin (as cited in

Saad et al., 2021) discuss the concept of resilience while dealing with multiple managerial constructs, including but not limited to a firm's performance growth amidst disruptions. For Biggs et al. (2012), the term resilience is multidimensional in nature encompassing dimensions such as survival, fast recovery, reducing vulnerability as well as ensuring sustainability. According to Verreynne et al. (2018), the key attributes of resilience can be combined into capabilities. This is in line with the view presented by Biggs et al. (2012) who advance that since vulnerability and adaptive concepts are linked, the management of vulnerabilities and responsiveness refers to the adaptation aspect of companies to changing and complex situations. In addition, there is a diversity of issues which different scholars choose to emphasise in defining resilience. Some scholars (Biggs et al., 2012; McManus et al., 2007; Duchek, 2020) consider resilience as resistance and recovery, anticipation, coping and adaptation.

2.2.3 Levels of analysis of resilience

In a highly dynamic and yet complex environment, the extent to which firms respond to disruptions is varied. This requires a broader and deeper understanding and the presentation of the levels of analysis of resilience (Bennett et al., 2018).

Lengnick-Hall et al. (2011) made several initiatives to combine resilience on "individual", "collective" and "organisational" levels. Lengnick defined resilience as "a firm's ability to effectively absorb, develop situation-specific responses to, and ultimately engage in transformative activities to capitalise on disruptive surprises that potentially threaten organisational survival". Miguel et al. (2013) unpacked the concept of resilience from three levels: individual, group and organisational. Cunha et al.'s (2013) are of the view that employees form the basic element of organisational systems, leading to the formation of organisational resilience. Although an individual in the group or organisation may possess resilience characteristics, this does not imply that the group that she or he belongs to is resilient.

Lei and Zao (2017) state that individual characteristics such as confidence, optimism, faith and belongingness are a cornerstone for individual resilience. An organisation's ability to engage in collective transformation is, to a greater extent, a function of employee resilience. For transformation to occur, employees must possess individual-level knowledge and abilities and an understanding of organisational routines and processes by which a firm conceptually orients itself and acts decisively to progress. Bennett et al. (2018) note that team-level

resilience has been studied more than at the individual level. The study of resilience at the team level focuses on team abilities and their cohesiveness in responding to disruptions under pressure. Bui et al. (2019) further state that resilience at the team level focuses on the following: anticipating and planning for contingencies, assessing key challenges that the team might experience and trying to gain situation awareness, ensuring that team debriefs occur, as well as addressing key risk points. Psychological safety and accountability form the foundation for group level resilience (Helen et al., 2021).

From an organisational perspective Bennett et al. (2018) state that resilience is studied holistically to understand its source and role of change that may cause transformation. According to Holling (1973), understanding resilience requires understanding the dynamic circles linked across spatial-temporal scales and the system's ability to withstand disruption and retain specific functioning. At the organisational level, building resilience requires flexibility, anticipation and adaptability, which are enhanced by social memory of alternative situations and responses. The complexity of Holling's (1973) view is the nature of the human community. Humans and organisations generally ensure efficiency is built into organisational routines and processes. With this in mind, pursuing efficiency while ensuring that an organisation becomes resilient is quite challenging. It has been argued that the need for efficiency brings into play some elements of control, standardisation and process streamlining to ensure that wastage is minimised at the expense of creating an adaptive system responsive to change (Bennett et al., 2018). Redman and Kinzig (as cited in Løvschal, 2022) wonder whether it is possible for flexibility to be substituted for efficiency. They contend that enhancing resilience requires individuals, their organisations and society to learn from past experiences and accept that some uncertainties must be inevitably faced.

In addition, Lei and Zao (2017) argue that there is mutual influence across the different levels of resilience analysis, resulting in a level transition, from the lowest to the highest level. Interaction among members promotes organisational learning and resilience. Harris (2008) and Graham (as cited in Wahyudi & Partini, 2018), warn that whereas individuals with a focus on positive things exhibit a formation of resilience, individuals with challenges tend to show different results. They rarely pay attention to negative things which adversely affect the resilience of the team and organisation. It should be noted that, there is no life without problems; the only problem is how individuals deal with the problem, to rise from the disruption (Wahyudi & Partini, 2017). If this is true, then how valid is the argument that the foundation for team and organisational resilience is individual? Bowes and Jaffee (as cited in

Adams et al., 2021) note that there is great variation in how individuals respond to environmental stressors, with different people exhibiting different resilience in a disruptive environment. Therefore, Bowes and Jaffee(2013) argue that resilience at individual level is not just a trait that can be measured directly, but rather, an elusive theoretical construct. Table 2.2 presents a summary of the levels of analysis of resilience at the three levels (individual, group/team and organisation).

Table 2. 2: Levels of analysis of resilience in organisations

Level	Definition	Content	How it is promoted
Individual	Ability to bounce back quickly in functioning from a disruption	Capacity to rebound or bounce back from a disruptive event. Optimism, faith, belonging	The human resource management function ensures that practices are embedded in training to develop employee's capacity to bounce back from disruption. Emphasis has to be put into developing and maintaining organisational resources that strengthen the resilience dimension from an employee standpoint.
Team/group	Resilience is seen as the group's capacity to see failures and imperfections as a source of learning and progress	Understanding failure and its sources, whilst drawing lessons to progress.	Psychological safety and accountability are seen as key ingredients of resilient teams/groups
Organisational resilience	Refers to the organisation's ability to absorb and develop situation specific responses that allow it to engage transformation activities to capitalise on disruptive surprises which have the potential to threaten organisational survival	"Involves a set of individual level of knowledge and skills to function, the organisation's routines and processes that form part of the organisation's functioning to move forward and establish a setting of diversity and adjustable integration that allows it to withstand disruptions. Others include: organisational learning and adaptation, and dynamic capabilities.	The human resource management function as well as senior management, play a key role in developing in developing requisite knowledge, skills and attributes that are central to dealing with disruptive events. Adaptive structures, improvisation, social capital and attention to failure are key drivers of change.

Source: Adopted from Xiao and Cao (2017.p.3); Santos and Spers (2023, p.6)

According to Santos and Spers (2023), the study of resilience differs according to the timing of the analysis; before, during or after adversity. Authors such as Lengnick-Hall et al. (2011, as cited in Santos and Spers, 2023), add that analysis of resilience may focus on seeing organisational resilience as a factor that enables the development of new capabilities that ultimately leads to new opportunities that are not limited to returning to the state before the disruption. Williams et al. (2017) argue that pre-crisis actions that leaders take can enable organisations to navigate through crisis. Roux-Dourt (2009, p.6 as cited in Williams et al. 2017) claims that if leaders remain ignorant of accumulating imperfections and vulnerabilities in their organisations, these imperfections become a major cause of disruptions. During a crisis, leaders help stakeholders make sense of information (Shepherd & Williams, 2022), thus enabling the provision of stability notwithstanding the potential for a crisis. The “after” crisis stage commonly called the “better off post-crisis” results in better outcomes after disruptions (Williams et al., 2017; Supardi & Hadi, 2020). James et al. (2011); Kahn et al. (2013); Maitlis & Sonenshein (as cited in Williams et al., 2017) argue that rational systems embedded in organisations lead to the generation of positive outcomes.

Whereas Somers (as cited in Santos & Spers, 2023) argues that works on resilience tend to focus on the environment after an unexpected event (Santos & Spers, 2023) highlight the role of management period before the disturbance, owing to the fact that disruptions emerge from unexpected day-to-day occurrences, which remain unnoticed until they significantly affect the activities of the organisation.

According to Sawalha (2015), attempts have been made to define and measure resilience using a wide range of factors; people, core business (systems, facilities and infrastructure), and networks. The definition and measures of resilience differ based on perspective and context; personal, organisational, sectorial, and societal. Chen et al. (2021), argue that most studies lack both a systematic theoretical exploration and a clear definition of organisational resilience. As Kantur and Say (2015, as cited in Chen et al., 2021b) argue that although scholars have conducted exploratory research on organisational resilience as a predictor variable, and proposed a measurement scale, others do not have a unified opinion for the study of resilience. Of interest is the fact that Kantur and Say (2015), argue that there are few in-depth evaluations of the dimensions of organisational resilience as they limit the scope of research. Wishart (2018) agrees with the view that resilience research in SMEs is limited, but emergent. Wishart (2018) adds that research on resilience in SMEs has tended to focus on the characteristics and capabilities of SMEs, and the resilience of the leader. For example, a

study by Pertheban (2023) on “the impact of proactive resilience strategies and organisational performance: role of ambidextrous and dynamic capabilities of SMEs in manufacturing sector in Malaysia” state that leadership involves concerting organisations from what they presently are to what the leader wants them to be. This view suggests the significant role played by leaders in shaping the resilience path of an organisation. Wishart (2018) presents a narrow view of resilience, since the focus shifts from the recovery process or returning to an original state to an individual facing a disruption. Wishart (2018) offers greater insights into the need to define and examine resilience in the SME context using contextual variables.

In an empirical study by Lenny et al. (2024) on quantifying organisational resilience: an integrated resource efficiency view, the study enhances the existing resilience literature by broadening the assessment of resilience to include managerial insights regarding the degree of implementation of key organisational resilience factors within organisations. The study also validated measurement scale based on four levers, resilience management, organisational learning capacity, capacity business continuity and operational flexibility. Extension in the assessment of resilience as well as validating the measurement scale is critical in understanding and operationalising resilience.

2.2.4 Ecological resilience

To most practitioners, the key question is whether the debate on biodiversity-stability outweighs every other discussion on resilience and organisational responses to disruptions.

According to Holling (1973), there exist multiple viewpoints of how the world is perceived. People, like organisations die, and populations disappear, while other species become extinct. On the other hand, another viewpoint does not focus on the presence or absence of organisms and the degree of constancy of their numbers. What is true is that analysis of each viewpoint stems from viewing the behaviour of the systems and the usefulness of the characteristics and properties of the system being studied.

“A milestone in establishing the notion of sustainability in international consciousness presented the often-quoted book, the limits to growth edited by the Club of Rome (Meadows et al. 1972). The 50 self-appointed wise women and men developed, for the first time, the concept of outer limits, the idea that development could be limited by the finite size of the Earth’s resources, fundamentally affecting the understanding of human life (Brand, 2005).

It is more than three decades since the term resilience was introduced to literature by Holling (1973). It has been argued that since management actions are based on various theoretical

propositions, the contextual meaning of resilience can lead to multiple sets of policies and actions. Holling's (1973) work has been helpful in advancing our understanding of the concept of resilience. In 1978, Holling stated that, "it is commonplace now to perceive limits to growth, resources, climate and environmental stability". It seems that from this point, the concept of outer limits emerged. Brand (2005), states that the notion of outer limits suggests using ecosystem resilience, as it defines resilience in clearer terms. Related to the concept of carrying capacity, the resilience of firms denotes their ability to understand, respond and bounce back to a state of equilibrium. Ecological resilience of a system has been defined in two ways where each depicts a unique aspect of stability. In his view, stability was characterised as the persistence of a system near or close to an equilibrium state. This view was later expanded to mean that resilience was the system's ability to absorb disruptions without changing state. The two viewpoints of ecological resilience are; resilience and global equilibrium and, resilience and multiple equilibria.

2.2.4.1 Resilience and global equilibrium (engineering resilience)

Brand (2005) and Gunderson (2000) established that every system exists near a single or global equilibrium condition. From this view, resilience of a system is measured in terms of how far the system has moved from the main equilibrium, the extent to which the system is able to return to its original or even a better state (return time). Holling (1973), established that the period a system takes to bounce back to its original state (return time) was significant in measuring the resilience of an organisation. Thus, return time was seen as a key measure of stability. Although different authors have multiple conceptualisations of return time. It is prudent to note that most agree that return time originates from the concept of engineering resilience. Holling (1973) argues that return time arises from traditions of engineering, where the ultimate goal is to design systems with a single operating aim (objective). From this view, Hollings pursues a global view of systems design, that of global stability where the focus is on one equilibrium state. Holling (1973) further advances that there can only be one state of equilibrium. This state of equilibrium is universal and applicable in physics, material engineering and other forms of technical control. From a resilience standpoint, the ultimate goal of a resilient organisation is to bounce back to a previous state (equilibrium) or even better. Although response mechanisms might be context idiosyncratic, the ultimate objective is to bounce back to an original state before the disruption. Through the different systems and structures of the organisation, management should ensure that early weak signals are detected

and used to make important strategic choices/decisions. Evans and Steven (2009) disputes the view that there is never an equilibrium state. Systems are never at equilibrium since they rely on a continual flow of energy, which helps to maintain their integrity. This implies that they are always in motion “flowing out” through creating an adaptive cycle. This leads to the creation of a new equilibrium state. For example, Evans and Steven (2009) argue that if an organisation experiences a situation where resources are plentiful, it might have to be conservative when such resources reduce. This calls for adaptation to its environment, given its current state. Walker and Salt (as cited in Evans & Steven, 2009) argue that;

“a disturbance that exceeds the systems resilience breaks apart its web of reinforcing interaction. The system comes undone. Resources that were tightly bound are now released as connections break...” Once resources have been released, a brief reorganisation ensures, as opportunities for exploiting the resources that the collapse has freed follow. A new regime (equilibrium) state follows (Evans & Steven, 2009). This argument then raises the need to discuss resilience on multiple equilibria.

2.2.4.2 Resilience and Multiple Equilibrium (ecological resilience)

Holling (as cited in Allen et al., 2014; Gunderson, 2000) advanced the view that instead of a single or global equilibrium level of resilience, there exist multiple equilibrium states in which an organisation can find itself if it is affected by disruption. The concept of multiple equilibria of resilience holds that resilience is measured by the magnitude that can be absorbed before the system defines its structure by changing the variables and processes that affect or determine behaviour. Allen et al. (2014 and Holling (1973) state that in resilience, only one state can exist or can be made to exist. Thus, two issues emerge: near equilibrium or equilibrium. This view predominantly takes an ecological viewpoint recognises the existence of multiple stability domains. This way, systems have limits to what they can absorb and the state or conditions in which they can operate, some allowing the system to return to its previous state and, at times, taking up a new state.

Like natural objectives, the resilience nature of organisations is determined by multiple factors, some of which are determined by the structural configuration of the organisation and management’s idiosyncratic perspectives on issues the organisation faces. As such, response mechanisms vary with a high probability of an organisation taking up a new state (equilibrium state). This view advances the argument that resilience is maintained by focusing on keystone restructuring processes that cross scales, thus allowing for renewal and

reformation. Gunderson (2000), warns that no single mechanism can guarantee maintenance of resilience. Strategies aimed at ensuring renewal should be developed. Gunderson's (2000) argument on the need to encourage learning, trust and engagement is supported by Santos and Spers (2023); Xiao and Cao (2017b). One noticeable weakness of ecological resilience is the failure to provide a clear plan of action on how the consequences of disruptions will be dealt with in the long-term. Despite this weakness, Holling (1973) ecological resilience provides a clear perspective of how resilience should be viewed. He emphasises the need to pay attention to the shift in equilibrium to a new condition for persistence.

2.2.5 Reconciling Engineering and Ecological Resilience

The persistence of relationships with a system, as well as the ability to absorb changes in state variables with a high degree of persistence was what initially developed as the concept of resilience. Resilience was, therefore defined as the persistence and property of a system (Zampieri, 2021). The emergency of concepts such as single or global equilibrium as well as resilience and multiple equilibrium, speak to the concepts of one equilibrium point (near or closer to) and multiple equilibrium points. Resilience was therefore seen as the size of a stable state or the amount of disruption a system could take before taking up a new set of equilibrium of state. The definition of engineering resilience narrowed down to a single equilibrium. This definition focuses on how a system returns to a previous state of equilibrium and how long it takes to normalise after a disruption. This foundational understanding of resilience is crucial, as it highlights the dynamic nature of systems and their interactions with external factors.

Zampieri (2021) argue that whereas ecological and engineering definitions were undoubtedly clear, they failed to provide define resilience . As Zampieri (2021) puts it, determining the quantitative effect of resilience requires objective techniques to identify the disruption. It has been established that since ecological resilience requires an analysis of large amounts of disruptions to aid in decision making, generalising disruptions might be complicated since each situation might require an idiosyncratic approach. Zampieri (2021) argues that engineering resilience requires proper estimation of the disruption and the time taken or required for a system to return to a single or global equilibrium state. These concepts illustrate the complexity of resilience, suggesting that systems can exist in various states depending on the nature and magnitude of disruptions.

Whereas an attempt has been made to ensure an integrated understanding of resilience (ecological and engineering), the approach to assess resilience based on system properties that promote resilience while at the same time focusing on real resilience that unleashed its system response (Dakos & Kéfi, 2022). From this analysis, it is clear that conceptualising while at the same providing clear measures of resilience remains a struggle and a complex task. In an attempt to reconcile ecological and engineering resilience, (Dakos & Kéfi, 2022) provides an operational definition of resilience. According to Pimm (1984), resilience is the ability of an ecosystem to recover and return to its initial state after experiencing a disruption and the speed at which it returns to its original state. This definition reconciles the definition in two ways: 1) it recognises the existence of local (engineering) and, 2) non-local equilibrium (ecological) states while at the same time factoring in the amount of time it takes for a system to return to its initial state (quantity). While this focus on returning to a previous state is valuable, this may overlook the potential for systems to evolve and adapt in response to disruptions.

In sum, reviewing the literature on resilience (ecological and engineering) shows common threads of relatedness. First, the size and shape of the likely disruption can be related to properties of both engineering and ecological resilience. Engineering resilience focuses on the properties of the system and its behaviour in reaction to a disruption (small) around a local state (equilibrium). Ecological resilience focuses on how the system would respond to disruptions that are not small and the likely chance of the phenomenon shifting to a new state (multiple or non-local equilibrium). Secondly, the concept of variance around the point of equilibrium is important. Whether potential disruptions are small or non-small, resilience analysis focuses on the extent and speed at which the state of an entity remains or changes to a new state of equilibrium after a disruption. Implicitly, one common thread around the resilience analysis is the question of how close or far (variance) each object or phenomenon takes up a new state? It has been stated that the smaller the potential disruptor, the higher the likelihood of a near to the original equilibrium and vice versa (Dakos & Kéfi, 2022). This dual focus is essential, as it recognises that resilience is not just about bouncing back but also about leveraging disruptions as opportunities for growth and transformation.

The third aspect in identifying similarity between the two concepts is the notion of minimum distance to equilibrium. This aspect measures the minimum amount of disruption that can be applied to cause changes to the system state from equilibrium. This key metric is used by both ecological and engineering equilibrium to assess the extent to which a disruption might

cause changes in the system state and how the changes might create a movement away or closer to the original equilibrium.

The fourth and most important measure is the likelihood modality. This proxy measures bi-stability and potential changes between various states. This proxy states that environmental disruptions can cause movement or system state changes along a defined path. The movement away from two of the original equilibrium assumes that the path is defined and predictable. The closeness or shift from the original system state is a function of the strange disruption from the environment. In conclusion, although common characteristic and measures exist to conceptualise ecological and engineering resilience, studies point to the fact that it is easier to operationalise engineering resilience as opposed to ecological resilience. This observation highlights the need for ongoing research to develop frameworks that can effectively measure and enhance ecological resilience. What is true about the multiple viewpoints used in measuring resilience is the fact that there cannot be a single measure for operationalising the concept (Dakos & Kéfi, 2022).

With this challenge notwithstanding, the study intends to adopt a multi-dimensional view of understanding resilience rather than a unidimensional approach.

2.3 CONCEPTUAL DEBATE ON RESILIENCE

This subsection presents two critical aspects that form the mantra of resilience; organisational resilience as a meta-capability and resources and complexity of adaptive resilience. The aim is to provide a comprehensive understanding of the topic, explore different perspectives and identify gaps in current knowledge on resilience.

In a complex, yet dynamic environment, organisations should be able to develop capabilities for predicting, facing as well as withstanding unexpected disruptive events that may be both internal and external. Ahmić (2022) argues that when faced with catastrophic threatening events, organisations react differently. Some organisations emerge victorious; others improve their operations while others might be grossly affected by their operations. In trying to understand the concept of resilience, different authors have provided diverse concepts, definitions and dimensions.

2.3.1 Organisational resilience as a meta-capability

It is important to underscore that there are scholars such as (Duchek, 2020a) who assert that resilience is a meta-capability which constitutes a set of organisational capabilities or routines that allow for successful ways of dealing with disruptive events in three different resilience

stages. Duchek (2020) brings to the fore the issue of time in relation to resilience capability required, before the unexpected event which requires proactive action, during the unexpected event, which requires concurrent actions to cope and after the unexpected event which demands reactive action. Duchek (2020) adopts a process-based resilience, which is common in research to define three successive and interrelated resilience stages (anticipation, coping, and adaptation) and assign important organisational capabilities to each of these stages which together form organisational resilience as shown in Figure 2.1 below.

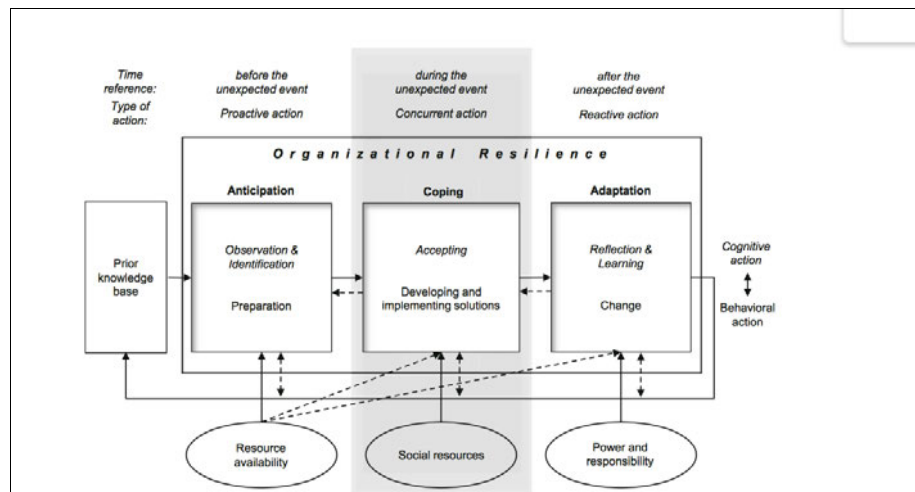


Figure 2. 1: Capability-based conceptualisation of organisational resilience

Source: Duchek (2020: 224)

As shown in Figure 2.1, anticipation is the first dimension of organisational resilience and regards the ability to detect critical developments which can occur internally or in the environment. According to Duchek (2020), anticipation capabilities required in the initial stage of organisational resilience refer to the preventive and proactive steps and actions linked to internal and external turbulences. Duchek (2020) argues that there are three capabilities which together make up anticipation capability. These are observation ability of inner/out changes, pinpointing prospective developments of vital effect, and preparing ability for unforeseen events. Duchek (2020) highlighted situation awareness as the construct of anticipation. In their assessment, they identified six measures of awareness: 1) “degree of advanced awareness of expectancies, obligations and constraints concerning interested parties, inner and outer; 2) capability to keep an eye out for favourable occasions and prospective crises; 3 (degree of resource attainability awareness(inward and outward); 4 (capability of precisely determining crises and their effects; 5) degree of advanced

comprehending what triggers crises and; 6) degree of advanced comprehending of required minimums for operations in terms of recovery”.

In addition to anticipation, scenario planning enables organisations to manage diverse future events (Hillmann & Guenther, 2021). Hillmann and Guenther (2021) argue that although preparation has been identified as a key capability to be deployed during a crisis, it should form part of every organisation’s resilience process. If organisations are prepared, they can easily handle sudden disasters and may benefit from such disruptive events (Lengnick-Hall et al., 2011a). Lengnick-Hall et al. (2011a) further argue that organisations are said to be prepared if they are fitted to manage disruptions. In their view, the development of resources during crises that include effective relations, recovery plans as well as comprehending are key characteristics of organisations that are prepared to respond to disruptions. Although this dimension is key, it does not necessarily imply that if an organisation can anticipate, then it is resilient. This is so because disruptions do not occur in a consistent pattern with multiple effects, no effect or sometimes with mild effects. This naturally implies variations in the predictive power and the response towards each disruption exist.

The second resilience capability is coping, which focuses on an organisation’s ability to manage tightly crisis at the concurrent stage it is happening. As the disruptive or unexpected event unfolds, there is a need to cope either through acceptance or implementation and development of solutions. The dimension of coping contains two capabilities: 1) an organisation’s ability to accept troubles and 2) being able to find solutions/put them into action to resolve a crisis. In crisis management, resilience is exhibited by the organisation’s ability to move first and share information with its relevant constituencies. Releasing information early allows the organisation and its members to accept the situation and be able to quickly develop mechanisms to respond to a crisis. As mentioned earlier, different organisations perceive and respond differently to disruptions. Some of the options that are available when responding to crises include: functional actions and communication, providing employees with information to prevent damage, managing the firm’s public image as well as changing the culture of the organisation (Tasic et al., 2020). Even though organisations respond to disruptive events, some are not able to because of challenges that are associated with the internal configuration of systems, as well as weaknesses in social and cognitive limitations. Internal organisational arrangements make it hard to create response mechanisms that offer quick and yet specific solutions to resolving disruptions.

The third capability is adaptation, which occurs at the reactive stage. Adaptation, is therefore, an important capability for firms to reduce consequences that occur due to unexpected events. The adaptation dimension distils into adapting to unfavourable circumstances and benefiting from changes that disruption may create (Ahmić, 2022). Adaptation contains two capabilities which are: “reflection and learning”, and “capabilities of organisational change”. Ducheck (2020) argues that adaptation precedes a disaster and requires adept leadership, clear networks, internal alignment, “experience-based learning” as well as a focus on the well-being of staff. According to Nilakant et al. (2023), responding to crises requires collaboration since addressing new context without prior experience is often challenging. Thus, effective adaptation happens if “organisations are able to make internal changes, such as breaking down organisational silos in order to draw upon and combine resources and synergies of different sections.”. The notion of organisational resilience by Ducheck (2020) is insightful in three key ways. Firstly, it informs scholars that organisational resilience capabilities develop over time and emerge from the interlinked process of anticipating coping and adapting with threatening situations and unexpected events. Secondly, the view of organisational resilience by Ducheck (2020) brings to the fore the issue of prior knowledge and its use to change. Knowledge can be acquired through learning from similar firms and incidents or through interaction and collaborations to learn from failures. Lastly, there is an explicit recognition of different types of resources including social resources, and availability of resources as critical not only for pro-action before the unexpected event, concurrent action during the disruptive event, but also reactive action to adapt after the event. It is noteworthy that organisational resilience capabilities are complex, deeply embedded in a social context, and embraces various collective routines that generate resilience outcomes.

Whereas Ducheck (2020), acknowledges the need for more knowledge to understand how resilience works in originations. How then does Ducheck’s (2020) model become universally acceptable? Secondly, Ducheck’s model captures three resilience stages: anticipation, coping and adaptation, since resilience is complex and multi-dimensional, Ducheck’s model may not fully capture the capabilities and conditions needed for resilience to flourish. It can be argued that regular sociocultural processes and interactions among teams lead to resilience. This therefore makes it difficult to develop a universal model of resilience, as claimed by Ducheck (Mondragón et al., 2022).

Ducheck’s (2020) model provides a framework for understanding resilience, highlighting the capabilities required to cope and bounce back from disruptions. This is applicable to small

and medium enterprises (SMEs) that operate in a volatile, uncertain, complex and ambiguous (VUCA) environment. SMEs should build collaboration among the resilience stages (anticipation, coping and adaptation) if they are to bounce back from disruptions (Duckek, 2020). This argument is supported by empirical findings by Wided (2023), who studied IT capabilities, strategic flexibility and organisational resilience in SMEs post-COVID-19: A mediating and moderating role of big data analytics capabilities in Saud-Arabia. The study revealed that personal expertise in big data (capability) strengthens the relationship between strategic flexibility and organisational resilience.

2.3.2 Resources and complexity of adaptive resilience

Nilakant et al. (2023) conceptualised adaptive resilience as the ability to respond effectively, recover quickly, and successfully renewed in the face of adverse events identified four major factors that aid organisational response, recovery and renewal following major disruptive events. The study further shows that quality of top and middle-level leadership, quality of external linkages, level of internal collaboration, ability to learn from experience, and staff well-being and engagement significantly influence an organisation's ability to adapt during the reactive stage. Figure 2.2 shows these four elements of an organisation's adaptive resilience to depict the multi-dimensional nature and specific aspects which are key in the reactive stage of organisational resilience.

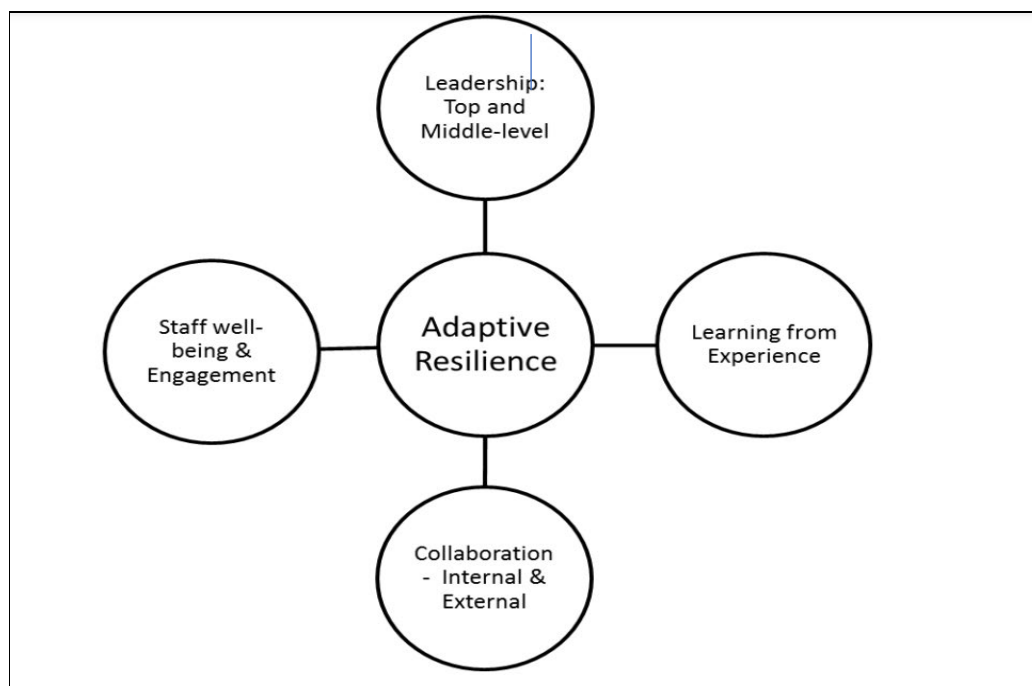


Figure 2. 2: A framework for adaptive resilience

Source: Adopted from Nilakant et al. (2023:83)

According to Nilakant et al. (2023), staff engagement is a major driver for adaptive resilience but requires sustained efforts from leaders to maintain. In an organisation where staff feels cared for, empowered, and valued, staff engagement tends to be high. Factors such as work-life balance and acknowledgement of family ties enhance a sense of well-being. Additionally, the emotional literacy of middle management plays a key role in sustaining engagement. On the other hand, leadership is central to resilience building in an organisation, with emphatic leaders being vital in the response and recovery phases during and after a disruption. Effective leaders exhibit a range of features that differentiate them from less effective ones, such as open and frequent communication with their staff, placing high value on staff well-being, and empowering them. To build resilience, leaders and organisations must create a caring, learning, collaborative culture which promotes better response, faster recovery, and positive renewal. According to Nilakant et al. (2023), collaboration is a catalyst that promotes ongoing resilience, particularly in the recovery and renewal stages. Networked organisations can draw upon resources and support in the response, recovery and renewal stages.

Furthermore, adaptation in a dynamic environment requires quick-decision making and operations flexibility. Internally, organisations that have built up entrenched, separated silos find it harder to respond quickly. Nilakant et al. (2023) argue that in a dynamic environment, organisational adaptation is contingent on continuous learning. However, the view that adaptation is contingent on learning has received less attention because there is a lack of a systematic approach to organisational learning coupled with limited dissemination of novel insights (Nilakant et al., (2023)). A major criticism of Nilakant et al. (2023) is the lack of empirical validation of the framework. Whereas Nilakant et al. (2023) tested the model on 200 individuals in 11 organisations in New Zealand, the generalisability of the model is still in question. Hadi et al. (2019) argue extant literature suggests that there is need for deep collaboration and understanding of resilience.

In a study by Supardi and Hadi (2020) on, “new perspective on the resilience of SMEs proactive, reactive from business turbulence: a systematic review”, of 2646 articles published from 2011 to 2020 established that changing, sustaining and adapting are important attributes of SMEs adaptive resilience. This view is supported by Supardi and Hadi (2020) who argue that the adaptive capacity of the SME enhances its ability to meet and achieve priorities and goals in order to absorb or limit disruptions while retaining continuity.

Clearly, Ducheck (2020) and Nilakant et al. (2023) share the view that resources and leaders are critical in ensuring organisational resilience which occurs in a social context. Equally common in the view of these scholars is the importance of prior knowledge and learning from experience. However, the notion of adaptive resilience by Nilakant et al. (2023) is unique as it also emphasises the collaborative aspects of resilience internally and externally, but also engagement and well-being of employees which are key foundations for organisational citizenship behaviour of employees during disruptive times. Organisations that are externally well-networked draw upon resources and support in the response, recovery and renewal stages. Rapid adaptation in a dynamic environment requires quick decision making and flexibility in operations.

In a slightly different vein, Nilakant et al. (2023) focuses exclusively on adaptive resilience which occurs in the reactive stage to provide four different definitions of resilience and what it entails. Supardi and Hadi (2020) in their article argue that the definitions of SME business resilience vary with resilience being described as the ability to "revive" or recover to a previous or even better state after experiencing turbulence. This recovery is said to stem from a process of survival or adaptation, leading to implementing an initiative strategy for recovery in the face of unexpected challenges. However, the article primarily defines resilience as the capacity to cope with and respond to change, without delving into the specifics of maintaining balance or the resource configurations necessary to achieve a new equilibrium. It suggests that successful resource configurations result from adapting to new environmental conditions. Davari et al. (2021); Supardi and Hadi (2020) suggest that SMEs resilience and performance tend to improve in times of turbulence. Ali et al. (2021) in their study on "corporate resilience and performance in food industry SMEs during COVID-19" in Iran established that there is a positive effect of planned and adaptive measures of resilience and performance. The study suggests that, during crises, a manager's task is to decide how to improve their business models and adapt their marketing strategies to withstand adversity.

One may conceptualise four different types of adaptive resilience in terms of post-disturbance resources both tangible and intangible which are available or eroded and also whether the post-disaster environment may be similar to the pre-disaster environment or may be significantly different, as shown in Figure 2.3. The purpose of Figure 2.3 is to present two dimensions of an organisation's resource landscape, resource availability and environmental dynamism which if combined, produce four different scenarios as shown below;

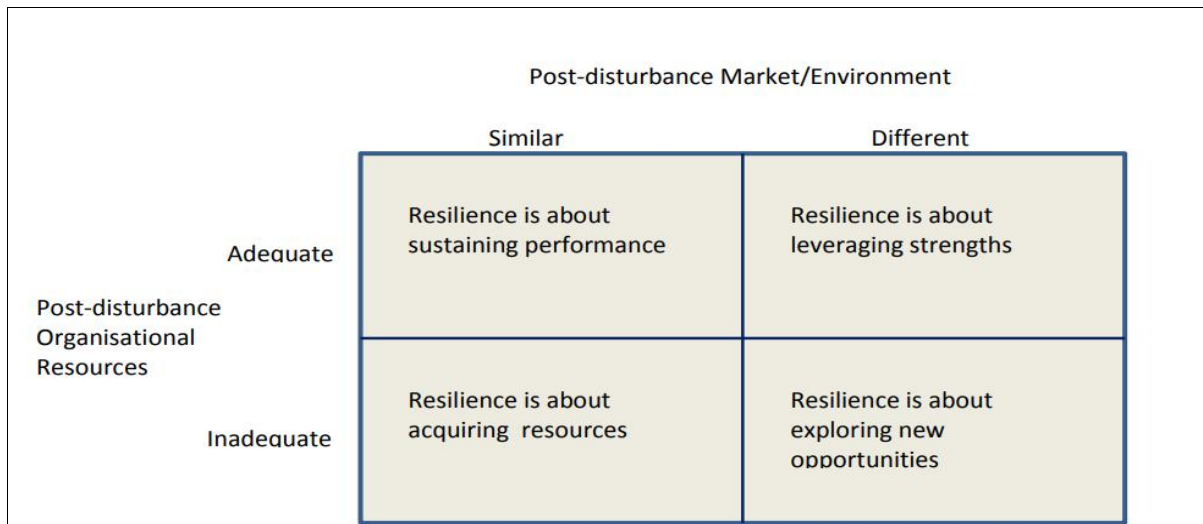


Figure 2. 3 Contextualising Adaptive resilience

Adopted from: Nilakant et al. (2023:84)

Adaptive resilience is about dealing with the disruption and sustaining performance if an organisation’s post-disaster environment is similar to its pre-disaster environment, and its resources, both tangible and intangible, are “largely intact” (top left quadrant). In this situation, the two factors of leadership and staff engagement will be central to quick recovery.

Furthermore, adaptive resilience is all about “leveraging” the existing strengths in the new environment. If an organisation’s post-disaster environment is different from its pre-disaster environment. In this instance, tangible and intangible resources are “largely intact” (top right). In this situation it is learning, along with leadership, and staff engagement that are likely to be the key to effective recovery because it allows organisations to acquire new knowledge and make the necessary changes that are required for survival.

In addition adaptive resilience is all about mobilising resources and exploring new opportunities if an organisation’s post-disaster environment is different from its pre-disaster environment, and its resources, both tangible and intangible, are “eroded” (lower right). Lastly, adaptive resilience focuses on rapidly mobilising resources if an organisation’s post-disaster environment is similar to its pre-disaster environment, but resources are significantly eroded (lower left). Collaboration becomes a central element, along with leadership and staff engagement.

Although this framework provides important insights into what organisations can do with their adaptive capacities, it does not follow that a systematic approach will be adopted. Pursuing any of the adaptive approaches may not yield the same results. On the other hand, if

resources are significantly eroded with no effort to replenish them, and the few resources are neglected, an organisation's adaptive capacity disappears, giving way to rivals to out-compete it. To remain adaptive, learning, leadership, and staff engagement should be encouraged as a primary initiative. The three aspects allow the organisation to promote learning while enabling key stakeholders to take ownership of key organisational processes that ensure effective adaptability. The four scenarios of adaptive resilience pronounce not only the availability but rather adequacy of both tangible resources, such as physical assets and money, along with intangible assets like human capital, knowledge and leadership for adaptive capacity. Scholars need to be mindful that adaptive resilience is a complex dynamic that is constituted by tangible and intangible resources which resonates with the Resource Based View (RBV) of an organisation. Thus, if any of the constituent resources are neglected and eroded rather than fostered and sustained, adaptive resilience will diminish over a period of time. After the above discussion on the roots and different definitions, conceptualisation, and levels of resilience, and framework of adaptive resilience, it is timely to clarify and justify the definition of resilience as a central issue in this study. For the purpose of this study which focuses on SMEs in Eswatini, resilience is *the organisation's ability to rebound back from adversity, disagreement, and failure, and to effectively absorb, develop situation-specific responses* (Pathak et al., 2023; Kanyangale & Pearse, 2012 and Lengnick-Hall et al., 2011b). This definition is useful because it adopts a multi-dimensional approach to defining resilience and acknowledges the fact that resilience involves anticipating, coping and adapting to disruptive events (Duchek, 2020).

Nathan's (2011) study entitled, adaptive capacity and its assessment, concludes that, the complexities surrounding adaptive capacity, underscore the need for a more integrated approach in adaptation studies. While the emphasis on adaptive capacity as a bridge between vulnerability and resilience frameworks is insightful, it is equally important to consider the socio-political dimensions that shape these frameworks. For instance, the effectiveness of adaptive capacity is often contingent upon the inclusivity of governance structures and the active engagement of local communities in the decision-making process. Research indicates that successful adaptation not only relies on technical solutions but also on the empowerment of marginalized groups, whose voices are frequently overlooked in resilience and vulnerability assessments. By incorporating participatory methods that prioritize stakeholder input, it is possible to develop a more holistic understanding of adaptive capacity that addresses not only the systems in place but also the people within those systems. Moreover,

while the call for novel methods to measure adaptive capacity is crucial, it is essential to ensure that these methods are flexible and context-sensitive. Thus, integrating an equity lens into the frameworks of vulnerability and resilience can enhance a manager's understanding of adaptive capacity, ensuring that it is not only a theoretical construct but also a practical tool for achieving sustainable outcomes.

Elia et al.(2020) conducted an empirical evaluation of the impact of resilience and sustainability on performance, whose aim was to examine how a sustainability strategy, evaluated through a sustainability maturity index (SMI), influences a company's financial performance. Sustainability was conceptualised as a dimension of resilience. The study concluded that, while much of the literature proffers a sustainable strategic imperative results in financial benefits, their empirical research on 53 organisations does not support this view(profitability doesnot show a significant relationship with sustainability). Nonetheless, the study argues that there may be other business motivations to enhance sustainable operations, such as acknowledging market sentiment that favours socially responsible organisations, which could lead to a larger market share.

Tumaku and Agbeko's(2024), empirical study on the relationship between regulatory focus and innovative performance of SMEs in Ghana:The role of entrepreneurial resilience, orientation and learning in SMEs in Ghana revealed concluded that companies that implement prevention strategies (vigilant or avoidant approaches) by minimising losses and safeguarding their assets while taking calculated risks to avoid setbacks are likely to build resilience. Similarly, firms that adopt promotion strategies (eager or approach methods) to secure gains for their small and medium-sized enterprises (SMEs) during disruptions or economic downturns can also foster resilience. This is particularly effective when managers or owners of SMEs inspire their employees to work diligently, think creatively to generate new ideas and opportunities, and actively seek and accept feedback from the business.

From the foregoing discussions and empirical evidence, the hypothesis, H0₁: ***There is no significant relationship between resilience and performance optimisation of SMEs in the Manzini region*** was formulated.

Having discussed the nature and essence of resilience in general, the next section will dwell on theories related to an integrated model of resilience in order to anchor the study and identify a research gap that the study seeks to investigate.

2.4 THEORIES/MODELS RELATED TO AN INTEGRATED MODEL OF ORGANISATIONAL RESILIENCE

This section presents 4 theories/models that explaining the key assumptions and foundation for the variables that were selected to form the resilience model. A review of these theories is important in a study on resilience in SMEs because it provides a comprehensive understanding of the factors that contribute to resilience. Resilience of organisations and SMEs in particular has been a matter of scholarly scrutiny, with most studies delivering their analytical efforts through resilience models. This section presents relevant resilience models that further the understanding of the concept.

The complex adaptive theory of resilience helps explain how SMEs adapt and respond to challenges in a complex and changing environment. Dynamic capability theory acknowledges the fact that in order to create a competitive advantage, firms operating in a changing environment need to be able to develop a dynamic perspective of their resources. Lee et al. (2013) argue that factors of relative overall resilience model identified two factors: adaptive capacity and, planning that enhance an organisation's resilience. Capacity for Organisational Resilience Model delves into the underlying mechanisms that foster resilience in organisations, while Ma, Xiao and Yin's (2018) Integrated model of resilience highlights that an organisation's dynamic capability can be earned at three levels: individual, group and organisational level. Lastly, Mallak's (1998) Work Resilience Instrument (WRI) model identified four factors that enhance organisations resilience: active problem-solving, team efficacy, confident sense-making, and bricolage.

2.4.1 Complex Adaptive (Panarchy) Theory of Resilience

In 2002, Gunderson and Holling from the discipline of ecology developed the Panarchy theory, which proposes "that tensions between demands for organisation and efficiency versus demands for novelty and diversity drive adaptive cycle type dynamics in many different types of complex system". The theory was developed to offer a detailed explanation of environmental problems. In a book entitled *Panarchy: "Understanding Transformations in Human and Natural Systems"*, Holling a synthetic perspective of how a group of researchers associated with resilience understood change in social-ecological systems (Gunderson, 2000). From the late 1990s and early 2000s, the Alliance on Resilience took a productive, innovative, and highly collaborative approach to unravelling aspects of resilience. The resilience alliance addressed social-ecological challenges by integrating insights from social and natural sciences (Rocha et al., 2020).

Panarchy theory postulates that “complex adaptive systems show cross-scale structure resulting from positive, self-reinforcing organisation of defined processes” (Gunderson & Holling, as cited in Angeler et al., 2011). As a conceptual model, Panarchy describes how the complex system of people and nature is dynamically organised across scales of time and space (Allen et al., 2014). The processes within an entity form adaptive cycles, thus allowing cycles to operate at distinct ranges of space and time scales (spatiotemporal). Gunderson and Holling (2002) further advance that social, ecological, and economic systems follow predictions of Panarchy theory. Angeler et al.(2011), (Boyer, 2020) provide examples where the theory of Panarchy has been applied as depicted in Figure 2.4, a heuristic model represents a variety of systems and environmental problems. Adaptive cycle (A) at different scales of the hierarchy (B) can be connected through remember and revolt interactions. Proponents of the Panarchy theory posit that systems are organised in nested hierarchies across space and time, where each level of the hierarchy is a subsystem that can be four phases of the adaptive cycle; conservation (stability), release (a disturbance) and re-organisation (change after the disturbance), and growth (settling into a new stable stage) (Meerow & Newell, 2015). The popular concept of ecological resilience has evolved as an intellectual framework for understanding how complex systems self-organise and change over time. Therefore, resilience has been defined as the 'capacity of a system to absorb disturbance and reorganise while changing (Anderies et al., 2013, as cited in (Meerow & Newell, 2015).

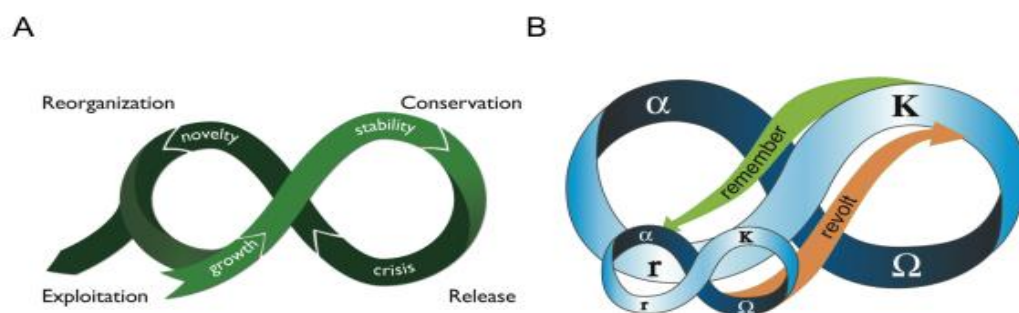


Figure 2. 4: Phases of Panarchy

Source: Rocha et al. (2020.p.2)

Panarchy is a heuristic of nested adaptive cycles representing various systems and environmental problems. Adaptive cycles (A) at different scales of the hierarchy (B) can be connected through remember and revolt cross-scale interactions. In the application of

Panarchy, control comes from all parts of the organisation. To ensure the stability of systems, Panarchy theory emphasises cross-scale linkages whereby processes at one scale affect those at the other scales to influence the overall dynamics of the system. This view implies that resilient firms do not establish tight control processes but allow for flexibility and cross-functioning within units. Adaptation, coping, and transformation result from the holistic functioning of the entire unit, learning from itself and without. Panarchy provides a useful framework that characterises complex systems of people and nature as dynamically organised.

Rocha et al. (2020) advance the view that understanding systems requires conceptualising them as interacting adaptive cycles. The concept of adaptive cycles was developed by Holling in 1986 when trying to understand managed ecosystems. Experiences in understanding managed ecosystems drew his attention to understanding processes of destruction and organisation. These had been neglected relative to those systems of growth and conservation. To him, *“considering these processes provides a more complex understanding of system dynamics. An adaptive cycle alternates between long periods of system aggregation, connection, and accumulation, and shorter periods of disruption and reorganisation* (Rocha et al., 2020, p.2)”.

Holling developed the second domain of the system, which he called the back-loop. This phase focuses on renewal. Implicitly, two options are available to a system recovering from a disruption. The system might return to its old equilibrium point or establish a new state of equilibrium. From a research standpoint, researchers propose that a force emerges between the demand for organisation and efficiency, pitting it against demands for new and creative ways of doing things and diversity. These are centripetal to the adaptive cycle in complex systems. As a perspective for understanding ecosystems and governance, over the last few decades, Panarchy has increased in importance in understanding resilience. It is a fundamental theory that helps to explain how complex systems work. According to Allen et al. (2014), Panarchy as a heuristic is a practical theory that allows organisations to envision the configuration of complex systems.

The characteristic structure of a system is primarily determined by the number of operating processes. From a resilient angle, conservativeness and self-organisation of systems result from interactions among elements. In ecological terms, animals change the ecological structures in ways that are favourable for themselves. The popular concept of ecological

resilience has evolved as an intellectual framework for understanding how complex systems self-organise and change overtime. This reflects a broader shift towards recognising the dynamic nature of resilience, moving beyond static definitions to encompass ongoing adaptation. Therefore, resilience has been defined as “capacity” of a system to absorb and reorganise while undergoing change (Anderies et al., 2013, as cited in Meerow & Newell, 2015).

In resilience, organisations collect, interpret, and understand the external environment and attempt to shape it. Authors such as Allen et al. (2014) have investigated the linkages between social system and ecosystem adaptation cycles focusing on cycles of disruption and adaptation. The distribution of function (Mhango & Dick, 2011), as well as using Panarchy as a framework for managing change, has been widely discussed.

The theory of Panarchy has been used to identify thresholds, opportunities and changes necessary to achieve sustainability (Allen et al., 2014a; Boyer, 2020; Gunderson, 2000). Panarchy becomes a practical conceptual framework that considers the duality (change and persistence) represented by resilience and vulnerability in complex systems (Patriarca et al., 2018). The qualitative study by Bachtiar et al. (2023) in Indonesia established that resilience could trigger recovery, process and transformation, which form the primary response to disruption and crisis in shaping an adaptive move towards a new situation.

In a study entitled, “toward an evolutionary and sustainability perspective of the innovation ecosystem: revisiting the panarchy model”, in France, Boyer (2020) argues that when ecosystems face significant shocks, adaptive mechanisms and properties within the ecosystem lead the ecosystem to a new re-organisation phase, which gives birth to another exploitative phase. This enables an organisation to achieve organisational rigidity by providing mechanisms to enhance resilience and competitiveness. Boyer (2020, p.14) argues that;

“adaptation is key for any firm and organisation. It is obvious that, as a result, policy-makers and economic agents are looking for relevant frameworks or tools to enable them to be both competitive and resilient. Therefore, the innovation ecosystem framework proves to be relevant because it offers conceptual and operational tools, able to address both resilience and competitiveness through adaptation capacity”.

As a helpful theory, Panarchy has provided a ground for conceptualising and envisioning complex dynamics. Panarchy theory helps to cover many facets of the complex system, such as change and adaptation, hierarchy and non-hierarchy (ability of a system to exhibit

hierarchical and non-hierarchical order and that systems interact with each other), resilience and vulnerability, which are impossible to frame within a single hypothesis (Allen et al., 2014a). Panarchy presents opportunities to test specific hypotheses regarding resilience, the newness of an innovation, and the processes that organisations rely on to collect significant and sometimes unrelated information to derive meaning for action. As earlier mentioned, since measuring resilience is complex, requiring the use of both ecological as well as engineering resilience. Panarchy theory enables understanding of the concept for two reasons: it makes it easier to identify the best operationalisation of the term resilience (structure and scale). The concept is intrinsically linked to resilience and follows from multiple attempts to understand resilience (Allen et al., 2014a). Similar to organisations, animals usually change their ecological structure in ways that are favourable to them. Brunchhort (2011, as cited in Allen et al., 2014) argue that Panarchy is a relevant theory in explaining the relationship between institutional and organisational change and resilience. This theory is applicable in understanding resilience of SMEs. The theory provides a framework for understanding human and natural systems transformations, including how systems adapt and change over time. It emphasises the interconnectedness and dynamics of different scales within a system, which is relevant for understanding the resilience of SMEs operating in complex environments. By considering the adaptive cycles and feedback loops within a system, Panarchy theory assists in analysing the resilience of SMEs and identify strategies for enhancing their adaptive capacity.

Panarchy is an invaluable theory for understanding the complexities of resilience, as it captures the dynamic interplay between change, adaptation, and the interconnectedness of systems at various scales. By acknowledging both ecological and engineering dimensions of resilience, Panarchy provides a multifaceted framework that aids organisations, particularly SMEs, in navigating the challenges of complex environments. This theory not only facilitates the identification of effective resilience strategies but also highlights the importance of adaptive capacity, emphasising that resilience is not merely about recovery but also about thriving amidst disruptions. Ultimately, Panarchy invites us to draw insights from both natural ecosystems and organisational practices, fostering a deeper understanding of how systems can evolve and transform over time.

In terms of application of the theory, a study by Slight et al. (2016) revealed the need to diversify their economies with a view of preventing dependence on one or a few vulnerable businesses; SMEs in Atalanta Canada recognised the need to develop strategies associated

with averting the back loop. Such strategies involved diversifying SMEs' supply chains. The development of such strategies enabled participating SMEs to leverage their supply chains as well as deal with their human resource challenges during difficult times (Slight et al., 2016).

Further, Hopkins (as cited in Welsh, 2014) characterises resilience theories as “transformatory, a normative philosophy for shaping change, producing active citizens and self-securing agency.” For Sørensen et al. (2012) a resilient subject is conceived to the extent to which it is capable of adaptation rather than resisting the conditions of its suffering. Panarchy emphasises the concept of adaptation of a complex set up. Complexity theories stress contingency and non-linear evolutionary (adaptive and reflective) properties of complex systems. Therefore, resilience, per the Panarchy theory, is defined as improving evolutionary capacity or the fitness of systems or people (Welsh, 2014). To avoid a back loop, systems have been constructed to respond to catastrophic events that can withstand, rebound, or better yet, rebuild and make better systems to ensure resilience. Welsh (2014) is of the view that resilience discourse offers a means for adapting to social-natural uncertainty while trying to create functionality.

In a study by Jie and Qian(2020) entitled, the impact of organisational resilience on construction project success: evidence from large-scale construction in China, revealed that a resilient construction project organisation should have important characteristics, such as autonomy, diversity, distribution, self-regulation, integration and adaptability. The study also revealed that construction projects should develop a comprehensive resource reserve system that combines the government and the market, a strong production, supply and logistics system, a clear and transparent responsibility system and regulatory system, and intelligent processing of information and data. It is further noted that the findings indicate that without prompt oversight of situational changes, a flexible organisational structure, a strong organisational culture, and the involvement of various stakeholders can enhance the success of a construction project. The collaboration among multiple participants can partially compensate for any shortcomings in organisational culture.

It is important to note that the extent to which Panarchy has gained empirical support beyond the metaphor has evolved over time and remains without clear conclusions. Although the adaptive cycle is a useful concept for looking back at history and organising events and periods around phases, it remains a complex process to identify the phase of a system in real-time or use Panarchy to forecast future trends. Panarchy is a valuable theory for retrospective

studies with limited application for prospective ones (Rocha et al., 2020). Limitations of Panarchy based on inadequate empirical results/literature are not unique to this theory. Like any other theory, the theory continues to develop overtime. A similar conclusion was reached, where many conceptual frameworks have been developed, yet few empirical attempts have been conducted to test their validity (Rocha et al., 2020).

2.4.2 Dynamic Capability Theory

The intellectual origins of organisational capabilities can be traced back to at least Alfred Marshall (as cited in Dietmar 2020). Marshall described in his *Industry and Trade* how a good manager who inspires loyalty is able to create a culture that endures his tenure. Although Marshall's work was taken up by others. Unfortunately, far more attention was given to the use of maths than his more profound understanding of how firms operate and evolve. George Ricardson the Oxford Economist, introduced the term capability in the 1970s which he defined as the knowledge, experience, and skills" in an organisation that were not reflected in the classic production function, but instead never became part of a theory or framework (Richardson, p. 8888, as cited in Dietmar, 2020). Teece drew lessons from several economists such as Richard R.,Nelson, Sidney G. Winter, Nathan Rosenberg, and Edwin Mansfield in developing the dynamic capabilities theory.

Clark (as cited in Fitriati, 2020) adds that the concept of dynamic capabilities acknowledges the fact that in order to create a competitive advantage, firms operating in a changing environment need to be able to develop a dynamic perspective of their resources.

Fitriati (2020) argues that in today's era, organisations must be able to make quick decisions to adjust to the environment. The dynamic capabilities framework draws from capabilities theory that can be traced to Joseph Schumpeter (as cited in DietMmar, 2020), who opined that incumbent firms were regularly displaced by new entrants capable of offering lower prices, better quality or better desirable substitutes for existing products. The term "dynamic capabilities" is deconstructed into two main elements: capability and dynamic. The concept of capability refers to the routine-based activity inside the firm, which develops over time through problem-solving and collective learning (Fainshmidt et al., 2019). Teece, Gary and Amy (1997, p.504) define dynamic capabilities as *the ability to identify the foundation upon which distinct and difficult-to-replicate advantages can be built, maintained and enhanced*.

Dynamic capabilities allow firms to overcome past constraints by unshackling the enterprise from dysfunctional processes and structures designed for an earlier period (Suddaby et al.,

2020). Apart from spanning the domains of the process of strategy and content, it involves various layers of analysis (decision processes, environmental change, and competitive relationships, among others). Undoubtedly, analysing the dynamic capabilities theory from multiple layers creates confusion. The first one is the role of external factors in shaping the dynamic capabilities of an organisation. Secondly, the role of strategic orientation in building organisational dynamism to environmental change and thirdly, the question of whether indeed dynamic capabilities enable organisations to create a competitive advantage.

Peteraf et al. (as cited in Suddaby et al., 2020b) aptly argue that competing versions of the concept of dynamic capabilities focus mainly on whether the concept can explain the strategic adaptation of organisations in a changing environment. According to Winter (2003), the word dynamic connotes change and disruptions caused by the external environment. An organisation's ability to be "responsive", "make fast decisions", and "reconfigure resource base" are key tenets of the dynamic capabilities' theory (Teece et al., 1997). Dynamic capabilities are the abilities that firms have to solve problems, perceive threats and opportunities, and make decisions to solve/exploit them. These concepts are based on evolutionary economics and resource-based views. Capabilities are complex, and multidimensional, requiring multiple levels of analysis. Teece et al. (1997) posit that the ability to establish and configure internal and external resources in turbulent times is the source of a firm's competitive advantage. Since dynamic capabilities change, they open learning opportunities to organisation members. As a weakness, although firms that change develop dynamic capabilities, it is also possible that firms are forced to change without dynamic capabilities. This way, firms become reactive and not proactive. The concept of dynamic capabilities calls on organisations to develop a character of change of the environment, that requires strategic responses, and the organisation's capacity to deal with requirements (adaptation, integration, and reconfiguration) to create change through internal organisational adaptation (Antônio & Tondolo, 2014).

The dynamic capabilities theory amplifies the relevant capabilities in ensuring organisational adaptation and sustainability in complex environments. Firms cannot succeed if they cannot establish a fit between the organisation's strategic orientation and its capabilities. The capabilities recognise that strategic theory is replete with analyses of firm-level strategies for sustaining extant advantages. To date, many strategists remain skeptical about the value of the concept of 'dynamic capabilities' while some scholars see 'dynamic capabilities' as the key to competitive advantage. To some extent, dynamic capabilities exist although they tend

to argue that these are created by an organisation (Antônio & Tondolo, 2014). It should also be noted that another group of scholars believe that dynamic capabilities are a genuine option for managers, although, unfortunately, they are not anything that offers an organisation a competitive advantage.

2.4.2.1 Components of dynamic capabilities

Verifying dynamic capabilities is challenging, but scholars can explore and research from various perspectives. By integrating previous theory and literature, it is suggested that an enterprise's dynamic capabilities may consist of opportunity perception, resource acquisition capability, organisational learning capability and restructuring capability (Mi. Wang & Li, 2013). According to Winter (2003), “an organisation’s capability is a high-level routine that together with its implementation input flows, confers upon an organisation’s management a set of decision options for producing significant outputs of a particular type”. Teece (as cited in Fainshmidt et al., 2019) provide a framework for dynamic capabilities demarcating three components: sensing, seizing, and reconfiguration. The continuous observation of a firm’s external environment is a responsibility of sensing. This involves the accumulation of insights regarding external threats and opportunities that a firm can minimise and exploit. Seizing focuses on the evaluation of resources and resources. This evaluation results in substantial investment in tangible and intangible assets to build a firm’s competitive advantage. The domain of reconfiguration attempts to focus on a firm’s capacity to recombine a firm’s resources and ordinary capabilities to maximise the exploitative capacity of the internal and external environment (Fainshmidt et al., 2019). It has been argued that although the three components of dynamic capability: *sensing, sizing, and reconfiguration* are interrelated, they are not interchangeable. The components of dynamic capability act together to strategically influence how an organisation responds to external variables/disruptions. Each component adds value to the other, enabling the organisation's leadership to deploy responses to exploit opportunities. Mingxian and Ran (2013), state that, the ability to recognise and capitalise on opportunities is crucial for organisations to thrive in rapidly changing markets and technological landscapes. Teece's concept of dynamic capabilities, introduced in 2007, encompasses key dimensions including opportunity perception, opportunity exploitation, and the ability to reconstruct. Opportunity perception involves identifying and seizing opportunities, as well as enhancing, integrating, protecting, and reconfiguring an organisation's assets to maintain a competitive advantage. O'Reilly et

al. (2007) expanded Teece's dimensions of dynamic capabilities to include adaptability, integration, and reconstruction ability.

Additionally, the research study by Wang (2016) in China emphasised the importance of understanding the environment, including legal aspects, changes, and the analytical capability to assess their impact on businesses. Furthermore, organisations need to acquire resources from external sources to survive, leading to the need for interaction with external factors. Wang and Li (2013) categorised dynamic capabilities into integration, reconstruction, and the ability to obtain and release resources. Organisational learning capability, as highlighted by Luo Min and LiuYong Jun (as cited in Wang & Li, 2013) involves the acquisition, internalisation, conversion, and utilisation of knowledge, which they consider essential for gaining a competitive edge. Wang and Li (2013) emphasised the role of absorptive organisational learning capacity as a critical factor in driving technological innovation performance.

In an analysis by Teece et al. (2012), an organisation develops environmental dynamism, it can respond to environmental shifts. In a content-analytical review of the current state of knowledge and recommendations for future research, Schilke (2014) argues that there is a positive relationship between dynamic capabilities and competitive advantage. According to Samsudin and Ismail (2019), early studies on dynamic capabilities show a direct relationship between firm performance and dynamic capabilities.

For Fainshmidt et al., (2019), environmental munificence shapes access to resources and becomes the potential value of dynamic capabilities in supporting alignment with the external environment. Fainshmidt et al. (2019) further argues that internally, an organisation's strategic orientation might influence an organisation in producing some form of internal organisation/alignment. This view is supported by Wilden et al. (2016), who advance that in integrating strategic orientation in the model of value dynamic capabilities, a clear understanding of how dynamic capabilities are influenced and shaped by managerial strategic plans that are put in place to ensure internal alignment as well as external consonance. Although this view holds that managerial strategic orientation shapes a firm's dynamic capabilities, Fainshmidt et al. (2019) opine that there is a need to advocate for a nuanced method of understanding the role of context in shaping the value of dynamic capabilities with a clear focus on environmental factors over and above dynamism as well as internal organisational factors. Fainshmidt et al. (2019) argued that dynamic capabilities alone do not

guarantee the firm's performance. Instead, the skilful arrangement and positioning of resources created by dynamic capabilities create a competitive advantage. Samsudin and Ismail (2019) opine that changes to internal resources through dynamic capabilities influence the firm's performance. Thus, having dynamic capabilities may lead to the creation and development of resources that can enable an organisation to produce differentiated products.

Thirdly, much as the dynamic capabilities theory has been praised for its robustness in clarifying the nature of dynamic capabilities that are needed to create and sustain competitive advantage, Collis and Anand, (2019) argue that a firm faces more competition if it develops dynamic capabilities in identifying markets and resources in product and market positioning. Collis and Anand (2019) further argue that if dynamic capabilities create more market opportunities, a new set of competitors to whom it should perform better equally expands. From this, it is clear that dynamic capability is not the only thing. A firm should ensure that it develops capabilities that satisfy the resourced-based model (RBV) requirements. Fourthly, there are certain choices that firms make when making commitments that are necessary to pursue any dynamic capabilities. The choices are prone to trade-offs, as any traditional product market strategy (Collis & Anand, 2019). Although it has been argued that firms achieve competitive advantages by deploying their dynamic capabilities, choices regarding organisation design, incentive system to use, processes, and structure must ensure an integrated functioning. This is not possible because of the challenges of integration and the costs associated with achieving desired objectives.

It is also important to note that pursuing any dynamic capability involves making commitments and choices that are subject to inevitable trade-offs like any other traditional product market strategy, including ensuring that there is alignment between structure, processes, metrics and incentives (Collis & Anand, 2019b). It is important to note that since every choice constrains what an organisation can or cannot do, pursuing dynamic capabilities may not enable an organisation to pursue everything it wishes to do simultaneously (Collis & Anand, 2019b). This, therefore, requires a firm/organisation to make trade-offs. Trade-offs require that a firm combines a new combination of activities to exploit a desirable yet new and productive position. Thus, an organisation will then build lower-level capabilities necessary to deliver the static efficiency (lower-level capabilities) required to effectively execute any product market position (Collis & Anand, 2019b). Therefore, although dynamic capabilities are valuable, they cannot enable an organisation to achieve all its desired competitive advantages simultaneously.

Notable scholars such as Akpan et al.(2022), have studied the relationship between dynamic capabilities and resilience. Dynamic capabilities are essential components that help to sense opportunities and threats, thus amplifying organisational resilience (Kurtz & Varvakis, 2016 as cited in Akpan et al., 2022).

In recent times, there has been a significant focus on the concepts of dynamic capability and innovation implementation within small and medium-sized enterprises (SMEs) (Deyassa, 2023). This heightened attention can be attributed to the increasingly dynamic business environment and the growing impact of SMEs on national economies, especially in developing countries. Researchers and industry practitioners concur that dynamic capability and innovation represent a burgeoning trend in corporate innovation strategies (Deyassa, 2023). The focus on dynamic capability and innovation in the context of small enterprises involves the utilisation of knowledge from both internal and external sources to enhance innovation performance, further emphasising the significance of these concepts in current research and practice (Dambiski Gomes de Carvalho et al., 2021).

In a study by Nedzinskas et al. (2013) whose aim was to “examine the dynamic capabilities of small and medium enterprises on performance, and interaction between dynamic capabilities and organisational inertia in a volatile environment” in Lithuanian SME sector revealed that the tested SME dynamic capabilities model's positively influence relative non-financial performance, while showing no impact on financial performance. This finding has contributed to strengthening dynamic capabilities in SMEs as an emerging paradigm. According to Fabrizio et al. (as cited in Deyassa, 2023), SMEs collaborate with external partners to introduce new products to the market, while those employing closed innovation focus on making incremental improvements to existing products. Additionally, companies utilise external resources to enhance operational flexibility, mitigate risks, expedite innovation timelines, and minimize costs (Knight & Cavusgil, 2015).

The study conducted by García-Valenzuela et al. (2023) evaluated the impact of dynamic capabilities on the organisational resilience of small and medium-sized enterprises (SMEs) in Mexico. Using Covariance-Based Structural Equation Modeling (CB-SEM), the research analysed 216 SMEs within the commercial sector and found a positive and significant influence of several dynamic capabilities, including detection, absorption, coordination, and innovation, on organisational resilience. Notably, the study revealed that integration capability had the weakest impact on organisational resilience, while innovation capability

emerged as the most influential factors for bolstering organisational resilience among SMEs in the region.

Kanten et al. (2017); Akpan et al.(2022) have established positive relationship between dynamic capability and resilience. Kanten et al. (2017, as cited in Akpan et al., 2022) established in their study on the Turkish retailing industry that the dynamic ability of integration and coordination impacts a retailer's deftness. On their part, Ginuiniene and Jurksiene (as cited in Akpan et al., 2022) opined that organisational learning, innovation and performance are impacted by dynamic capabilities. These findings provide a strong case for including the dynamic capabilities theory in studying organisational resilience.

In Eswatini, a study by International Trade Centre (2022) in collaboration with the government of Eswatini revealed that there is need to invest in the management capabilities of SMEs because weak management skills affect the production capacity of Swazi firms. Although dynamic capabilities have been identified as a valuable resource in enabling an organisation to achieve competitive advantage, it is not the only source for a firm's competitive advantage. Competitors can replicate this ability and exploit a firm's market position. In furtherance of the same argument, the mere existence of the capability expands the likelihood of attacks from competitors with even better and superior capabilities. It has also been argued that with the choices of exploitation and exploration, a trade-off(s) has to be made between the levels of dynamic capabilities to create. As an example, the pursuing new strategy positioning initiatives will most likely require making changing internal systems that have been responsible for creating capabilities for internal stability and some level of efficiency. This trade-off will most likely undercut efforts to take advantage of new positioning initiatives (Collis & Anand, 2019).

Despite its known challenges, as illustrated above, the nexus between resilience and dynamic capability lies in the fact that dynamic capabilities enable an organisation to improve the efficiency with which existing sets of assets and capabilities are deployed. This view is supported by Collis and Anand (2019b) who argues that to do the right thing and position themselves in the marketplace, firms should be able to act in a resilient manner by recombining, reconfiguring and creating new assets to realise an entrepreneurial opportunity. Therefore, pivoting to a new business model is critical to dynamic capability. For this to happen, Teece identified three skills necessary to build a dynamic capability (sensing, seizing and transforming). Transformational skills (continuous renewal) are the most valuable and

difficult to build because they require the metaprocess of orchestrating assets (Collis & Anand, 2019b). Sensing focuses on aspects such as identification, development, eco-development, and assessment of technological opportunities in relation to the customers' needs. On the other hand, seizing focuses on mobilising resources to meet needs and opportunities and capture value (Kump et al., 2019). Therefore, seizing implies that market opportunities are successfully exploited, and threats are eluded. This helps to bridge external and internal information and knowledge to aid decision-making.

2.4.3 Factors of relative overall resilience model

Organisational resilience is a critical aspect of business management, especially for Small and Medium-sized Enterprises (SMEs) that may need more resources than giant corporations. In 2008, McManus introduced a model of resilience, relative overall resilience (ROR) with three factors, situation awareness, management of critical vulnerabilities and adaptive capacity. Fifteen (15) indicators were also evaluated to measure resilience (Alessandro, 2017). However, Lee et al. (2013) evaluated McManus' (2008) ROR model and did not find support for the model in enhancing organisational resilience. Initially, Lee et al. (2013) proposed a new adjusted version of four factors (capability and capacity of internal resources, innovation and creativity, devolved and responsive decision making, and participation exercises and 73 items. This version of the model was equally not found to support the data of their research, thus leading to a new evaluation model that resulted from a study on developing a tool to measure and compare resilience in New Zealand. A new model with two factors, adaptive capacity and planning and 13 indicators to measure it was formulated. According to Lee et al. (2013), adaptive capacity occurs when an organisation responds or bounces back using existing predetermined planning and capabilities. An organisation's ability to adapt is exemplified by things such as business continuity and risk management. Table 2.3 presents Lee et al. (2013) two factors for measuring resilience highlighting the 13 items that were used to measure each.

Table 2. 3: Lee's two factors for measuring resilience

Factors	Indicator	Definition
Adaptive capacity	Minimisation of silos	Minimisations of divisive social, cultural, and behavioural barriers, which are most often manifested as communication barriers creating disjointed, disconnected, and detrimental ways of working
	Internal resources	The management and mobilisation of the organisation's resources to ensure its ability to operate during the business-as-usual, as well as being able provide extra capacity required during a crisis
	Staff Engagement and involvement	The engagement and involvement of staff who understand the link between their own work, the organisation resilience, and its long-term success. Staff are empowered and use their skills to solve problems.
	Information and Knowledge	Critical information is stored in a number of formats and locations and staff have access to expert opinions when needed. Roles are shared and staff are trained so that someone will always be able to fill key roles.
	Leadership	Strong crisis leadership to provide good management and decision making during times of crisis, as well as continuous evaluation of strategies and work programmes against organisational goals.
	Innovation and creativity	Staff are encouraged and rewarded for using their knowledge in novel ways to solve new and existing problems and for utilising innovative and creative approaches to developing solutions
	Decision making	Staff have the appropriate authority to make decisions related to their work and authority is clearly delegated to enable a crisis response. Highly skilled staff are involved, or are able to make, decisions where their specific knowledge adds significant value, or their involvement will aid implementation.
	Situation monitoring and reporting	Staff are encouraged to be vigilant about the organisation, its performance and potential problems. Staff are rewarded for sharing good and bad news about the organisation including early warning signals and these are quickly reported to organisational leaders.

Planning	Planning strategies	The development and evaluation of plans and strategies to manage vulnerabilities in relation to the business environment and its stakeholders
	Participation in exercises	The participation of staff in simulation or scenarios designed to practice response arrangements and validate plans
	Proactive posture	A strategic and behavioural readiness to respond to early warning signals of change in the organisation's internal and external environment
	External resources	An understanding of the relationships and resources the organisation might need to access from other organisations during a crisis, and planning and management to ensure this access.
	Recovery priorities	An organisation wide awareness of what the organisation's priorities would be following a crisis, clearly defined at the organisational level, as well as an understanding of the organisation's minimum operating requirements.

Source: (Lee et al., 2013.p. 34).

The model developed by Lee et al. in 2013 provides a framework for assessing and enhancing the resilience potential of organisations. This model was designed to assess the potential for organisational resilience in SMEs within the process industry. The model employs a fuzzy approach, which allows for handling uncertainty and imprecision that is often inherent in assessing complex systems like organisational resilience (Lee et al., 2013).

Lee et al.'s (2013) model was evaluated by Arsovski et al. (2015), who ranked organisational resilience factors (ORPFs) using a two-step fuzzy Analytic Hierarchy Process (AHP) and fuzzy Technique for Order Preference by Similarity to Ideal Solution (TOPSIS). This involves modelling the relative importance of ORPFs and their values, which were then used to assess the resilience potential of 120 SMEs and one randomly selected enterprise in Serbia. The paper establishes a two-step model for assessing and enhancing the resilience potential of SMEs in the process industry.

The formal problem statement and the proposed algorithm are integral parts of the model, providing a structured approach to the assessment. The model's application to SMEs is particularly relevant as these entities often operate in a dynamic and risk-prone environment. The process industry, for example, is susceptible to various disruptions, making resilience an essential factor for sustainable operations. The model can aid SMEs in designing resilient supply chain networks that can withstand disruptions. It also aligns with the broader context

of risk management in business relationships, as seen in Polish case studies, and the need for quantitative models to manage supply chain risks.

While the model provides a structured approach to evaluating organisational resilience, it may have limitations. For instance, using fuzzy logic, while beneficial for dealing with uncertainties, may introduce subjectivity in the assessment process. Additionally, the model's focus on the process may only allow its direct applicability to other sectors with modifications. The model's static and dynamic metrics of economic resilience may also need to fully capture the evolving nature of risks and the need for adaptive resilience strategies.

Lee et al.'s (2013) model offers a valuable framework for assessing and enhancing the resilience of SMEs, particularly in the process industry. Its fuzzy logic approach allows for a nuanced evaluation of resilience factors, although this may also introduce subjectivity. Given their vulnerability to disruptions and the importance of resilience for their sustainability, the model's application to SMEs is crucial. Future research could focus on adapting the model for broader industry applications and addressing any identified weaknesses.

2.4.4 Capacity for Organisational Resilience Model

The Lengnick-Hall, Beck, and Lengnick-Hall (2011) Organisational Capacity for Resilience (OCR) is a conceptual framework that aims to provide a comprehensive understanding of the development of organisational resilience that was developed by Cynthia A. Lengnick-Hall, Tammy E. Beck, and Mark L. Lengnick-Hall (Lengnick-Hall et al., 2011b). The model was designed to delve into the underlying mechanisms that foster resilience in organisations. The developers aimed to create a model combining the processual approach and focusing on resilience factors to gain a broader understanding of organisational resilience (Hillmann & Guenther, 2021). The model assumes that strategic human resource management can cultivate organisational resilience (Duchek, 2020b). It proposes strategically managing human resources can develop competencies among core employees, which, when aggregated, can enable organisations to respond resiliently to severe shocks (Lengnick-Hall et al., 2011b). The model presents five key dimensions: human resource principles, desired employee contributions, human resource policies, organisational capacity for resilience and desired performance outcome. Figure 2.5 presents dimensions of the Human Resource System (HR) that constitute the capacity for organisational resilience framework.

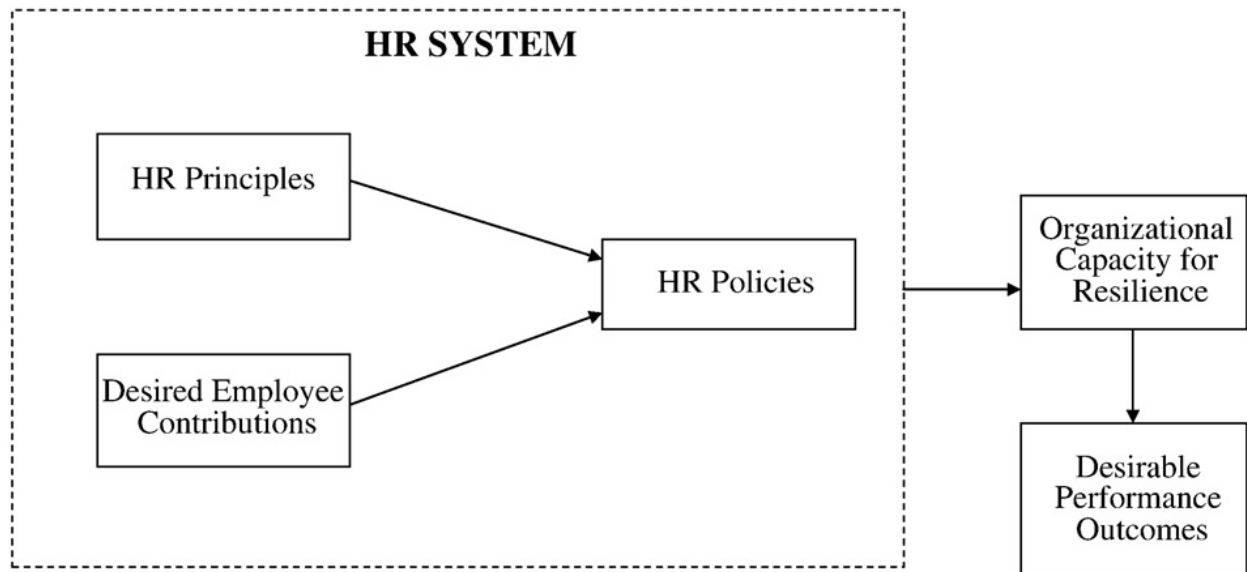


Figure 2. 5: Capacity for organisational resilience framework

Source: Lengnick-Hall et al. (2011.p.248)

The focus of the Lengnick et al. (2011) model was the human resource system which is a multi-level construct (Lengnick-Hall et al., 2011). In developing the model, Lengnick asked: What are the characteristics of a human resource system (HR) designed to develop a capacity for organisational resilience? According to Lengnick-Hall et al. (2011), the HR system contains three components: human resource principles, desired employee contributions and human resource policies.

The model posits that aligning human resource management strategies with organisational goals is critical. Human resource principles serve as guideposts to align policies and practices that ensure alignment between lower and fewer policies and abstracts (Lengnick-Hall et al., 2011). Human resource policies provide alternative means of achieving the targets and objectives to be achieved by employees. Lengnick-Hall et al. (2011) argue that the human resource (HR) system creates messages that clarify what is expected of employees, including how they interact, areas of focus, reward system and what not to focus on.

The strength of the HR system has a significant bearing on how the message is understood and the extent to which employees can implement messages sent to them by the HR system. In combination with desired employee contributions, HR principles determine the HR policy design of an organisation. Employee contributions focus on developing component capabilities such as cognitive, behavioural and contextual elements which support resilience. Expertise, opportunism, creativity, decisiveness, questioning fundamental assumptions and

conceptualising novel and appropriate solutions form the six components of collective cognitive capabilities (Lengnick-Hall et al., 2011b). The key behavioural elements required to support resilience as well as employee desired contributions include: devising unconventional, yet robust responses to novel challenges, harnessing the power of originality and novelty to address immediate challenges, pursuing a relatively new course of action, using repetitive routines as fall-back approach as a means to ensuring that responses to threats are mitigated and, taking action and investment beforehand to avoid surprises. According to Nahapiet and Ghoshal (2009), employee contributions can create contextual conditions ripe for resilience which results from the actions and interactions among employees that enrich social and resource networks in and outside the organisation. What are the key employee contributions? Lengnick-Hall et al. (2011) argue that the key employee contributions are: developing interpersonal connections and resource supply lines which enhance the ability to act quickly, sharing information and knowledge widely and, sharing decision making widely that cause effective structural, rational and cognitive dimensions of social capital.

Zahra and George (2002), argue that a firm's capacity for resilience anchors a firm's ability to take action and reconfigure and augment a firm's resources. In addition, this capacity captures an important conceptual diagnostic and interpretation component that enables firms to accurately determine the most appropriate type of strategic approach to use, given the situation it finds itself in. The capacity for resilience has a close relationship with many organisational competencies that enable an organisation to deal with competitive dynamics. Dimensions of capacity for resilience (cognitive, behavioural and contextual) work both independently and interactively to support an organisation's capability development which are essential for a firm to respond to environmental changes. If a firm has the relevant capacity to respond to environmental changes, such a firm will thrive in a continuously surprising environment. With the capacity for resilience, a firm can take appropriate action and undergo a transformation in response to unanticipated events that potentially threaten its existence (Lengnick-Hall et al., 2011b). Despite these strengths, the model suffers from several weaknesses, including a lack of specific guidance on the implementation and measurement of the dimensions, a potential failure to capture the complexity and context-specific nature of organisational resilience fully, and a lack of discussion on potential limitations or challenges in developing organisational resilience.

2.4.5 Ma, Xiao and Yin (2018) Integrated model of resilience

An examination of current literature on organisational resilience shows that existing studies have largely focused on isolated dimensions of resilience, thus treating resilience as a state and not a dynamic capability (Ma et al., 2018). Ma et al. (2018) developed an integrated dynamic model to study organisational resilience. The model consists of three dimensions: cognitive, behavioural and contextual resilience. In their model, an organisation's dynamic capability can be earned at three levels: individual, group and organisational level. Figure 2.6 presents the integrated resilience model. The aim is to present the dimensions and elements of the model that conceptualises resilience.

A key question in studying resilience is: what makes the difference in surviving, adapting and even thriving in the most unexpected life difficulties for individuals, communities or countries? Linnenluecke (2017) argues that every discipline has its own perspective in defining resilience, and as such, there are variations in how resilience is conceptualised.

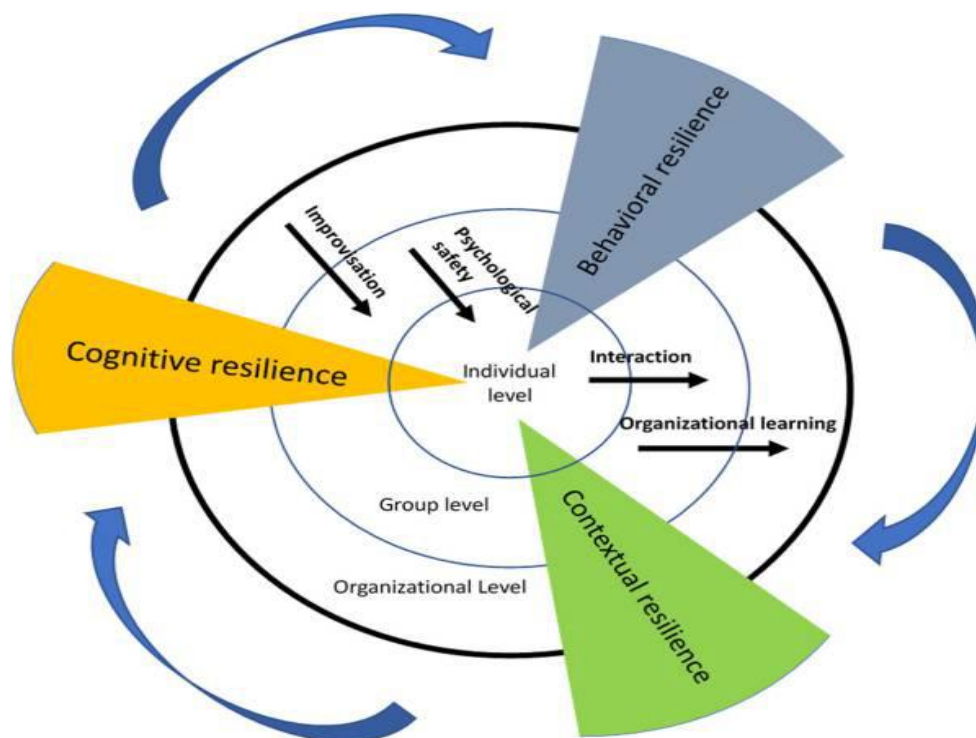


Figure 2. 6: Integrated model of resilience

Source: Ma et al.(2018).p.253).

Resilience is the capability to resist and recover from shocks or disasters that could affect an organisation or a system either internally or externally (Luthar et al., 2000). In examining the concept of resilience, two key aspects of resilience are looked at: the first one examines

organisational resilience as the survival skill in the face of a threat (s). This perspective views resilience as a rebound-oriented tasks, with a characteristic of hardness, which focuses on an organisation's positive adjustment and the ability to bounce back from a disruption (Ma et al., 2018). The second aspect of organisational resilience focuses on the notion that organisational growth can occur amidst challenges and that transformations can take place in response to environmental shifts (Gilber, et al.2012, as cited in Ma et al., 2018). From the second aspect, resilience focuses on opportunity identification and the development of new organisational capabilities (Coute, 2002; Crichton et al., 2009, as cited in Ma et al., 2018).

According to Ma et al. (2018), organisational resilience is defined *as the ability to survive in, adapt to, bounce back from and often thrive in unexpected, sometimes disastrous events*. The capability to survive, adapt, and bounce back evolve across the entire organisation (individual, group, and organisation). Resilience lies in different dimensions, from cognitive to behavioural resilience, and further contextualises resilience. This implies that organisational resilience is a dynamic capability and self-reinforcing across the different levels of the organisation. Indeed, while there are many different perspectives to conceptualise and operationalise resilience, the integrated model of resilience by Ma et al. (2018) proposes that some key aspects are inseparable in developing resiliency in an organisation. For example, the capability to change in response to unexpected events such as shocks or disasters, and further, the capability to anticipate the occurrence of such unexpected events.

The model by Ma et al. (2018), draws from Dias et al. (2022),; Lengnick-Hall et al., 2011) who suggest that research on resilience should take a more holistic view to explore different dimensions and levels required to develop a strong resilient organisation. From the model, on an individual level, resilience is defined as the individual's ability to bounce back from problems with a focus on attaining success. At the group level, members ensure that they are protected from potential negative effects of unexpected events they collectively encounter (Ma et al., 2018). Such protection includes providing psychological safety and accountability. At the organisational level, resilience shows in terms of adaptive structures, managing internally created constraints and attention to failure (Van Der Vegt et al., 2015).

Employee characteristics, social networks, resources and organisational structure affect the general resilience of an organisation. Interactions among resilient individuals help to improve resilience at the group level. It is important to note that the perceived psychological safety

within a resilient group facilitates and enhances the development of resilience at the individual level. Therefore, resilience at the individual and group levels, coupled with multiple interactions, leads to the development of resilience at the organisational level (Van Der Vegt et al., 2015). As groups and individuals continue to interact, structures, processes, and learning emerge, creating an opportunity for the organisation to develop capabilities to respond to disruptive events. A noticeable weakness of this model is that it fails to reveal the nature of coping behaviour that organisations should develop to survive disruptions. While the model explains the need for interactions that should take place at individual and organisational levels, the model fails to provide empirical results on the relationship between the three levels. Despite its weaknesses, the model provides valuable insights into the dimensions of resilience.

2.4.6 Mallak (1998) Work Resilience Instrument (WRI) model

Developed in 1998 by L. A Mallak Mallak's workplace resilience instrument (WRI) model focuses on measuring resilience in healthcare organisations. There are four critical factors in the WRI model: Active Problem-Solving, Team Efficacy, Confident Sense-Making, and Bricolage. These four factors track well with existing resilience and coping research. These factors help organisations to effectively respond to and navigate challenging situations, maintain a minimum level of stress, and persist in complex tasks. (Mallak & Yildiz, 2016). Mallik (1998) presents the four factors of the WRI model;

One of the factors is active problem-solving. According to Mallak and Yildiz (2016), active problem-solving is the ability to do something positive rather than merely talking about the problem and wishing it away. Taking positive action requires employees to have a bias for action and the ability to focus on the problem instead of focusing on why things are not working as per the plan. The need for positive action resonates well with Carver et al. (1989), on the concept of active coping, which focuses on the deliberate step to take action to resolve a problem. The second element, Team efficacy, advances that resilient individuals work well in teams, and have a clear understanding of the operating mechanisms of teams as well as the goals that the team is expected to accomplish. Team efficacy opines that individuals do not assume that members know what to do, but instead, resilient individuals discuss team member roles with their team members. The result is clear goals and guidelines that members are supposed to follow when performing their tasks (Mallak & Yildiz, 2016).

With regard to confidence sense-making, resilient individuals develop the capacity to extract order from a chaotic situation. To extract one, the necessary resources must be availed so that individuals are able to perform their tasks confidently. Weick(1993) advances the view that, behaviour that results from extracting order from chaos saves lives and leads to long-lasting innovations. During confident-sense-making, individuals develop the capacity to filter out unnecessary signals and information and to focus on the relevant stimuli for decision making and action (Mallak & Yildiz, 2016).

Strauss (as cited in Freeman, 2007) uses the word Bricolage to define and express what he terms as “the science of the concrete”. The “bricoleur” practices a highly applied engineering approach to resilience, involving finding solutions in a creative manner to address a situation. Confronted with a chaotic, extreme, and dangerous situation, the resilient individual takes intelligent risks and realises that there is time to take a pause (stop), think, observe and plan. Freeman (2007) further argues that the bricoleur, as opposed to the scientist or engineer, requires and assembles tools and materials as he or she goes, ensuring that they are stored/kept until such time they might be used. The previous application of the tool provides feedback into how it is shaped, but remains undetermined, imperfectly understood and open to manipulation for whatever purpose is at hand. Freeman (2007) argues that two activities are performed by the bricoleur: the selection of the tool and the shaping process. He argues that, the selection of the tool may inevitably lead to the shaping of the purpose. Not only are tools selected according to the bricoleur’s purpose, but the purpose itself is shaped in part by the tools and materials.

Mallak’s (1998) model of work resilience instrument (WRI) provides insights into how individuals and organisations build resilience into their organisations. The selection of tools for a particular purpose and the shaping of the purpose by the tools calls for proactive organisational processes to understand changes that may occur in their organisations (Mallak & Yildiz, 2016). However, the model appears to have been overtaken by events. In the context where the model was tested, resilience theory and psychometric methods have evolved since then, calling for the design and development of new integrated models and instruments (Mallak & Yildiz, 2016).

Secondly, the model's focus on healthcare organisations may limit its generalisability to other industries or sectors. It is essential to consider the applicability and effectiveness of the model in diverse organisational contexts. The issue of self-reported surveys and scales may

introduce potential biases and limitations. Self-report measures are subject to social desirability bias and may not capture the full complexity of resilience in the workplace. It is crucial to consider alternative data collection and analysis methods to ensure a comprehensive understanding of resilience.

Additionally, the model's factors and dimensions may only encompass part of the full range of resilience-related constructs. Resilience is a multifaceted concept that involves various cognitive, emotional, and behavioural strategies. Exploring and incorporating additional dimensions of resilience is essential to enhance the model's comprehensiveness.

Despite its weaknesses, Mallak's workplace resilience instrument model contributes to the field of organisational resilience by providing a framework for measuring and understanding resilience in healthcare organisations. Identifying factors such as bricolage, goal-directed solution seeking, and critical understanding highlights the importance of adaptive strategies in building organisational resilience. Understanding and measuring resilience in the workplace can have several implications. It can inform the development of interventions and techniques to enhance resilience among employees and organisations. By identifying the factors contributing to resilience, organisations can implement targeted initiatives to foster a resilient work environment, improve employee well-being, and enhance organisational performance.

The above literature review provides a robust theoretical foundation for understanding organisational resilience and its relevance for SME performance optimisation. Panarchy theory highlights the dynamic adaptive cycles of complex systems like SMEs, emphasising the need to balance efficiency and novelty (Angeler et al., 2011). The dynamic capabilities theory underscores the importance of SMEs developing the ability to sense opportunities, seize them, and reconfigure resources to maintain a competitive advantage. Resilience models, such as the relative overall resilience and capacity for organisational resilience models, identify key factors like adaptive capacity, planning, and underlying mechanisms that foster resilience at the individual, group, and organisational levels. These multilevel resilience capabilities are crucial for SMEs to navigate dynamic and uncertain environments. While these theoretical frameworks offer valuable insights, the literature also cautions about potential limitations in generalisability and the need to consider trade-offs in pursuing resilience strategies. Collectively, these theoretical foundations and resilience frameworks directly inform the current study by providing a comprehensive lens to investigate how SMEs

can leverage their resilience capabilities to optimise performance in complex business environments.

Building on the theoretical insights from the reviewed models, the exploration now turns to examining the specific variables of an integrated model of resilience, which operationalise the dynamic capabilities and adaptive capacities identified as crucial for enhancing SME performance in complex environments. In examining the strategic impact of resilience on performance optimisation in SMEs, it is essential to establish a solid theoretical foundation that captures the complexities of organisational behaviour in dynamic environments. The integration of Complex Adaptive Theory and Dynamic Capabilities Theory provides a comprehensive lens through which to examine this relationship. By leveraging these two theories, the study not only addresses the multifaceted nature of resilience but also highlights how it enables SMEs to adapt and thrive amidst uncertainty. This justification sets the stage for a deeper exploration of how these theories underpin the research, offering valuable insights into the mechanisms through which resilience influences performance.

Complex Adaptive Theory emphasizes the importance of adaptability and the ability of organisations to thrive in unpredictable environments, which is particularly relevant for SMEs operating in dynamic markets (Angeler et al., 2011). This theory suggests that resilience is not merely a reactive trait but a proactive capability that enables firms to navigate complexity and change effectively. On the other hand, Dynamic Capabilities Theory focuses on a firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Fainshmdit et al., 2019). By combining these theories, the study underscores how resilience enhances SMEs' dynamic capabilities, allowing them to optimise performance through strategic flexibility and innovation in the face of challenges. Thus, this dual theoretical framework not only supports the deductive nature of the research but also enriches the understanding of how resilience drives sustainable competitive advantage in SMEs.

The next section discusses the variables of the integrated resilience model that the study developed. The aim of this section is to provide a detailed examination of the variables within the integrated resilience model, elucidating how each variable contributes to understanding the resilience of SMEs in the context of performance optimisation. To achieve this aim, strategic foresight, absorptive capacity and strategic orientation are presented. By

systematically discussing these variables, the section seeks to clarify their interrelationships and the theoretical significance they hold within the model.

2.5 VARIABLES OF THE INTEGRATED RESILIENCE MODEL.

This section presents an analysis of the variables that form an integrated resilience model. Insights drawn from this section will inform the conceptualisation of the resilience model in chapter three.

2.5.1 Strategic Foresight (Transformative Resilience)

In today's volatile, uncertain, complex and ambiguous (VUCA) global business landscape, companies are facing intense competition and instability (Stefan, 2023). As a result, companies must develop specific capabilities and strategies to thrive in the midst of complexity (Stefan, 2023).

This explains the inclusion of strategic foresight as a variable of the integrated model. The distinction between resilience and strategic foresight (transformational resilience) can be justified by their unique roles and contributions to organizational performance. Strategic foresight, as defined by Rohrbeck et al. (2015), focuses on utilizing future-oriented information to enhance decision-making and gain a competitive advantage, enabling organizations to anticipate changes and trends ahead of their competitors (Yoon et al., 2018). This proactive approach is essential for navigating uncertainties and adapting to evolving market conditions. In contrast, resilience, as described by Biggs et al. (2012), is a multidimensional concept that encompasses various dimensions, including survival, rapid recovery, vulnerability reduction, and sustainability. The inherent complexity and breadth of resilience necessitate a focused examination of its components to develop a comprehensive understanding and integrated model. By treating resilience and strategic foresight as distinct objectives, the research can delve into their specific contributions and interactions, leading to a more nuanced exploration of how these concepts work together to optimize organizational performance in the face of challenges.

The need to thrive under uncertainty requires companies to understand potential future scenarios and their impacts (Iden et al., 2017). This concept, known as "strategic foresight," involves using future-oriented information to enhance decision-making and gain a competitive edge (Rohrbeck et al., 2015). Essentially, strategic foresight aims to anticipate changes and trends ahead of competitors, leveraging this knowledge to achieve superior

performance (Yoon, Kim, Vonortas, & Han, 2018). Interest in this concept has spurred a rapidly growing area of management research (Rohrbeck, Thom, & Arnold, 2015).

Iden et al.(2017) introduced the concept of strategic foresight by referencing the French term 'la prospective,' which becomes "strategic foresight" when translated to English. The French approach emphasises human decision-making, the consequences of actions in the future, and the involvement of decision-makers in the entire foresight process. This perspective establishes a clear connection between strategic foresight processes that help decision-makers plan the future course of action for their organisations (Iden et al., 2017).

According to Fathi et al.(2021b) “strategic foresight is a firm’s structural and cultural capabilities to detect changes, interpret the consequences, and generate responses”. Teece et al. (1997a) defines strategic resilience (transformative resilience) as a capability coupled with the needs of dynamic capabilities of sensing, seizing and reconfiguring enable an organisational to mitigate against uncertainty and partly ensure superior performance. *Foresight is a systematic, participatory, future intelligence-gathering and medium-to-long-term vision building process aimed at enabling present-day decisions and mobilising joint actions.....* European Foresight Platform, supported by the European Commission (Minkkinen et al., 2019). On the other hand, Minkkinen (2019), states that foresight, *is a refined sensitivity for detecting and disclosing invisible, inarticulate or unconscious societal motives, aspirations and preferences, and of articulating them in such a way as to create novel opportunities, hitherto unthought and hence unavailable to society or organisation.* This definition suggests that foresight is a transformative capability of resilience that involves transforming the invisible future/aspirations to create novel opportunities (Minkkinen, 2019). Strategic foresight is a structured process that gathers insights (detectability/sense making) important information that is key in determining current and long-term actions. Strategic foresight emerges from the convergence of emergent development of knowledge (Dadkhah et al., 2018).

Perhaps, the definition by Dufva et al. (2014) appears to be rich. They define foresight as: *system as a transient ensemble of agents, set up to catalyse future-oriented insights, decisions and actions in a certain context", and foresight processes as "dynamic and provisory analyses of the components of present and potential drivers of change, in order to understand the present contexts and particularities of present conditions, and, through these insights, build robust, accessible, plausible and disruptive future alternatives.*

The essence of strategic foresight is to develop robust tools and approaches to identify early weak signals. Identifying weak signals is followed by strategic realising, a process of instituting change mechanisms to boost an organisation's change initiatives.

Organisations have different capabilities to boost their resilience, “the ability to absorb, disruptions and at the same time, positively adapting and transforming their structures for operating in the face of long-term stress, change and uncertainty” (UNDP-Muhammed Bin Rashid Foundation, 2022). Strategic foresight as a transformative capacity captures the mechanisms that enable organisations to function in the face of shock, but thrive after a disruption. This capacity involves an organisation's ability to adjust as well as change its characteristics in order to move towards a more sustainable future (UNDP-Muhammed Bin Rashid Foundation, 2022).

As mentioned in chapter one, resilience is the ability to deal with impacts of negative disruptions and shocks. Dealing with disruptive shocks requires abilities such as *buffering impacts or returning to pre-shock situation or bouncing back or shock absorbing, evolving and adapting or even transforming* (Béné et al., 2012). Strategic foresight as a transformative capacity is built on two main characteristics: 1) innovative capacity, the ability of the system to create an enabling environment to fostering innovation and experimentation, and 2) collaborative capacity which is the ability to organise and act collectively (Béné et al., 2012). Béné et al. (2012), developed the 3D resilience framework which advances the view that resilience emerges as a result of three mutually inclusive capacities: *absorptive, adaptive and transformative*, each resulting into different outcomes: persistence, incremental adjustment, or *transformational* responses. *Adaptability* (or adaptive capacity) is defined as the system's ability to adjust to change, including variability and extremes, to reduce potential damages, capitalise on opportunities, or manage the consequences. On the other hand, *transformability* refers to the capacity to establish a fundamentally new system when the existing ecological, economic, or social structures become unsustainable (Walker et al., 2004). These concepts, along with absorptive capacity or persistence (coping) strategies moderate or buffer against the impacts of shocks and are considered the three core components of resilience. Béné et al. (2012) argue that resilience has become an integrative discourse offering common ground for internal and external collaboration. Figure 2.7 presents the 3D resilience framework.

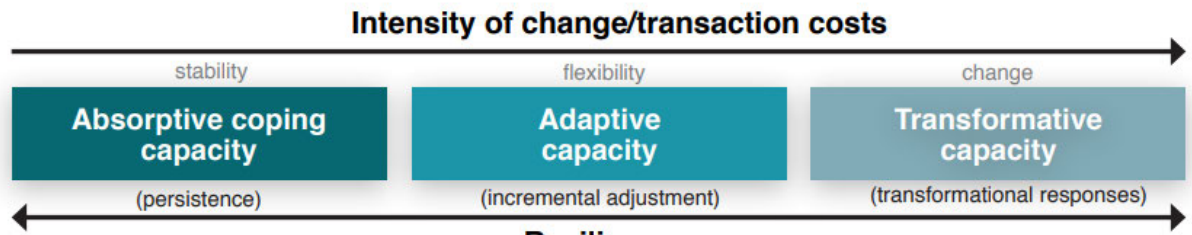


Figure 2. 7: 3D Resilience Framework

Source: Béné et al,(2012.p.21)

In Figure 2.7 various intensities of shocks call for different responses. The intensity of a shock significantly affects the degree of resistance as well the level of absorption a system, individual or organisation is capable of absorbing in order for it to effectively function. Norris et al. (p.132, as cited in Béné et al. 2012) aptly argue that after a disruption, is resistance, implying that resources have been effectively deployed to deal with the disruption and ensure proper functioning. The interdisciplinary nature of the foresight field adds complexity. Depending on the context and the background of the practitioners, foresight may be associated with various areas such as risk management, knowledge management, cultural change, innovation systems, sociotechnical dynamics, long-range planning among others. Differences in approach are often implicit, forming an assumed shared background rather than being explicitly stated (Minkkinen et al., 2019).

Minkkinen et al.(2019) states that foresight guides organisational action by focusing attention to what is deemed relevant, by connecting elements of a process and by transforming how particular elements are seen. Schoemaker (1995), adds that foresight is key in addressing future organisational challenges. In understanding future events and outcomes, resilience can be increased through the minimisation of unexpected challenges, especially by looking at early warning signals. Zumbrunn (2023) argues that foresight minimises bias to project, thus increasing the optimality of decision making. López-Rodríguez (2010), opines that strategic foresight, a transformative capability of resilience process can be characterised as incorporating creativity and innovation. To be successful at innovating, an organisation should be able to develop knowledge of markets and the type of technology to meet or exceed customers' needs (Rohrbeck & Schwarz, 2013). Drawing from this paradigm, transformative resilience (foresight) may support new product development in three ways; an examination of possible areas of innovation, determining the feasibility of each area or field where innovation can occur and, developing products from results of what is feasible. With the

innovation management paradigm, corporations are able to explore new innovations by envisioning opportunities. Although the innovation management paradigm emphasises the adoption of diverse knowledge sources as opposed to heavy reliance on internal knowledge, a noticeable challenge is the identification and development of an ecosystem of networks to work with. Since the model is still new, questions linger about its genuine innovativeness given that its principles have not been observed and tested (López-Rodríguez, 2010).

Wilkinson (2017) argues that with foresight, a transformational capacity of resilience, decision making would be much simpler and easier if focused changes create impact. In her analysis on strategic foresight, she argues that strategic foresight develops through team-based decision-making activities and collaboration and anticipation. Wilkinson further argues that strategic foresight is a learning process where decision makers develop new perspectives on decision making. Gilmore (as cited in Nyuur et al., 2015a) study revealed positive association between networking (a second order domain of foresight) and, performance, strategic adaptiveness and ambidexterity. Networks are a quick means to access market opportunities and align internal operations. However, this is quite risky because if SMEs lack the capacity to bounce back quickly, a whole chain of players in the network could be affected (Nyuur et al., 2015a).

Despite its prominence in research, various publications have highlighted issues within this emerging field (resilience) (e.g., Piirainen & Gonzalez, 2015). Concerns include the weak organisation, lack of structure, and insufficient connection to relevant management debates in journals, hindering theoretical progress and the development of foresight practices (Rohrbeck et al., 2015). This lack of a clear, unified objective has impeded the advancement of strategic foresight (Hines, 2020; Iden et al., 2017; Snyder, 2019).

2.5.1.1 Conceptualisation of Strategic Foresight

According to Amstéus and Intellecta Infolog, (2011), there is no commonly agreed upon measures that provide a clear conceptualisation of key components of strategic foresight, yet unfortunately, without clear measures, the debate on the foundation of strategic foresight capabilities is lost. Paliokaite and Pačesa (2015) agree with this argument and, state that “the conceptual landscape on strategic foresight is growing into fragmented disciplinary tribes and territories with the potential to obfuscate the little that is already known about the subject.” Whereas Paliokaite and Pačesa(2015) accept the scholarly literature and theoretical development of strategic foresight are still evolving, not much has been made toward

synthesising the different conceptualisations to ensure further development of research on strategic foresight. Despite challenges in the conceptualisation of resilience, researchers Hines et al. (2017), Iden et al.(2017), Stefan, (2023), argue that for foresight activities to be conducted in a way that makes success possible, certain capabilities must be in place. It is, therefore, important to understand the foundation for the conceptual debates at two levels, individual and organisational.

Individual Foresight

Hines et al. (2017) view foresight from an individual, cognitive phenomenon instead of an organisation activity. In an attempt to understand individual capabilities, Hines et al. (2017) developed foresight competency model (FCM) to identify capabilities necessary for individuals to develop as futurists, and to measure foresight capabilities. In this model, foresight is described as an inherent ability to "create mental images of the future" that can be enhanced with time (Hines et al., (2017). The capability for foresight is characterised as a collection of specific individual skills necessary for effectively conducting foresight. These capabilities are categorised into six "core competencies," which are underpinned and contextualised by three "foundational competencies" and two "professional competencies." The model proposes that at its essence, a futurist must (posses 6 core competencies) be capable of defining project scopes (*framing*), examining indicators of change (*scanning*), identifying potential futures (*futureing*), committing to a desired future (*visioning*), devising outcomes based on this information (*designing*), and remaining adaptable to alternative futures (*adapting*). Moreover, futurists need foundation competencies such as; academic, personal, and workplace skills, as well as professional competencies (industry and sector knowledge) to fully develop foresight capability (Hines et al., 2017).

Proficiency in specific competencies enables individuals to develop foresight capability leading to positive organisational outcomes (Hines et al., 2017). Hines et al. (2017) view foresight capability as a mediator in the relationship between foresight activity and its outcomes, and they propose distinct capabilities that individuals can enhance to facilitate positive results. The Futures Literacy Framework (FLF) introduced by Miller (as cited in Stefan, 2023) also characterises foresight as an individual phenomenon. In this framework, "futures literacy" is defined as the ability for individuals to purposefully "use-the-future" and adapts this usage based on context and objectives (Stefan, 2023). Unlike the Foresight Competency Model, this framework distinguishes between non-conscious anticipation and

conscious, learned anticipation, which constitutes futures literacy (Miller & Sandford, 2018). According to Miller (2018), this perspective reinforces the notion that foresight capability is a skill that can be developed and enhanced over time. This skill not only involves engaging with the future itself but also making situational decisions: individuals need to understand why and how they are using the future based on specific contexts (Miller & Sandford, 2019). Foresight capability, in this context, refers to the ability to utilise the future for specific goals and to *adapt* the approach flexibly if necessary (Miller, 2018). Based on this definition, the Futures Literacy Framework offers various *anticipatory* systems to support individuals' foresight activities in diverse contexts (Miller, 2018).

Organisational Foresight

Scholars (Day and Schoemaker, 2005; Rohrbeck and Kum, 2018) have defined organisational foresight capability as a phenomenon within organisations and have devised models to assess and comprehend this capability at the organisational level. Key models explaining strategic foresight at the organisational level include "Peripheral Vision Capabilities"(PVC) by Day and Schoemaker (2005), the "Foresight Maturity Model" (FMM) by Grim (2009), the "Maturity Model of Corporate Foresight"(MMCF) by Rohrbeck (2010), and the "Future Preparedness Model" (FP) by Rohrbeck and Kum (2018). These models conceptualise organisational foresight capability and offer practical implications for its development and outcomes. For instance, Day and Schoemaker's PVC model characterises organisational foresight capability as "Peripheral Vision Capabilities," highlighting the alignment of ability with the necessity for peripheral vision in various environments. They suggest that organisations must assess their need for peripheral vision by considering the nature of their strategy and the volatility and complexity of their surroundings.

Five contextual elements form the PVC: leadership orientation, strategy making, knowledge management, organisational configuration, and culture. Grim (as cited in Stefan, 2023) developed the Foresight Maturity Model (FMM), which defines best practices in foresight activities to evaluate organisational foresight capability. These best practices are categorised within six different "disciplines" (*necessary capabilities*) in the strategic foresight process: leadership, framing, scanning, forecasting, visioning, and planning (Grim, 2009). Additionally, Rohrbeck (2010) formulated the Maturity Model of Corporate Foresight to further enhance the assessment and development of organisational foresight capability. This model builds on insights from existing models and incorporates complementary criteria

identified in practice (Rohrbeck, 2010). Three parts form Rohrbeck (2010) model: context, capabilities, and impact of foresight activities. "Context" is based on the idea that an organisation's foresight requirements depend on its surroundings, as proposed by Day and Schoemaker (2005), who added new components such as the size of the company, corporate culture, and competitive dynamics (Rohrbeck, 2010). "Capabilities" are essential abilities for successful foresight activities and are evaluated for their maturity in dealing with discontinuous change (Rohrbeck, 2010). The different capabilities in this model include information usage, method sophistication, people and network, organisation, and culture (Rohrbeck, 2010). Although foresight capabilities are seen as pillars of foresight, it remains unclear how foresight's foundations and micro-foundations affect organisational foresight capability and how individual capabilities translate to an organisational level. Moreover, the exact mediating impact on firm performance is unclear due to relevant moderators and limited empirical studies.

Essence of Foresight in SMEs

Complementing resilience to anticipate and bounce back from disruptions, companies have started to use strategic foresight (SF) to anticipate changes to better respond to them and minimise uncertainties. In a study by Obomeghia and Chima (2023a) whose aim was to investigate the connection between strategic foresight and the competitiveness of small and medium-sized enterprises (SMEs) in Rivers State, Nigeria utilised a cross-sectional survey, drawing a sample of 297 from a population of 1300 SMEs in the state. Data collection was carried out using a structured questionnaire. The Spearman Rank Correlation was employed to assess the relationship between strategic foresight and competitiveness. The findings indicated a significant relationship between strategic foresight dimensions of integration capability and environmental scanning capability and measures of cost leadership and organisational responsiveness. The study concluded that strategic foresight plays a crucial role in enhancing the competitive advantage of firms and recommended that organisations utilise strategic foresight to maintain competitiveness. Although the study reported a significant relationship between strategic foresight dimensions and competitive advantage, using two dimensions of integration and organisational responsiveness makes it difficult to generalise the findings since foresight encompasses many dimensions. Secondly, the study did not mention the sector in which the SMEs were drawn. This further complicates generalisation of findings.

The study by Brown and Barnard (2018) aimed at investigating how entrepreneurs and innovators engage the future, and how such engagement reflects on how strategic foresight can contribute to innovation and entrepreneurship in South Africa. The study revealed a disconnect between entrepreneurs and the future. The study found that the future is not taken seriously, allowing it to unfold unexpectedly and often surprising many entrepreneurs. A study by Brown and Barnard (2018) also found that simple methods to engage the future are used, and unfortunately, the understanding of the future is vague, coupled with a lack of leadership and coordination. Of interest, the study revealed that, although entrepreneurs recognise a general connection between the future and innovation, the relationship between innovation and future studies is not seen.

In highlighting the significant role of strategic foresight(future studies) on resilience and organisational performance, Léo-Paul et al.(2022) under took a study on Strategic futures studies and entrepreneurial resiliency: A Focus on digital technology trends and emerging markets. The study explored four areas:strategic futures studies, entrepreneurial resilience, digital technology development, and emerging markets. It identifies 15 driving forces based on the insights of panel experts, including artificial intelligence, data mining, environmental scanning, business scenario forecasting, and real estate analysis. These factors are recognised as critical in addressing potential future scenarios and associated risks. The study concluded that organisations are unaware of changes around them due to lacking awareness from structure, culture, and internal organisational processes, which affect a comprehensive perception. Thus, strategic fure studies(strategic foresight) guarantee the organisation's preferrable future and to gain a competitive advantage over rivals(Rohrbeck & Schwarz, 2013).

From the above analysis and empirical review, the hypotheses: *Ho₂: Strategic foresight(Transformational resilience) does not significantly impact performance optimisation of SMEs in the Manzini region, Eswatini was formulated.*

In a nutshell, it should be noted that the distinction between resilience and strategic foresight (transformational resilience) can be justified by their unique roles and contributions to organizational performance. Strategic foresight, as defined by Rohrbeck et al. (2015), focuses on utilizing future-oriented information to enhance decision-making and gain a competitive advantage, enabling organizations to anticipate changes and trends ahead of their competitors (Yoon et al., 2018). This proactive approach is essential for navigating uncertainties and

adapting to evolving market conditions. In contrast, resilience, as described by Biggs et al. (2012), is a multidimensional concept that encompasses various dimensions, including survival, rapid recovery, vulnerability reduction, and sustainability. The inherent complexity and breadth of resilience necessitate a focused examination of its components to develop a comprehensive understanding and integrated model. By treating resilience and strategic foresight as distinct objectives, the research can delve into their specific contributions and interactions, leading to a more nuanced exploration of how these concepts work together to optimize organizational performance in the face of challenges

2.5.2 Absorptive Capacity

In 1965, Alder introduced the concept of absorptive capacity (AC) in macroeconomics and described it as “*an economy’s ability to utilise and absorb external information and resources.*” Cohen and Levinthal (1990) introduced the concept into the field of management as “a company’s ability to acquire assimilate, and exploit knowledge for commercial ends.” Although Zahra and George (2002) expanded the concept of absorptive capacity into four dimensions, including acquisition, assimilation, transformation, and exploitation. Cohen and Levinthal’s (1990) three-dimensional concept has gained wider acceptance due to its ability to capture the stages of absorptive capacity, knowledge engagement, and continuous learning. Knowledge acquisition primarily involves a firm's capacity to identify and obtain externally generated knowledge crucial to its operations, such as customer preferences, supplier operations information, and new technological developments, through formal and informal procedures (Liu et al., 2018).

Knowledge assimilation refers to the routines and procedures within a firm for analysing, interpreting, and understanding external information and integrating it with existing knowledge (Zahra & George, 2002). Application involves the routines that enable firms use to gain a competitive advantage by incorporating assimilated knowledge into their daily operations (Lane et al., 2006; Zahra & George, 2002). During the application process, individuals from diverse backgrounds and interests collaborate to consider how to enhance existing designs for production operations by applying newly assimilated knowledge and making joint decisions (Xueyuan & Xiande, 2018). According to Eduardo et al. (2017) there has been a substantial increase in publications related to absorptive capacity, knowledge transfer and technology when Cohen and Levinthal (1990) published a seminal paper on absorptive capacities and their impact on innovation anchored in Penrose’s (1959) *Theory of the Growth of the Firm*, in which a firm in an *innovative agent* which accumulates skills in an

environment of permanent mutation (Mahoney, 2000). Earlier, Penrose (1965, p.8, as cited in Mahoney, 2000) had suggested that limits on the absorption of modern technology can be the binding constraint on growth. This submission implied that to maximise productivity and reduce costs, companies can share knowledge in the supply chain links by investing in inter-organisational knowledge transfer processes. Initially, Cohen and Levinthal, (1990) defined absorptive capacity as the absorptive capacities of employees the acquisition of information and the ability to exploit it.

According to Zahra and George (2002), absorptive capacity comprises two components and four aspects. These components are potential absorptive capacity, which involves acquiring and interpreting external knowledge, and actual absorptive capacity, which focuses on converting and applying knowledge (Aliasghar et al., 2019; Tufan & Mert, 2023). Acquisition refers to a company's ability to recognise and obtain external information from its surroundings (Zahra & George, 2002). Additionally, Hill and Rothaermel (as cited in Tufan and Mert, 2023) assert that acquiring and utilising new knowledge leads to enhanced organisational capability and innovation potential. Assimilation is the company's capacity to develop processes and routines for analysing and understanding externally acquired information (Aliasghar et al., 2019). Transformation, as defined by Zahra and George (2002), involves integrating acquired knowledge with existing knowledge and current company activities. Shin et al. (2015) emphasise that transformation is a crucial strategy for remaining competitive in the business environment. Conversely, exploitation refers to the ability to generate valuable outputs, such as new knowledge, products, processes, and competencies, through the integration of knowledge within the existing structure (Tufan & Mert, 2023).

Figure 2.8 presents a mode of absorptive capacity. The aim is to present a revised model of absorptive capacity as presented by Zahra and George (2002).

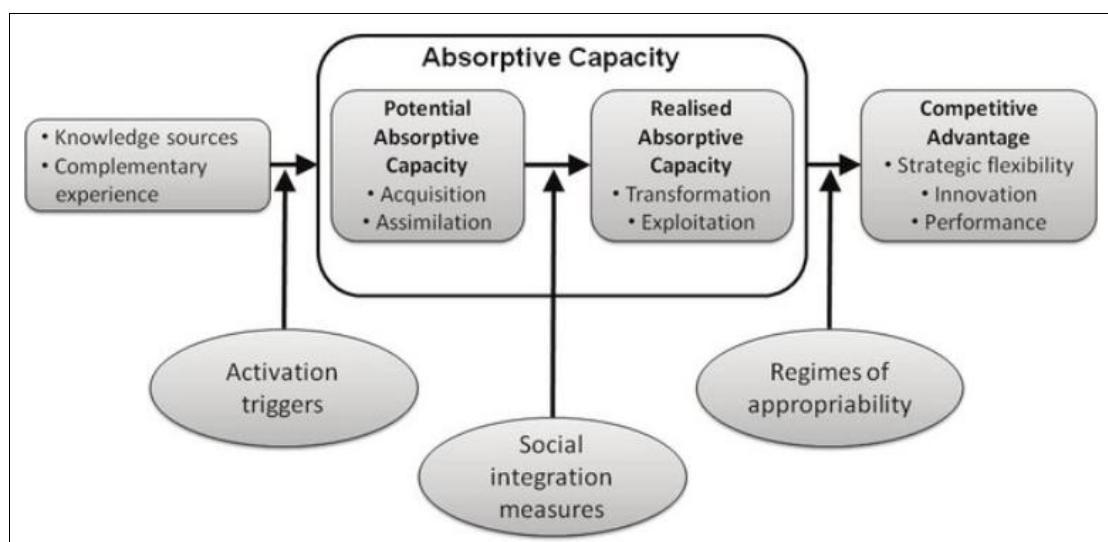


Figure 2. 8 Elaboration of Zahra and George (2002) absorptive capacity model

Source: Abrell et al. (2018: p.11)

2.5.2.1 Dimensions to measure absorptive capacity as depicted in the model

The model in Figure 2.5 illustrates how internal mechanisms moderate prior knowledge. The distributed system of organisational knowledge constitutes prior knowledge. Zahra and George (2002) conducted an analysis of absorptive capacity, presenting a model that encompasses its components, antecedents, contingencies, and outcomes. Their innovative model replaced the component of 'recognising the value' with 'acquisition' and repositioned the influence of 'appropriability regimes'. Furthermore, they expanded the model with the concept of transformation following the assimilation component, activation triggers, and social integration mechanisms, and categorised absorptive capacity into 'potential' absorptive capacity and 'renewed' absorptive capacity. This transformation process empowers firms to adapt existing processes to assimilate new knowledge by interpreting and comprehending it within current cognitive structures. Additionally, the authors identified 'activation triggers', social integration mechanisms, and 'appropriability regimes' as crucial contingencies. Activation triggers refer to events or conditions that stimulate or restrict a firm's capacity and intention to utilise acquired knowledge. Social integration mechanisms aid in reducing barriers between assimilation and transformation, thereby enhancing absorptive capacity, which is viewed in the proposed model as a dynamic capacity involving a set of organisational routines and processes (Pereira et al., 2018). "Appropriability" regimes pertain to the firm's ability to secure the competitive advantage gained from its absorptive capacity,

with secrecy being an example of a strong regime that deters imitation due to high costs and the absence of knowledge spillovers to competitors (Zahra & George, 2002).

Pereira et al. (2018) developed a model, drawing from Zahra and George (2002) that consists of two primary components. The first part addresses the various dimensions and elements of absorptive capacity, distinguishing between potential and renewed absorptive capacity. The second part focuses on the factors that determine or precede this capacity, encompassing organisational knowledge, formalisation, and social integration mechanisms as internal determinants of the firm's absorptive capacity. The authors argue that when external knowledge is applicable and generally acquired from other firms or industry sources, it becomes easier for the firm to acquire and effectively exploit it, requiring less effort in terms of scientific and technological expertise. Additionally, the authors incorporated a significant element into the model, based on theories of organisational learning and technology transfer (Zander and Kogut 1995; Lam 1997; Chen 2004), which is the applicability of relevant knowledge available in the environment. This element serves as a moderating factor for the effects of antecedents on firms' absorptive capacity.

Knowledge acquisition triggers the process of firm-level learning. The routines that organise and assess the knowledge that has been acquired with the firm, updating the existing knowledge base, enhance organisational transformation and exploitation of knowledge (Rodríguez-Serrano & Martín-Armario, 2019). Zahra and George (2002), Jansen et al. (2005) and Ajeeli (2018) warn that knowledge acquisition does not lead to automatic transfer and exploitation of new knowledge for profit organisation.

Zahra and George (2002) argue that *assimilation* focuses on a firm's routines and processes leading to the analysis, interpretation and understanding of information (Zahra & George, 2002). Ideas that cannot be comprehended are overlooked and not used in the knowledge use processes (Cyert & March, 1963, as cited in Zahra & George, 2002). Knowledge obtained from external sources may embody heuristics that differ significantly from those used by the firm, delaying knowledge comprehension. Furthermore, the acquisition of external knowledge is context-specific and may be driven by the needs of the organisation (Zahra & George, 2002).

According to Pérez Sánchez and Toro-Jaramillo, (2018) and Zahra and George's (2002), proposed two dimensions for the realised absorptive capacity, knowledge transformation and exploitation. Knowledge *transformation* is the firm's ability to create a link between its own

knowledge and its innovations produced in the market, integrating internal technologies with the ones produced elsewhere, as well as adjusting inside the enterprise based on knowledge from the environment. Pérez and Toro-Jaramillo, (2018) agree that knowledge transformation is the employee's ability to combine new knowledge with the knowledge they already have, to recognise new opportunities. This requires internalisation and conversion knowledge that allows employees to spot opportunities. Pérez and Toro-Jaramillo (2018) agree with the view that transformation is an appropriate alternative to knowledge assimilation, which occurs when new knowledge cannot be altered to fit existing ones. Transformation links new knowledge through the construction of new cognitive schemas.

Cuervo-Cazurra and Rui (2017) aptly argue that *knowledge exploitation capacity* focuses on the firm's ability to make technological adjustments and modify existing products using new innovation or knowledge from external sources. Cohen and Levinthal, (1990) opine that exploitation makes it possible to improve, adjust, extend and leverage existing competencies that incorporate acquired and transformed knowledge into firm-level operations. With exploitation capacity, an enterprise can extend and take advantage of existing competencies to create new ones, with the aim of creating a competitive advantage. It should be noted that although exploitation process presents mechanisms for social change and integration, sometimes, mutual understanding between the receiving enterprise and the one that communicates the new knowledge may not be effective as a result of structural challenges, cognitive causes of intentions of the receiving organisation (Pérez Sánchez & Toro-Jaramillo, 2018). These four capabilities that form the absorptive capacity (AC) concept enable an organisation to deploy knowledge necessary to generate other forms of organisational capabilities". According to Zahra and George, (2002), a significant relationship exists between AC and firm innovation. According to Zahra and Georg (2002) view, the effect of absorptive capacity on innovation reflects an organisation's realised capacity. Because of the value that planned and realised AC contribute to organisational survival, understanding both strands of absorptive capacity is important in times of complexity and rapid change (Anatoliivna, 2013).

2.5.2.2 Measures to quantify absorptive capacity

Two approaches to Absorptive Capacity (AC) have been used in empirical studies (Perdomo et al., 2017). Firstly, there is a unidimensional approach, where capacity is assessed using a singular and straightforward measurement, often through proxy-variables with varying

natures across studies or through bidimensional measurements that encompass different aspects of the construct (Perdomo et al., 2017). Secondly, there is a multidimensional approach that takes into consideration the theoretical basis of the construct and is seen as an improved alternative to the traditional measurement methods. However, there is a lack of studies following this approach, possibly due to the challenges associated with implementing a measurement method that effectively distinguishes between different phases of the process (Perdomo et al., 2017). In general, empirical studies seem to struggle to capture the robustness of the theoretical arguments and the multidimensional nature of the AC construct. Most quantitative studies utilise non-structural or proxy variables, which inadequately account for a standardised measurement that allows for the operational use of the construct. To simplify this complexity, empirical studies often portray the concept as a unidimensional variable, focusing on accumulated knowledge and its connection to the outcomes of organisational innovation efforts. This commonly used measurement is often related to quantifying R&D expenditures as a proportion of annual sales, patents, full-time research staff, R&D activities, number of publications, and the implementation of new projects.

However, not all firms have an R&D department, making it challenging to estimate research expenditures in such cases. These segmented measurements inadequately reflect the dynamic possibilities of knowledge absorption capabilities and knowledge flow processes (Zahra and George, 2002), thus potentially undervaluing the richness embedded in the construct (Jiménez-Barrionuevo et al., as cited in Perdomo et al., 2017). It has been observed that, beyond formal R&D, there are other activities within organisations that significantly contribute to their innovation capacity (Jansen et al., 2005; Vega & Jurado, 2008; Volberda et al., 2009). Therefore, there is a need for an approach that focuses on a more dynamic capacity to support the growth and evolution of the AC construct. This requires attention to the structure, policies, and organisational processes that impact knowledge transference, exchange, integration, and the creation of AC (Lane et al., 2006).

In recent years, various multidimensional scales have been proposed by different authors (Jansen et al. 2005; Jiménez-Barrionuevo et al. 2011, Liao et al. 2003, as cited in Perdomo et al. 2017), all aiming to address the limitations of unidimensional measurements. These scales have been developed based on reconceptualising the construct and considering firm antecedents and components. For instance, Jansen et al. (2005) differentiated between Potential AC and Realized AC, studying the organisational antecedents linked to AC components. Building on these contributions, Camisón and Forés (2010) developed a 16-item

AC scale from a study on knowledge absorptive capacity: new insights for its conceptualisation and measurement in Spain, while Jiménez-Barrionuevo et al. (2011) measured the concept using internal factors, resulting in an 18-item scale on a study to validate an instrument to measure AC in Spain. Other measurements have been adopted, such as those related to the HR department (Murovec & Prodan, 2009; Azila et al., 2016) and the Quality and Information Management departments, reflecting the models and systems implemented in the organisational design. Furthermore, some authors argue for considering the organisational structure of the firm, whether functional, divisional, or matrix, as a starting point for knowledge exploitation. In addition to external factors such as alliances, joint ventures, and acquisitions as mechanisms to quantify absorptive capabilities (Zahra & George, 2002; Perdomo et al., 2017). Table 2.4 presents the measures used to quantify AC to shed light on the different dimensions by several authors on the concept of resilience.

Table 2. 4: Measures to Quantify Absorptive Capacity

Authors	Constructing AC Variables	Dimensions	Methodology
Jansen et al. (2005)	Firm's R&D intensity (R&D expenditure divided by annual sales)	Multi-dimensional	Confirmatory factorial analysis
Nieto and Quevedo (2005)	A scale by Szulanski that was originally based on Cohen and Levinthal (1990) has been adopted. AC is measured as a firm's R&D intensity	Multi-dimensional	Multiple regression model
Arbussa and Coender (2007)	Scan and integrate	Bi-dimensional	Mixed logit
Escribano et al. (2009)	Internal R&D expenditure, permanent R&D, staff training, in R&D and the scientific staff ratio	Multi-dimensional	Modelo and trajectory model
Kostopoulos et al. (2011)	Internal R&D expenditure, permanent R&D, staff training, in R&D and the scientific staff ratio	Multi-dimensional	Modelo and trajectory model
Murovec and Prodan (2009)	"Bi-dimensional construct according to the data source (research and market)"	Bi-dimensional	Structural Equation Model
Grimpe and Sofjka (2009)	Research expenditure and employee experience	Bi-dimensional	Tobit regression and latent class regression analysis
Rothermel and Alexandre (2009)	Efforts and intensity in R&D	Uni-dimensional	Regression model

Liu et al. (2013)	Draws from Zahra and George (2002) to define the constructs AC. R&D expenditure is used to ensure knowledge acquisition capabilities, as well as the number of patents.	Confirmatory factor analysis and structural equation modelling

Source: Perdomo et al., (2017.p.3-5)

Knowledge acquisition, assimilation, and utilisation are integral dimensions of absorptive capacity contributing to organisational resilience. Through proactive knowledge acquisition, organisations can anticipate and respond effectively to disruptions. In contrast, knowledge assimilation enables them to make sense of new information and connect it with existing knowledge, fostering adaptability and recovery. By effectively utilising knowledge, small and medium enterprises (SMEs) can improve their operational efficiency, innovation capabilities, and overall performance, enabling them to identify opportunities, overcome challenges, and navigate uncertainties (Abourokbah et al., 2023; Kostopoulos et al., 2011; Zahra & George, 2002). Together, these dimensions of absorptive capacity contribute to building a resilient organisation that can thrive in a dynamic and uncertain environment.

In an article by Krzysztof (2024) that aimed at exploring the significance of resilience in helping SMEs in Poland survive major disruptions, such as pandemics or wars revealed that SMEs were particularly hard hit by the COVID-19 crisis due to their inherent characteristics. As a result, these businesses must adapt to the new realities of the post-crisis phase by enhancing their resilience. Knowledge management (KM) practices have shown great potential in both fostering and maintaining resilience. When the unique attributes of SMEs are combined with operational agility and resilience, they may be better equipped to confront the challenges posed by their turbulent environments. This study highlights the critical need for SMEs to embrace resilience as a fundamental aspect of their operational strategy. By prioritising knowledge management and leveraging their inherent strengths, SMEs can not only survive but also thrive in the face of disruption. Building resilience is not just a reactive measure; it's a proactive approach that equips these businesses to navigate uncertainty and emerge stronger in an ever-evolving landscape.

Joseph et al. (2021) conducted a study aimed at examining the relationship between knowledge creation and the financial performance of micro and small enterprises (MSEs). Their research assessed how knowledge acquisition correlates with financial performance, revealing a significant positive relationship ($P < 0.05$). The study was carried out in Sotik Sub-

county, one of the five sub-counties in Bomet County, Kenya. The findings concluded that knowledge acquisition positively influences the financial performance of MSEs. Utilizing a correlational survey research design, the study targeted a population of 810 micro and small enterprises in Sotik Sub-county. Simple random sampling was employed to select 267 MSEs for the study, and structured questionnaires were used to gather primary data. The data analysis involved descriptive and inferential statistics, presented through frequency tables, graphs, and charts. Mean and standard deviation were utilized to describe predictors of knowledge management and financial performance. Multiple regression models and ANOVA were applied to test the significance of the research hypotheses at a 5% significance level. The study concluded that knowledge acquisition significantly influences the financial performance of MSEs, which can be achieved through employee training. Additionally, MSEs are encouraged to conduct external surveys and environmental scanning regularly. Benchmarking practices help organisations gain new insights from competitors, enabling employees to understand and apply knowledge effectively through continuous engagement with business processes. This research underscores the vital role of knowledge acquisition in enhancing the financial performance of micro and small enterprises. By investing in employee training and actively engaging in knowledge management practices, MSEs can not only improve their financial outcomes but also foster a culture of continuous learning and adaptation. This proactive approach is essential for navigating the complexities of today's business environment and achieving sustainable growth.

Cohen and Levinthal (as cited in Perdomo et al., 2017) “conceptualised absorptive capacity (AC) with unidimensional, bi-dimensional, and multidimensional orders. The unidimensional approach uses a unique and simple measurement by measures of proxy variables, with variations ranging from one study to the other. Bi-dimensional measurements reflect aspects of the construct (Chen, Lin & Chang, as cited in Perdomo et al., 20017). The multi-dimensional approach considers the theoretical basis of the construct/variables and has been identified as an improved alternative to the measurement that has been traditionally adopted by several research studies (Perdomo et al. 2017). The study adopted a multidimensional approach because this allows for capturing the nuanced aspects of absorptive capacity and provides a more comprehensive understanding of its role as a mediator. A multi-dimensional approach provides a more robust and reliable measure of absorptive capacity, considering the diverse ways organisations acquire, assimilate, and utilise knowledge.

The new conceptualisation enhanced the collective capacity to manage and exploit the knowledge base. Zahra and George (2002) suggested four organisational capabilities that support the generation of AC. The four capabilities that enhance the generation of AC include acquisition, assimilation, transformation, and exploitation. The four dimensions are further grouped into two important strands: Potential Absorptive Capacity and Realized Absorptive Capacity. Potential absorptive capacity focuses on knowledge acquisition and assimilation capabilities while realised absorptive capacity deals mainly with the idea of knowledge transformation and application (Cohen & Levinthal, 1990; Van et al., 2006).

Although the concept of AC has been researched to establish its dimensions and antecedents, weaknesses that affect its application in organisations have been identified. Cuervo-Cazurra and Rui (2017) classify barriers to absorptive capacity into two: internal and external. Internal barriers to absorptive capacity include; managerial biases and weak social integration mechanisms while external barriers include aspects such as muted activation triggers and conflicting source relationships. Prejudices against or for sources of knowledge are a avital component of managerial biases. They affect a firm's ability to integrate external knowledge. Cuervo-Cazurra and Rui (2017) pointed out 17), managerial biases affect the nature of strategy a company will pursue, either at the individual level or through some form of partnership. The desire to learn from joint strategic initiatives/efforts is a result of how the management of each organisation perceives the benefit of taking up such an initiative. Thus, this analysis makes it possible to conclude that AC is not just a given. Value creation/innovation is largely affected by the nature of biases the management of an organisation has towards the action it intends to pursue. Managers may have particular attitudes that lead them to identify or prefer certain types or sources of knowledge.

In a study titled “integrative review of absorptive capacity's role in fostering organisational resilience and researcher agenda” in Thailand, Khin Khin Oo and Rakthin, (2022) establish the centrality of knowledge and dynamic capabilities in enhancing organisational resilience. This finding is supported by a study on the “role of absorptive capacity, digital capability, agility, and resilience in supply chain innovation performance” in Saudi Arabia by Abourobkbah et al. (2023). The findings of this study supported the hypotheses relating to absorptive capacity (ACAP) and digital capabilities (DCAP), supply chain agility (SCA) and supply chain resilience (SCR).

In the context of small and medium enterprises (SMEs), Prakasa et al. (2022), whose aim was to determine the effects of AC and innovation capability on business performance in SMEs in Indonesia, results of the study revealed a significant relationship between AC and performance, and AC significantly affects innovation capacity of SMEs. Another study by Nadia et al. (2022), that examined “the role played by alliance learning in enabling market’s SMEs to develop innovation”, in Pakistan revealed that, AC acts as an mediator between alliance learning and responsible innovation, while the competency of sense-making acts as a boundary condition as well as a dynamic capability enabling alliance learning through AC. The key criticism of this study is the fact that data was collected in Pakistan with its unique SME sector. Given the size of the sample size (176), the findings cannot be generalised. However, from the study, the significant role played by sense-making is recognised. Sense-making may help small and medium enterprises (SMEs) to overcome their liability of smallness and ensure sustainable growth (Zahoor et al., 2022).

From the foregoing presentation and analysis, the hypothesis: *Ho₃: There is no significant impact of absorptive capacity on performance optimisation of SMEs in the Manzini region, Eswatini was formulated.*

2.5.3 Strategic orientation

Organisational goals and objectives have a significant bearing on the nature of orientation an organisation develops (Orulmaz et al., 2022). According to David et al. (2019), for an organisation to compete effectively, it should be able to behave within a global context in a strategic way. Strategic orientation has received attention among management practitioners/academics, marketing and entrepreneurship scholars (Rizan, 2019; Zhou et al., 2005). Despite the growing interest in the concept, there is no universally accepted definition of strategic orientation. To date, different streams of literature have led to the development of different concepts (Rizan, 2019). Rizan (2019) proposes that strategic orientation is the lasting direction of thought, inclination or interest that affects an organisation’s external adaptation. Thus, strategic orientation refers to principles that direct and influence the activities of a firm, leading to the generation of behaviour that is intended to ensure viability and performance of the firm and guide the operations of the enterprise (Rizan, 2019).

Ogbari and Amaihian (2018) define strategic orientation as “the company’s strategic direction in creating the proper behaviour so as to achieve superior performance; both market and innovation are the most strategic orientation for the company to achieve superior

performance over the long term.” Grinsten (as cited in Ogbari & Amahian, 2018) recognise that the four dimensions of strategic orientation: market, learning, entrepreneurship and employee orientations positively affect company performance.

For Zhou et al. (as cited in Pett 2019), strategic orientation refers to, “a firm’s philosophy of how to conduct business through a deeply rooted set of values and beliefs that guide the firm’s attempt to achieve superior performance. In sum, Pett (2019) says that the term “orientation” has imprecise connotation. Pett (2019) provides a holistic definition of strategic orientation which it defines as, “the act of orienting or the state of being oriented”, where to “act” means the process of doing, while “state” is a condition concerning attributes. Gurkov (2012) provides a precise definition of strategic orientation as, *a framework for understanding deeply implemented company actions*. Therefore, efforts are oriented towards the discovery of composition of various industries or sectors by companies of different strategic types and to finding the possible differences in strategic and tactical actions.

Gurkov (2012) provides an “all” encompassing definition of strategic orientation as *patterns of strategic intent*. This definition focuses on the role of external and internal factors such as technologies, organisational structures, forms of knowledge acquisition and internal dissemination, organisational climates, leadership styles, human resource systems as being facilitators of a company’s strategic intent. This definition qualifies Miles and Snow strategic typologies as strategic orientation since it recognises the role of external and internal factors in shaping the strategic behaviour of an organisation (Anwar et al., 2021). Previous studies have specifically advocated the use of behaviour which is associated with organisation wide generation, dissemination, and use of market intelligence as an important ingredient of the orientation that an organisation takes.

For Zhou, Yim and Tse (as cited in David et al., 2019), strategic orientation can be described as “organisation-specific, cultural-based, and complex capabilities that show the philosophy of the organisation the way it carries out its business activities”. The effect of disruptive events from internal and external business environment have been dire, thus demanding that organisations review their strategic orientation while at the same time building strategic resilience in their functioning (Ahmić, 2022). The pursuit of strategic orientation enables an organisation to outline its strategies while at the same time focusing on the details and contents of each strategy and how they are implemented (David et al., 2019).

2.5.3.1 Essence of the Miles and Snow's (1978) Strategic Orientation and Comparison with other Typologies/Orientation

Initially, the Miles and Snow's (1978) typology broadly focused on the influence of managers on the overall direction and vision of the organisation. This view was limited in scope since it only focused manager's attention on strategic direction and vision O'Regan and Ghobadian (2005). With time, the typology was expanded to include strategies of the organisation, structures and process variables into a certain framework, thus resulting into a multifaceted typology. This new adjustment allows organisations to create the connection with its environment as well as building internal consistency and external consonance (Alani et al., 2019). The Miles and Snow typology explains companies' perception of their environment. In the model, an organisation is viewed as a dynamic, wholly integrated system that creates relationships among strategy, structure, and processes (Setijadi Lumbantoruan et al., 2020). The typology presents three viable business orientations: prospective, analyser, and defender (Anwar et al., 2021). To explain the model, Miles and Snow three key strategic issues of adaptive cycles are presented in Figure 2.9. The aim was to present an analysis of the problems of a complex and dynamic process of strategic choice.

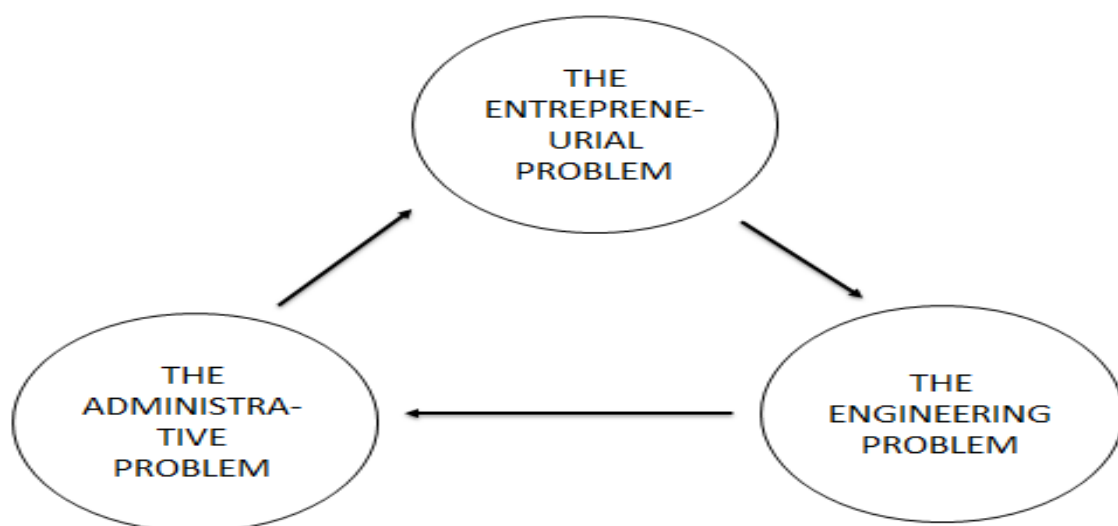


Figure 2. 9 The adaptive cycle by R.E. Miles and C.C. Snow (1978)

Source: Fatima (2017).

In Miles and Snow's (1978) typology (orientation), three problems presented in Figure 2.9 occur at the same time in developed organisations: the solution to the entrepreneurial problem

depends on accepting specific product-market domains by management. Regarding the engineering problem, the solution lies in developing a system that implements management solutions to the entrepreneurial problem and is solved by selecting appropriate technology used to produce certain goods or services. The administrative problem focuses on finding solutions aimed at rationalising and stabilising the activities that successfully solve those problems that the organisation faces within the entrepreneurial and engineering phases (Gnjidić, 2014).

According to Gnjidić (2014), taking strategy as a set of decisions through which strategic business units coordinate their managerial processes with the environment. Miles et al. (1978) advanced a model with four configurations of company strategic behaviour as answers to the problems of the adaptive cycle. Miles et al. (1978) argued that the classification of companies was carried out based on the extent to which the company is trying to create their environment. To achieve superior performance, the orientation proposes three premises: i) alignment with the environment and responding to the adaptive cycle. ii) in every industry, four strategic orientations are easily identified; defender (focus on narrow and limited product market domain), prospectors (organisations that are always on the lookout for new opportunities), analysers (organisations that balance between defending status quo and prospecting) and reactors (characterised by instability). iii) defenders, prospectors, and analysers may lead to organisational performance, while reactors are not able to lead to sustainable performance because of their inconsistent nature (Aragón-Sánchez & Sánchez-Marín, 2005a). Table 2.5 presents the strategic-performance focus with the purpose of presenting the traits that are exhibited by organisations that take a certain orientation.

Table 2. 5 Strategic- Performance orientation focus

Strategic orientation	Main focus	Traits
Prospector	Innovative, entrepreneurial, and new opportunity oriented	Externally oriented with focus on searching for new market opportunities. They are driven by the desire to exploit opportunities through innovation. Organisations that pursue this orientation are not bound by rules and see the environment as uncertain.
Defenders	Defends niche markets	Efficiency, narrow range of products and services, risk avoidance and centralised functional structure are the key tenets.
Analysers	Bear characteristics of prospectors and defenders	Flourish in stable and dynamic markets. In stable markets, firms that pursue this orientation emphasize efficiency and scale economies. In dynamic markets, such firms innovate.
Reactors	Change because of change	Reactive to change. Short-term planning orientation is the main outlook.

Source: O'Regan and Ghobadian (2006 p.34)

Research shows that the Miles and Snow typology of strategies (orientation) is a powerful predictor of organisational efficiency (Aragón-Sánchez & Sánchez-Marín, 2005). Chaganti and Sambharya (1986) examined the power of executives by virtue of their functional orientation; those who were able to cope with multiple uncertainties played an influential role than those who were unable to cope with the external environment. In their conclusion, Chaganti and Sambharya (1986) state that defenders face a relatively certain environment in marketing, research and production and uncertainty in finance. In their attempt to cope with uncertainties, top management make choices to deal with environmental uncertainties (Chaganti & Sambharya, 1986). As such, the need to understand how top management (upper echelon's) make decisions is key.

Developed by Hambrick and Mason in 1984, the upper echelon's theory was developed to provide a new perspective on two prevailing questions: why organisations act the way they do and, why organisations perform the way they do? (Hambrick & Mason, 1984). This new perspective was a departure from the initial view that managers had little to do with organisational outcomes because organisations are prone to inertia and as such, the environment has a great influence on firm outcomes (Hannan & Freeman, 1977; Hambrick &

Mason, 1984). Porter equally proposed the view that choices that organisations make were a result of techno-economic factors, rather than the decisions made by top management (upper echelon). However, Cyert and March (1992) and Hambrick and Mason (1984), criticised the view that the environment largely influenced top management's strategic choices. They argued that this perspective merely considered strategic situations as interpretable rather than objectively "knowable." They added that strategic choices are a product of behavioural factors and not a mere quest for economic optimisation. This new perspective provided insights into the design of the upper echelon's theory.

At the centre of the upper echelon's theory is the view that top management's cognitive base and values, reflected in observable characteristics such as age, education, functional tracks, experiences, socio-economic roots have significant bearing on how they interpret and respond to strategic situations through the kind of choices they make, thus affecting organisational performance (Hambrick & Mason, 1984). According to Carpenter et al, (as cited in Hambrick, 2007) the upper echelons perspective/theory contains three subordinate ideas: 1) senior manager's cognitive base and values are reflected in organisational outcomes; 2) observable demographic characteristics are indicators of executive's cognitive frames. These are used to predict strategic outcomes; 3) understanding the characteristics of the upper echelon (top management) results into prediction of strategic outcomes, instead of focusing on the chief executive's cognitive frame alone.

Hambrick and Mason (1984) argue that functional background plays a pivotal role in strategic decision-making, as individuals from different functional areas develop distinct perceptions about a firm's strategic goals. Managers with experience in throughput functions, such as production and accounting, prioritise efficiency-related issues, while those with more exposure to output functions, like marketing and R&D, favor innovative strategies for business growth. Additionally, demographic variables are considered reliable indicators of the psychological processes that shape how managers interpret strategic situations and formulate appropriate strategic alternatives (Hambrick, 2007).

Empirical results from studies by Hambrick et al. (1996); Boeker (1997); Ferrier (2001); Hambrick (2007) show that executives' demographic profiles strongly predict strategic choices and performance outcomes. Furthermore, executives with different career experiences, such as organisational tenure and industry experience, exhibit varying strategic choices due to their exposure to diverging perspectives and environments. Educational background is also

regarded as an indicator of cognitive ability and skills, with higher levels of education associated with enhanced information processing, creative problem-solving, and receptivity to strategic change. Moreover, socio-economic background and financial position characteristics can influence decision-makers' choices, with managers from lower socio-economic groups tending to pursue more aggressive strategic actions, while those with substantial stock-holdings are more committed to long-term wealth maximisation (Barker & Mueller, 2002).

Miles and Snow's typology of strategic orientations (prospector, defender, analyser, and reactor strategies) provides a framework for understanding how organisations adapt to their environments. This typology is linked to the Upper Echelons Theory in the sense that top managers' cognitive base, values, and experiences, as emphasised in the Upper Echelons Theory, influence the strategic orientations adopted by organisations. Furthermore, both theories contribute to the understanding of how managerial characteristics and decisions impact organisational performance. While Miles and Snow's typology focuses on strategic choices, Hambrick and Mason's Upper Echelons Theory emphasises the influence of top managers' background characteristics on strategic decisions and organisational outcomes. Figure 2.10 presents an upper echelon's perspective of strategic orientation. The aim is to appreciate how orientation develops in an organisation.

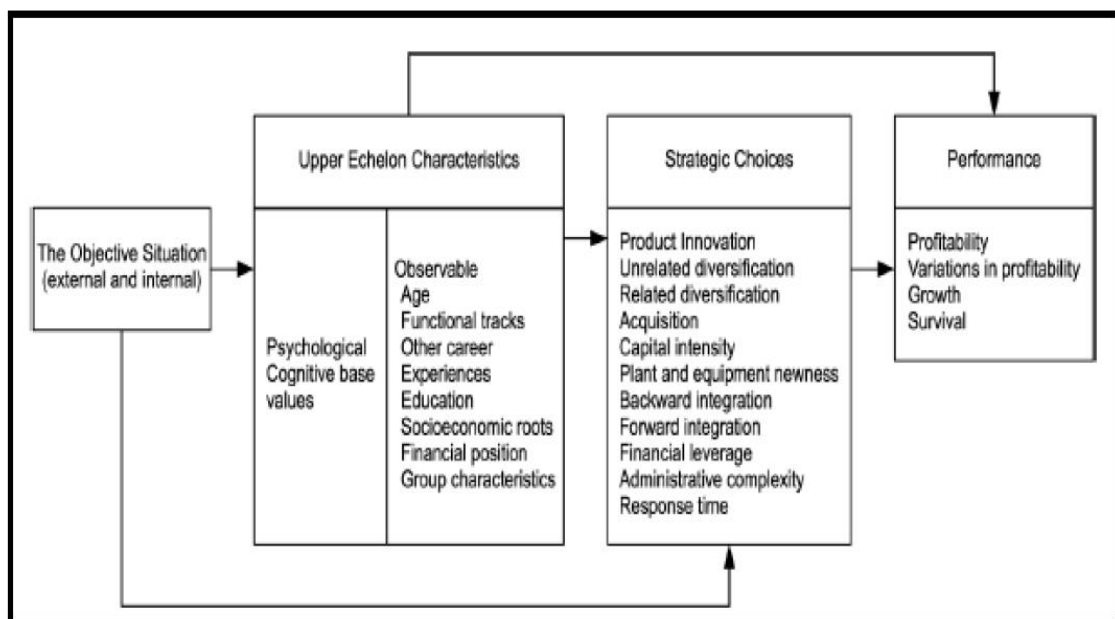


Figure 2. 10 An Upper Echelons Perspective of Organisations

Source: Hambrick and Mason's (1984:198).

As the current study focuses on the strategic impact of resilience on performance optimisation of SMEs in the Manzini region, Eswatini, it is fruitful to understand the role of those in the upper echelon of an organisation as they make strategic decisions with potential impact on organisational resilience and survival. The upper echelon theory is traceable to the seminal works of Hambrick & Mason (1984). The upper echelon theory, as the theoretical root of strategic leadership, proposes that “organisational outcomes – both strategies and effectiveness – are viewed as reflections of the values and cognitive bases of powerful actors in the organisation” (Hambrick & Mason 1984:193). Thus, strategic leadership is about the symbolic role as well as the relational and social construction of top executives (Hambrick & Mason 1984:193-195). Boal and Hooijberg (2000, p.516) stress that: “Strategic theories of leadership are concerned with leadership ‘of’ organisations ... and are marked by a concern for the evolution of the organisation, including its changing aims and capabilities....”.

In every organisational context, managers usually deploy certain manoeuvres or tricks that enable them to perform their functions. Such tricks are usually displayed in the form of perceptions, beliefs and values that are premised on the executive's previous experiences. Executives with external knowledge tend to make strategies to respond to environment changes from a wide range of experiences compared to their counter parts that have risen to the top from within the organisation (Chaganti & Sambharya, 1986). For organisations that are experiencing fast internal growth, or generally industries experiencing high growth tend to develop an orientation for recruiting top management from outside the organisation and not promoting from within. The pursuit of this outside orientation of strategic orientation has been established to be associated with improvements in organisational performance (Hambrick & Mason, 1984). Central to the upper echelon's perspective is the argument that upper echelon characteristics determine strategic choices. When combined, upper echelon characteristics and strategic choices lead to organisational performance (Hambrick & Mason, 1984).

Gurkov (2012) highlights the significance of the two orientations (defender and prospector) in understanding the firm and its reaction to environmental changes. To him, the Miles and Snow typology fails to clearly indicate how firms explore and how they exploit the environment. Nevertheless, he recognises that the central theme of the typology is the organisation's response to changing conditions. Woodside et al. (1999) argue that the first three strategic typologies enjoy similar degrees of success. The last typology, reactors

represent strategic failure. In the Miles and Snow typology, defenders compete based on price, product quality and operational excellence. For prospectors, changes and understanding of the environment trigger changes in their product-market mix. Analysers appear to bear the characteristics of prospectors and defenders. Reactors adjust to environmental change, in a rather inconsistent manner (Anwar et al., 2021).

It should be noted that even though Miles and Snow present business strategic types as pure prospector, defender, analyser and reactor, this may not be the case in reality, while at the same time, organisations that adopt any of the strategic types may not exhibit similar characteristics of each type in a given industry (Tan et al., 2019). Porter's (1985) framework provides two distinct strategies orientations (differentiation and cost leadership). It appears that his framework draws from Miles and Snow's typology. Although Porter (1985) is an advocate of positioning of business in each industry, his positioning orientation and Miles and Snow's (1978) typology are based on the ability of an organisation to be successful by differing managerial strategies (Omar, 2005). In Miles and Snow, the pursuit of prospector, defender, analyser, or reactor is based on market conditions and internal capabilities.

Strategic orientation shapes the decision-making processes/procedures of an organisation and, helps those managing an organisation to effectively configure the resources of the organisation as well as how the organisation interacts with the market (David et al., 2019). Typologies/orientations in the field of strategic management are used to describe "feasible" business strategies in industry (Sollosy, 2013). The most prevalent typologies include: Mintzberg's (1978) view on strategic context, Hamel and Prahalad (1994) on strategy, Ansoff (1965) on decision making types or strategic behaviour patterns (orientatopm) by Miles and Snow (1978). However, Muhammad and Ehsan (as cited in Sollosy, 2013) present what has been established as the most influential typologies. These include: Abell (1980), Miller (1992), Porter (1980a), Tearcy and Wierema (1995) and Miles and Snow (1978). The most influential typologies are presented in Table 2.6. The aim is to compare the key dimensions for each.

Table 2. 6: Common Strategic Typologies /Orientations

Authors	Categories
Miles and Snow (1978)	Prospector Defender Analyser Reactor
Porter(1980a)-Generic Strategies	Cost Leadership Differentiation Focus
Abell(1980)-Strategic Windows	New Primary Deman New Competing Technology Market Redefinition Channel Changes
Miller (1992)-High Performance Gestalt	Craftsman Builder Pioneer Salesman
Teacy and Wiersema (1995)-Market Leadership	Operational Excellence Product Leadership Customer Intimacy

Source: Adopted from Sollosy (2013. p.12)

The Miles and Snow strategic orientation, introduced in 1978, is a framework that classifies companies into four strategic types: Prospector, Defender, Analyser, and Reactor. These types are determined by the company's approach to three core organisational problems: entrepreneurship, operational, and administrative. The strategic impact on organisational success is most significant when external and internal factors are aligned, and each strategic orientation positions a company to respond and adapt to its environment. Porter's (1980) generic strategies are a set of competitive strategies proposed by Michael Porter to achieve a competitive advantage in the market. These strategies include cost leadership, differentiation, and focus. Cost leadership involves becoming the lowest-cost producer in the industry, differentiation focuses on creating unique products or services, and focus emphasises targeting a specific market segment. These strategies aim to enable companies to thrive in a competitive environment and achieve superior performance within their industries (Sollosy, 2013).

Derek F. Abell introduced the concept of strategic windows in 1980, which refers to the limited periods (window) when the fit between the key requirements of a market and the

competencies of a firm competing in that market is optimum. This notion argues that when an enterprise has overlapping strategic windows, it can shift its attention to a different window when one starts to close, making it easier for the firm to stay in business (Sollosy, 2013). Additionally, closed strategic windows can be reopened, as seen in the example of the watch industry and the rebirth of clockwork movements in the 1990s. Abell's concept emphasises the need for companies to change their strategies in response to changes in the business world, as these changes have a significant impact on the effectiveness of the company. This is particularly relevant in today's dynamic business environment, where new products, competitors, technologies, and customer needs are constantly emerging.

In Miller's (1992) study, four distinct trajectories were identified in outstanding companies. These trajectories, known as craftsmen, builders, pioneers, and salesmen, represent different paths that successful companies follow. Each trajectory is characterised by specific strategic approaches and tendencies. Miller observed that firms of the same type tend to follow similar paths, albeit at different speeds. The study also classified the four strategies based on two dimensions: scope and change. Scope refers to the range of products and target markets, while change refers to the variability of methods and offerings. The study found that excellent businesses tend to be driven towards extremes along both dimensions. Additionally, the study highlighted the specific characteristics and strengths of each trajectory, such as the focus on quality for craftsmen, growth-driven nature for builders, emphasis on R&D for pioneers, and marketing excellence for salesmen (Sollosy, 2013).

Michael Treacy and Fred Wiersema in their 1995 book "The Discipline of Market Leaders," argue that successful companies do not attempt to be everything to everyone. They reveal that the value of a product or service is crucial, and companies should focus on creating unmatched value in the marketplace while meeting threshold standards in other dimensions of value. Treacy and Wiersema (1995) discusses three distinct disciplines for market leadership: operational excellence, product leadership, and customer intimacy. Each discipline represents a different approach to creating value for customers. Companies that seek to differentiate by product leadership are characterised by a leading-edge must-have product or service, with a firm operational focus (Sollosy, 2013).

The differences between the key typologies suggest that Miles and Snow, and later Miller's work, take more of a strategic choice approach that focuses on the analysis of an organisation's internal strengths and weaknesses, along with its external environment. Barney

(1986b;1991) extends the internal approach that focuses on an organisation's internal strength and weaknesses with an external focus. Porter et al. are rooted in external view with a strategic focus on opportunities and threats (Sollosy, 2013). The Miles and Snow typology does not view the environment as a homogeneous entity, but rather as a complex combination of factors (product and labour market conditions, industry customs, and raw materials among others). The influence of these factors on the organisation defines the strategic type of orientation the organisation adopts (Sollosy, 2013). Fatima (2017) argues that Miles and Snow (1978) advances the view that an organisation's structure and approach are partially pre-ordained by environmental conditions and that management choices are the critical drivers of organisational structure and process. Therefore, the Miles and Snow typology suggests that organisations develop internal consistencies in the pursuit of their strategy, which results in behaviour associated with the strategy. This view is supported by Fatima (2017), who opines that organisations formulate strategies that align with their environment. This indeed resonates with the concept of resilience, with its central theme being, an organisation's ability to bounce back better after a disruption (Amanda & Marius, 2022).

Two types of research have benefited from the use of the Miles and Snow typology of strategy orientation: the first one being the use of strategic orientation (SO) as a *framework for understanding deeply implemented company plans* (Sollosy, 2013). Secondly, strategic orientation is considered as a *pattern of strategic intent* (Igor, 2013). These studies focus on understanding internal and external factors that are central to the translation of an organisation's intent.

The classification of studies based on their research interests renders Miles and Snow (1978) an appropriate orientation for the study because it is based on empirical evidence that a firm's internal activities and strategies choices are a response to environmental changes/conditions (Fatima, 2017; Sollosy, 2013; Zahra & Pearce, 1990). Unlike other models such as Porter's which is generic in nature, Miles and Snow's orientation draws from organisational theory, organisational behaviour and human resource management to distil a firm's strategic orientation. Porter's model is based on generic industry characteristics, yet Miles and Snow's typology calls for specific strategies for each of the identified orientations. The dualistic (exploitation and exploration as well as research focus) nature of this Miles and Snow's typology further diminishes an allegation that the model assumes a static nature of firm orientation (Anwar et al., 2021).

Drawing from the perspective of strategic choice (Collis & Anand, 2019a), the perception of the strategic maker and interpretation of the environment are key in examining opportunities and threats that strategists examine during strategy formation. The nature of market opportunities to exploit as well as the threats to minimise are influenced by an organisation's resource basket. Because the study accepts the view that pursuing a multidimensional approach and accepting resilience as anticipated and planned capability makes the integration of strategic orientation an integral part of the study (Alberti et al., 2018; Hortovanyi et al., 2021; Purwanti & Hapsari, 2022).

Yanes-Estévez et al. (2018), established in their study on strategic behaviour of SMEs in Spain, that there are differences between the administrative and technological problems, with their technological approach being more prospector and their administrator one, which is more defender. The study recommends that managers should analyse their environment and develop strategies that suit such environments. Another study by Oyedijo and Ro (2012) on "organisational strategy and firm performance: a test of Miles and Snow's model" using 34 paint manufacturing SMEs in South-Western Nigeria determined support for Miles and Snow's model that prospectors and analysers perform better than domain defender and reluctant reactors. Using the ordinary least squares regression technique and correlation matrix, the study established significant differences in performance between prospectors, analysers, defenders and reactors. The study established that in small and medium enterprises (SMEs), reactors were associated with negative performance, therefore enabling their classification as defenders, prospectors, analysers and reactors.

On their part, Zubaedah et al. (2013), in their study entitled "revisiting the Miles and Snow typology: strategic math mediates business strategy and resource configuration for innovation", in seven Indonesian firms drawn from different industries (Banking, Airline, Food production, Insurance, Healthcare, Hotel and Telecommunication) established that firms go through adaptation cycles, to innovate. The study by Handoyo et al. (2023), on "firm characteristics, business environment, strategic orientation, and performance in Indonesia employed regression and independent t-test for statistical analysis". The study established that small preferred to adopt a proactive strategic orientation (prospector and analyser). The study also revealed that firms in the fast-moving consumer goods industry tend to adopt a proactive strategic orientation (defender and prospector).

Although Miles and Snow's model provides a framework for dealing with the key problems of administration, entrepreneurship and engineering, it has been criticised for defining strategies as deliberate which preclude any significant amount of organisational learning (Sollosy, 2013). To this end, Miles and Snow's (1978) and Porter's (1985) typologies of strategic orientation bear convergence with Porter's (1985) framework in terms of the role of the external environment in shaping a firm's strategic posture. According to Purity et al. (2020), "strategic orientation focuses attention on the execution of strategic direction that guides and direct the activities of an organisation."

Gatignon and Xuereb (as cited in Minovic et al. 2016b) tried to establish a suitable enterprise strategic orientation from three strategic orientates: customer (the need to produce products that satisfy their needs), competitive (position in the marketplace) and technological (focus on building efficiency). His conclusion was that several papers such as Zhou et al. (2005), Verhees and Meulenber (as cited in Rizan, 2019) placed a lot of emphasis on the concept of commercial orientation. In a study by Keskin (as cited in Minovic et al., 2016), results showed that firm innovativeness positively affected firm performance and firm learning orientation positively influenced innovativeness, while market orientation positively affected learning orientation mediated by the relationship between firm orientation and firm and firm innovativeness. In Verhee and Meulenber (as cited in Minovic et al., 2016), an analysis of the combined effect of market orientation and innovativeness on product innovation was explored. Results of the study revealed that product innovation is influenced by customer market intelligence either in a positive or negative manner depending on the innovativeness of the owner.

According to Ogbari and Amaihian, (2018), marketing researchers determine various dimensions of strategic orientation. Voss and Voss (as cited in Ogbari and Amaihian, 2018), used the customer, competitors, and technological products as the key orientations while Ogbari and Amaihian (2018) advance that strategic orientation consists of market focus, main competence, investment strategy and innovation. Dimensions of strategy orientation are made up of orientation of customer, entrepreneurship, learner and innovation (Ogbari & Amaihian, 2018). For Venkatraman (1989), aggressiveness, analysis, defensiveness, futurity and pro-activeness and risk are the orientations that businesses should focus. Further, Ogbari and Amaihian (2018) opine that existing literature shows that strategic orientation has been used in prior studies where the performance of small and medium enterprises (SME) has been explained. Hoq and Chauhan (as cited in Ogbari & Amaihian, 2018) argue that whereas

strategic orientations have been considered as strategic resources for an organisation to create a competitive advantage in small organisations, lack of resources and capabilities in SME are a major barrier to the development of sustainable advantages.

In a study by Voss, and Voss (as cited in Obeidat, 2016), a growing stream of research publications has accepted the view that the orientation of an organisation may affect its performance. This statement is important because it underscore the need for strategic alignment in achieving organisational success. Voss and Voss's (2000) study mentioned three types of orientation which are market, technology and entrepreneurial orientation. These orientations reflect different pathways through which organisations can navigate their competitive landscapes, and I believe that understanding these pathways is crucial for leaders aiming to enhance performance. Ejdy (2015) adds a fourth type of orientation, learning. Market orientation is a crucial strategy since it enables organisations to remain competitive through the acquisition of marketing knowledge. To do this, firms become proactive by anticipating changes in the market, as well as participating in emerging markets and shaping the environment in which they operate or intend to operate. Technology-oriented organisations use new technologies, products and innovation to build their competitive position (Obeidat, 2016). Laukkannen et al. (as cited in Ejdy, 2015) state that learning orientation influences the direction a firm takes to create and utilise all forms of knowledge and learning that ensures.

Internal organisational factors determine an organisation's strategic orientation (Ejdy, 2015). Ringland (as cited in Ejdy, 2015) argues that some organisations are not able to face the external environment because of lack of a clear strategic orientation. For Slater, Olson and Hult (as cited in Ejdy, 2015) argue that to attain a competitive advantage, organisations should develop a clear orientation (perspective) that defines their philosophy and posture. Strategic orientation precedes any planning process (Zhou et al., 2005). According to Nguyen et al. (2022) strategic orientation stimulates firm performance and growth. Geinstein (as cited in Nguyen et al., 2022) state that previous studies have revealed that there exists a significant relationship between strategic orientation and business performance. This finding is supported by Al-Ansaari's (2005, as cited in Nguyen et al., 2022) who revealed that strategic orientation (SO) affects the performance of SMEs from different levels, areas and in developed and developing countries.

Maclean et al's (2023), study revealed that strategic orientation could steadily boost innovation in an organisation, resulting in competitive advantage since it provides the direction and culture a firm adopts to gain advantages. For Syahdan et al.'s (2020), study on

Entrepreneur orientation (EO) argue that risk-taking, innovation, and proactive behaviour of a firm will enable it to gain better performance. On the other hand, Lumpkin and Dess (1996), argue that results of the relationship between strategic orientation and performance are inconclusive and contradictory, while for some empirical studies, results have been reported on studies that were conducted in developing countries. Strategic orientation may help new ventures to survive and adapt to the fast-changing market and positively improve their performance (Song & Jing, 2017). Zhou et al. (2005) established that a market orientation enhances the innovative capacity to satisfy “mainstream” customers, although this affects innovation that targets emerging segments. A technological orientation enhances innovations, although it does not impact market-based innovations.

Song and Jing (2017) state that “prior studies held that new ventures were typically challenged with strong and experienced competitors, capable suppliers, sceptical customers, and inadequate resources. The challenges faced by new ventures make them unable to compete with established enterprises in price, so their best choice was to shift their strategic focus onto innovation and differentiation. To realise innovation and differentiation, new ventures need to focus on and recognise customers’ present and potential demands and master or obtain technologies to create new products or improve existing products.”

It should be noted that although research has generated different viewpoints regarding the role of strategic orientation on firm performance (enhancing innovation and encouraging market performance), it is likely that different strategic orientations (market, technological and entrepreneurial or customer, technological and competitive) may co-exist to support/enhance the performance of an organisation. For new ventures, studies have not been conclusive regarding how they interact to enhance the performance of new ventures (Song & Jing, 2017). This analysis leaves the debate on the effect of SO on resilience and organisational performance (OP) incomplete. It is not therefore unclear whether strategic orientation affects new ventures because empirical studies have not focused their attention on new ventures. Secondly, it is also unclear whether the view that studies have not focused on the effect of strategic orientation on new ventures implies that focus has been placed on existing ventures. Such a conversation raises the need for more research on the subject to determine the effect of strategic orientation on the performance of SMEs.

According to Hambrick and Mason (1984), “the association between age and top executives and organisational characteristics has not been the subject of many subjects, but the few that

exist yield striking consistent results”. Hambrick and Mason (1984) argues that there is a relationship between managerial youth and organisational performance. The argument presented for the relationship between managerial youth and performance is based on the understanding that youthful managers try out new and novel ways of doing things. Child (as cited in Wiersema & Bantel, 1992) argues that old managers are not able to grasp new techniques for doing things, make risky decisions, and have less energy and ambition to try out new ways of doing things. The difficulty with this conclusion is that it fails to state in concrete terms when managerial age stops contributing to organisational performance. It has also been reported that each manager brings to the organisation a set of perceptions and values, thus forming his orientation of what should be done to succeed. The foundation of this view is the functional track orientation, in a way, influences the manager’s decision-making processes. Wiersema and Bantel (1992) argue that functional tracks have been classified into three: output functions include marketing, sales, and product research and development, and throughput function focuses on production, process engineering, and accounting. The focus of this classification is to improve efficiency.

As strategic leaders in the upper echelon make strategic decisions, it is prudent to ask what characterises a decision as strategic. In a nutshell, a decision is characterised as strategic when it is about the (1) longterm direction of an organisation, (2) broad scope of an organisation’s activities (3) focus on gaining a competitive advantage over competitors (4) building on resources and capabilities and (5) addressing changes in the business environment. It is also pivotal to note that strategic decisions are complex in nature, made in a VUCA context, involve considerable change, and require an integrated approach of both inside and outside perspectives of an organisation. However, Kanyangale (2017) argues that strategic leaders display four reciprocally related individual characteristics: opportunity seeking wisdom, building of appropriate social capital, entrepreneurial resilience, curiosity, and practice-led learning. Further, to commodify organisational employees, strategic leaders align priorities and resources to create value, exploit competitive advantage as well as promote local entrepreneur culture within the organisation. Therefore, in the study, three levels of analysis are central to the discussion of upper echelons: strategic, operational and tactical (Kanyangale, 2017).

Importantly, other managerial experiences may also have a significant effect on what managers do and the effect of what they do on performance (Hambrick & Mason, 1984; Wiersema & Bantel, 1992). This may include creating a culture that enables an organisation

to bounce back from disruptive events. The word “culture” originates from the Latini term “colere”, which means to “cultivate.” The culture of an organisation refers to the collection of values, beliefs, expectations, and practices which guide the actions of members of that organisation (Thangavel et al., 2023). The culture of an organisation is at the core of what the organisation does. It guides employees on what employees do. The resilience culture of an organisation is determined by its leadership (Garg et al., 2019). Employees mirror the actions of their managers to develop a resilient culture. Companies usually face four main hazards when trying to navigate in unpredictable times: failure to execute, loss of trust, loss of focus, and pervasive fear (Thangavel et al., 2023).

According to Puumalainen et al. (2023), entrepreneurial orientation is a multifaceted concept that is based on the model that was created by Miller (1983) with three key components of innovativeness, pro-activeness and risk taking (Miller, 2011). The innovativeness component involves pursuing and giving support to novelty, creative processes, and the development of new ideas through experimentation that could result in the production/development of new products. The dimension of pro-activeness focuses on opportunity seeking perspectives of the organisation. This opportunity-seeking perspective involves introducing new services and products ahead of the competition. In an analysis by Kraus et al. (as cited in Puumalainen et al., 2023) the pro-activeness dimension concerns the importance of initiative to seek new market opportunities. The anticipation of change, a dimension of resilience, may give organisations an unrivalled advantage over those organisations that are not. The third dimension of entrepreneurial orientation refers to the degree to which managers are willing to make large and risky resource commitments. Kraus et al.(2012) argue that firms that develop risk-taking behaviour have the capacity to pursue risk in a controlled and calculated manner. The deployment of resources is based on an analysis of what the organisation expects to achieve from leveraging resources (Puumalainen et al., 2023).

Pursuing an adaptive stance, strategic orientation influences and directs the activities of an organisation resulting in the production of behaviour that ensures the performance and mobility of the organisation (Yorulmaz et al., 2022). Yorulmaz et al.(2022) advance an argument that strategic orientation plays a key role in the strategy formation process and, enhances an organisation’s ability to challenge competitive conditions. In times of crisis, Small and Medium Enterprises (SMEs) seek greater need for internal competencies such as resilience rather than external outputs. Studies by Manda and Saravanan (2019), Okello and Luttah (2022), Yorulmaz et al.(2022) conclude that market orientation influences resilience.

Although studies point to the effect of strategic orientation on resilience, it is not clear how strategic orientation interacts with strategies to deal with crisis events (Puumalainen et al., 2023a). Covin et al. (2020) argue that the relationship between strategic orientation and performance might be difficult to understand than previously assumed. The strategic orientation of an organisation such as its entrepreneurial orientation might be difficult/impossible to change since an orientation an organisation it takes is a result of long held views about how it wants to address the three problems, administration, technology and entrepreneurship. Instead, coping strategies should be aligned with an organisation's orientation (Puumalainen et al., 2023b). This complexity introduces the need to understand orientation and coping strategies since strategic orientation might be hard to change.

In a crisis, reassurance from the leadership of the organisation enhances the ability of members to manage crises, thus creating a culture of trust. In crises, the level of trust plummets, resulting in a sense of insecurity, and anxiety. The sense of insecurity and anxiety requires adept leadership and a culture of trust (Garg et al., 2019). The response to disruptive events is not just a reaction to external events. Organisations with a resilient culture anticipate trouble and prepare for what they might experience in future. This involves developing a culture of resilience. "Companies with a resilient culture have the resolve to commit to the journey to bounce back whenever they experience crises. Such organisations communicate to develop the specific measures and procedures to make resilience actionable and possess the agility to allow for successful execution, even as circumstances rapidly change. Organisational resilience largely depends on the degree to which employees are empowered" (World Economic Forum, 2022). An empowered group of employees can make meaningful strides to strengthen strategic, financial, operational and strategic resilience (World Economic Forum, 2022), "the linkage between organisational and social resilience is highlighted when considering the connection between the workforce of an organisation and the cultural, social and political milieu outside of work." Communication that is internal or external to the organisation ensures that key players are prepared to handle disruptive occurrences.

Building a resilient enterprise requires a whole organisational approach that links internal processes to its strategic goals/targets. Management should be able to undertake initiatives that alter the way a company operates with the ultimate purpose of increasing its competitiveness. The increase of organisational flexibility enables an organisation to reduce its vulnerability. Flexibility enhances an organisation's ability to bounce back on the right path (Marković & Farooq, 2017).

Empirical results from a study by Léo-Paul et al.(2022) on Strategic futures studies and entrepreneurial resiliency: A Focus on digital technology trends and emerging markets revealed that organisations require a strategic orientation(approach) that enables them to develop a digital business model in response to changes. The timing of when a business achieves these goals is less important; what truly matters is the effective implementation of their strategies. Strategic futures studies offer a valuable perspective on what lies ahead for the organisation. By examining environmental changes and interpreting these shifts, the organisation in particular SMEs may be able to prepare for potential futures, thereby helping enterprises safeguard themselves against uncertainty. Understanding these dynamics is crucial for small and medium-sized enterprises (SMEs) as they navigate challenges and disruptions. By being proactive in their strategic planning, SMEs can enhance their resilience, allowing them to adapt more effectively to unforeseen circumstances and maintain their competitive edge in a rapidly changing market.

The study by Jose and Nieves (2024) aimed to explore the relationship between a proactive attitude toward disruptions, supply chain disruption orientation, and supply chain resilience, thereby enhancing our understanding of how these factors influence the mitigation of supply chain disruptions in a B2B context. Their findings indicate that unexpected disruptions are closely tied to a dynamic and evolving perception of the environment. This research is grounded in the framework of dynamic capabilities, aligning with existing resilience literature. The authors employed partial least squares path modeling (PLS-PM) to empirically validate the proposed research model, utilizing survey data from 216 firms. The results suggest that merely adopting a proactive orientation to disruptions is inadequate for alleviating their negative effects. Instead, a firm's orientation toward disruptions is vital for enhancing its resilience, serving as a mediator that helps lessen the impact of these disruptions. These insights are particularly important for businesses, as they highlight that resilience is not just about being proactive but also about fostering a strong disruption orientation that can effectively respond to challenges. This dual approach can empower firms to navigate uncertainties more successfully and sustain their operations in the face of disruptions.

In their article on fostering resilience in SMEs along the sustainability path, Rodolfo and Guisipp (2024) established that the owner's attitude or orientation significantly impacts the internal drivers within SMEs. They particularly emphasized the importance of an entrepreneurial mindset and orientation in cultivating resilience, which entails the adoption of

innovative practices and sustainability-driven strategies that enhance the firm's capacity to withstand and adapt to disruptions. The authors connect sustainability and resilience, highlighting how sustainable entrepreneurship can positively influence the economy and, in turn, bolster resilience. They clarify that sustainable entrepreneurship addresses environmental, societal, and economic issues through innovative and digital approaches. Sustainable entrepreneurs integrate sustainability, innovation, and technology to create effective synergies between their organisation and its embedded system, thereby minimizing their ecological footprint and enhancing resilience. This study indicates that sustainable entrepreneurs can instill values that prioritize environmental preservation and social well-being, merging environmental, social, and financial values while reinforcing their connection with stakeholders' values.

In a related study, Glowka et al. (2024) examined how strategic orientations and risk perceptions affect resilience in family-owned hospitality SMEs. They highlighted that family SMEs may adopt different strategic orientations, which in turn influences their perception of risks. The authors presented a taxonomy of entrepreneurial orientations within family SMEs, including proactive, sustainability-oriented, and destination-affirmative resilience-oriented strategies. SMEs with these orientations are more likely to pursue innovations and destination development compared to others.

Le, Ngo, and Pham Hai Nguyen (2023) explored the role of entrepreneurial orientation and business model innovation in promoting resilience within the food and beverage sector. Their findings demonstrated that entrepreneurial orientation positively affects corporate social responsibility and business model innovation, which can enhance resilience in alignment with circular economy principles and adaptability to crises. These studies collectively underscore the critical role of entrepreneurial mindset and strategic orientation in shaping resilience for SMEs. By embracing sustainability and innovation, SMEs not only strengthen their own operations but also contribute positively to the broader economy. This holistic approach is essential for navigating the complexities of today's business environment, ultimately enabling SMEs to thrive amid challenges and disruptions.

The interconnection between strategic, operational, financial and social resilience clearly demonstrates that a focus on members of the organisation should not be the main pre-occupation of the organisation. A resilient organisation benefits from the interaction between its employees and people outside the organisation. Collaboration, bridging and bonding

social networks of the owner of an SME and employees are key to accessing resources necessary for resilience. The people outside the organisation have a significant role to play in determining how resilient the origination becomes during a crisis (operational and social resilience). According to the World Economic Forum (2022. p.10):

Resilience requires hard choices today to be prepared for shocks that may well appear tomorrow or will appear with some uncertainty over the next few years. Moreover, with future challenges unknown until it appears, businesses need to prepare for a range of potential scenarios. Not only do these scenarios include the risk of natural disasters similar to those that businesses need to prepare for with climate change, but the next big shock could result from a geopolitical fallout cyberattack, financial crisis, another pandemic or even some combination of some or all these.(p.10)

From the above presentation and analysis of findings from previous empirical studies, the study formulate the hypothesis: *Ho₅: Strategic orientation does not predict the resilience of SMEs in the Manzini region, Eswatini.*

2.6. PREVIOUS/EMPIRICAL STUDIES ON RESILIENCE OF SMEs

This sub-section presents empirical studies on resilience in small and medium enterprises (SMEs). The aim is to provide a comprehensive and systematic overview of past studies. This will help to place the current study into context and identify gaps where such exist.

Meneghel et al. (2016) conducted a study entitled; “From social context and resilience to performance through job satisfaction: a multilevel study over time in Italy”. The longitudinal study was conducted in the headquarters in one of the largest service companies in Italy. 857 respondents (employees) of the 115 filled out and returned the questionnaire in 2010 while 935 respondents out of 1493 returned the questionnaire. It was reported that the final sample involving 305 responded in both times (2010 and 2012) could be nested into work units. Results of the “Hierarchical linear modelling” highlighted that “collective perceptions of social context are significantly related to individual work resilience”. Although the study attests to a relationship between perceived social context, resilience and performance, the inability to clearly operationalise resilience makes the results inconclusive. Secondly, the inability to establish a direct causal relationship between resilience and performance denies research the opportunity to understand the effect of resilience on performance. However, the study provides relevant information regarding the mediating effect of job satisfaction in the relationship between resilience and performance.

The explanatory study by Purwanti and Hapsari (2022) on the relationship between business resilience and performance in 286 Indonesian SMEs. A self-administered questionnaire was used to generate data, while Partial Least Squares Analysis (PLS) was conducted using SmartPLS 3.2. Their study was a two-stage evaluation: the outer model analysis focused on examining the validity and measurement of the proposed variables, while the inner model analysis focused on determining the fitness for the proposed model for determining if a relationship exists between the variables. This implies that this model could only be used if it meets the requirements of the inner and outer models. Results from the analysis revealed that, “business resilience is a strong determinant of a business’s performance sustainability when facing a crisis such as natural disaster or pandemic outbreak”. The findings further revealed that resilience may be examined from two dimensional observations because of differences in which adaptive and planned resilience influence organisational performance. In strengthening the understanding of the influence of resilience on performance, two variables were added to the resilience model: creative self-efficacy and innovation (Purwanti & Hapsari, 2022). Whereas the study presents key insights into methods of analysis using PLS and the results from analysis, failure to collect extensive data due to resource constraints was a major drawback. Secondly, the study failed to operationalise planned and adaptive resilience. It is, therefore, difficult to conclude as to what aspects of each require management attention. Nevertheless, the robustness of their approach and the inclusion of two variables to the conceptual framework (creative self-efficacy and innovation) adds credence to the need to study resilience from a multi-dimensional and not a unidimensional angle.

A conceptual research study by Saad et al. (2021) on “conceptualisation of SMEs business resilience: a systematic literature review” offered to examine SMEs resilience literature for the year, 2000 to November 2018. 118 articles and papers were reviewed. In their analysis, the following distinct features were of key interest: literature that focuses on SMEs, data that was generated from multiple databases (Web of science, Science Direct, Scopus, Emerald, Google Scholar). Of significance is the idea that 2000 was an important starting point, given the fact that not much research had been conducted on the subject in SMEs prior (Linnenluecke, 2017). The review by Saad et al. (2021) establishes that the literature on resilience is varied in definition and measurement as well as is inconclusive about its influencing factors. The finding further shows that there is little research on the resilience of SMEs in the developing world, despite the much attention given to the sector by governments due to its enormous potential for national growth and development. Although this study presents a detailed review

and findings from studies on resilience from the year 2000 to November, 2018, important research findings that precede this period are excluded. This is because the concept of resilience gained prominence in the 1970s (Holling, 1973). Leaving out publications that were released prior to the year 2000 presents an incomplete picture of resilience. Secondly, the study focused on resilience in SMEs. It should be noted that studies on resilience started in large organisations before finding their way into SMEs (Burnard et al., 2018; Gössling, 2020; Hepfer & Lawrence, 2022).

“An empirical study on entrepreneurial orientation, absorptive capacity, and SMEs innovation performance: a sustainable perspective” was conducted by Zhai et al. (2018) using 324 SMEs of the Yantze River Delt in China. Cronbach’s alpha was used to test for reliability. The study established that the main variables in the model are greater than 0.7; thus, meeting the threshold for undertaking the study. The Kaiser-Meyer-Oljin (KMO) was greater than 0.7: a value that is greater than 0.7 shows that the data sample meets the requirements for validity. In terms of measuring variables, absorptive capacity was measured using Lichtenthaler’s scale (Zhai et al., 2018a) exploratory learning, transformative learning and exploitative learning. Innovative performance was measured using the dimensions that were developed by Hagedoorn and Cloudt. Further, Covin and Slevin’s(1989) research identified three items of entrepreneurial orientation: innovation, pro-activeness, and risk taking. Results of the study revealed that absorptive capacity may positively moderate the relationship. The study further established that the moderating effect of absorptive capacity is high in a situation of environmental dynamism than during a stable state. Although the paper presents useful information, methods and results on entrepreneurial orientation, absorptive capacity, and SMEs innovation performance, the following limitations are noted. First, the use of a small sample which could affect the quality of inference. Secondly, absorptive capacity was tested to determine its mediating effect on entrepreneurial orientation and environmental dynamism. Although results show that absorptive capacity positively moderates the relationship between entrepreneurial innovation and performance (0.098), thus indicating high innovation performance when absorptive capacity is high and vice versa, it is not stated whether absorptive capacity has a direct effect on innovation performance. Nevertheless, the study provides useful insights into the measures and methods used as well as results on the mediating effect of absorptive capacity on performance.

The study conducted by Fatoki (2018) aimed to explore the connection between entrepreneurial resilience and the success of Small and Medium Enterprises (SMEs) in South

Africa. The research utilised both individual and organisational criteria to measure success. To assess entrepreneurial resilience, the Connor–Davidson Resilience Scale 10 (CD-RISC 10) was employed, and data was collected from 170 small business owners through a survey. The study used the self-administered questionnaire method for data collection, employing convenience and snowball sampling methods. Data analysis involved descriptive statistics, confirmatory factor analysis, correlation, and regression analysis, with Cronbach’s alpha used as a measure of reliability. The findings indicated that, majority of owners are males, of ages 31-40. The study also revealed a significant positive relationship between entrepreneurial resilience and both individual and organisational success (Fatoki, 2018). It should be noted that the study was carried out in the Central Business District of Johannesburg in the Gauteng province of South Africa. It is important to be cautious when applying the findings of the study to all SMEs in South Africa. Other research can explore the influence of innovation on entrepreneurial resilience, as well as the impact of firm and owner characteristics on entrepreneurial resilience.

Thabiso and Sphesihle (2023) conducted a study on the factors influencing the financial resilience of Small and Medium Enterprises (SMEs) in South Africa post the COVID-19 pandemic. The study focused on three main factors: access to loans, interest rates on these loans, and the structure of repayment plans. The authors employed a quantitative research methodology guided by the positivist philosophical framework and selected 310 SME owners from various sectors as respondents. The findings revealed that access to loans, interest rates, and repayment plan design had positive and statistically significant effects on SMEs' financial resilience in the post-COVID-19 period. From the study, financial institutions should streamline the process for SMEs to access financing, making it more accessible and accommodating. Additionally, these institutions should tailor loan repayment options to better align with the unique needs of SMEs. The research also emphasises the importance of offering financial education and support services to assist SMEs in enhancing their financial management skills and adaptability within the post-pandemic economic landscape.

Erika et al. (2021) conducted a study whose to analyse how organisations responded to the threats posed by COVID-19-related restrictions on economic activity. The study sought to identify the predominant behaviour of organisations that determines their resilience. The theoretical part of the study focused on the leadership aspect of organisational heads and the ability of organisations to survive in uncertain conditions. The research presented the findings in small and medium-sized enterprises (SMEs) of the Klaipėda Region, in Lithuania. The

study established that surveyed SMEs in the region were from the services sector (71.3%), with the rest belonging to the manufacturing (15%) and trade sectors (13.7%). The research revealed that most of the surveyed organisations benefited from government support. Upon evaluating the survey data, it was concluded that SMEs' response to uncertainties primarily focused on protection against threats and risk avoidance, but the organisations lacked preparedness and consistency in dealing with unforeseen circumstances. These results align with the findings of Thabiso and Sphehile (2023) who established in their study in South Africa that enhancing financial management skills would enhance the adaptability of SMEs to changing environment. It should be noted that the study by Erika et al. (2021), focused on SEs in Lithuania. Although 77 questionnaires were distributed, only 73 questionnaires were returned and analysed. The distribution process is unclear and this makes replication and generalisability of findings problematic.

The study by Ingram et al. (2016) entitled strategic sustainability orientation influence on organisational resilience: moderating effect of firm size collected data from 124 from a total of 240 enterprises in Bosnia and Herzegovina. Data was collected using email and self-administered questionnaires. Multiple regression was used to analyse the data, respondents were drawn from top management of the organisations (directors, branch managers, and managers). Strategic sustainability orientation was conceptualised into three dimensions: economic, environmental and social, while resilience was conceptualised as anticipation, coping and adaption. Cronbach alpha was used to assess and determine internal consistency, giving a value of 0.7 (acceptable level of consistency). The study performed varimax and exploratory factor analysis to examine the validity of data structure in extracting the dimensions of the independent variable. The study results revealed that strategic sustainability orientation insignificantly positively influences three resilience dimensions (anticipation, coping and adaptation). As a contribution, the study provides empirical evidence on the influence of strategic sustainability orientation on resilience. This was partly done by validating research instruments and testing the plausibility of the three dimensions of resilience (Duchek, 2020a). Although the study provides valuable information on tools and methods, the study only determined the significance of the independent variable on the dependent variable. It is not stated whether strategic sustainability orientation can predict organisational resilience. Despite these weaknesses, the study provides essential lessons on the various dimensions of strategic sustainability orientation, which feed into the current study.

El-Sahli and Alsamara (2022) conducted a study on the impact of the COVID-19 pandemic on small and medium-sized enterprises (SMEs) in four Middle East and North Africa (MENA) non-oil-exporting countries, namely Jordan, Morocco, Tunisia, and Egypt. Their research, based on recent enterprise survey data, revealed that MENA SMEs were more inclined to implement wage and work hours reductions rather than layoffs in response to the pandemic. Additionally, larger SMEs demonstrated greater resilience, faster recovery, and more frequent adaptation. The accommodation and food services sector were found to be the most adversely affected across various outcomes. However, there was a noticeable recovery in Quarter two of 2021 compared to Quarter one across sectors and countries. Furthermore, SMEs that transitioned to remote work exhibited a lower likelihood of closures, faster recovery, and more frequent adaptation, indicating higher resilience and adaptability. Conversely, participation in government assistance programs did not lead to improved firm outcomes, while SMEs engaged in international trade demonstrated greater resilience and adaptability in the face of the pandemic. The study's results carry significant policy implications for supporting SMEs in developing countries during extreme exogenous shocks.

Al-Hakimi et al. (2021) conducted a study in Yemen to explore the relationship between entrepreneurial orientation (EO) and supply chain resilience (SCR) in manufacturing SMEs. They focused on the mediating effects of absorptive capacity (AC) and innovation. The study involved survey data from 171 manufacturing SMEs in the Sana'a region of Yemen and utilised a structural equation model (SEM) with SmartPLS for empirical analysis. The findings revealed that EO positively influences SCR for SMEs, and this relationship is fully mediated by AC and innovation. Essentially, the study demonstrated that while EO is significant, it may not be adequate to improve SCR if the firm is unable to absorb external knowledge and innovate. The study emphasised the importance of developing absorptive capacity and innovation alongside entrepreneurial orientation to enhance supply chain resilience in SMEs. This research sheds light on the indirect relationship between EO and SCR, highlighting the critical role of AC and innovation as mediating mechanisms in this context. Although the study by Al-Hakimi et al. (2021) highlights the importance of the significance of entrepreneurial orientation on supply chain resilience, findings from the study were based on the perceptions of SME managers in the manufacturing sector. This affects the contextual application of the results of the study, where resilience is affected by various factors. However, the study highlights the importance of entrepreneurial orientation on

resilience, as well as the mediating role of absorptive capacity in the relationship between entrepreneurial orientation and supply chain resilience.

From the empirical review, it is established that the use of small sample sizes, could affect the quality of inferences, and the lack of examination of the direct effect of absorptive capacity on innovation performance, despite finding that it positively moderates the relationship between entrepreneurial orientation and innovation performance. Additionally, the contextual application of the findings may be limited, as the studies were conducted in specific regions, and it is unclear whether the results can be generalized to SMEs in other developing countries. Furthermore, the influence of innovation on entrepreneurial resilience and the impact of firm and owner characteristics on entrepreneurial resilience remain unexplored, which could provide additional insights. Overall, more research is needed to comprehensively understand the factors influencing SME resilience across diverse sectors and regions, as the existing literature on SME resilience is diverse but inconclusive, particularly concerning definitions, measurement, influencing factors, and the influence of resilience on performance.

Having reviewed articles on empirical review of resilience in SMEs, the next section presents the summary of the chapter.

2.7 CHAPTER SUMMARY

The second chapter presents literature that anchors the study to provide an understanding of what resilience is and how it is operationalised.

Chapter two of the study reviewed literature on the evolution of resilience, its intellectual roots, its definition, conceptual debates that have taken place on the concept, as well as the theories of resilience. This allowed the researcher to gain an in-depth understanding of the historical development and evolution of resilience, providing a solid foundation for this study. By examining the different perspectives and approaches to defining resilience, the study established a clear and well-defined conceptual model for the study. Additionally, exploring various theories and models of an integrated model of resilience helped the researcher to develop a comprehensive and holistic understanding of the subject. Lastly, the relationship among the four, resilience and strategic orientation, resilience and strategic foresight, and resilience and absorptive capacity, was explored to develop an integrated conceptualisation of organisational resilience. Chapter three of the study presents literature on the performance of SMEs.

CHAPTER 3: PERFORMANCE AND RESILIENCE MODELS

“When you can measure what you are speaking about, and express it in numbers, you know something about it.... (otherwise) your knowledge is of meagre and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely in thought advanced to the stage of science (Lord Kelvin, as cited in Neely et al., 2005).

3.1 INTRODUCTION

The performance of small and medium enterprises (SMEs) has been at the centre of entrepreneurship research. Understanding the performance of SMEs has been mainly through performance models, which aim to predict failure/success. This chapter explores the concept of performance as a key goal of an organisation. In pursuit of this aim, the chapter discusses the evolution of performance and its antecedents in SMEs. The typology of SME performance models, developments and framework of performance, the nexus between resilience and performance and, existing models and frameworks of resilience are presented. From the above presentation, the study develops an integrated resilience model. Lastly, the chapter ends with a summary.

3.2 EVOLUTION OF ORGANISATIONAL PERFORMANCE (OP) IN SMES

Before the emergence of global disruptions such as COVID-19, firms were grappling with the effects of disruptive technologies, which are blurring organisational and market boundaries, which resulted into stretched traditional management theories and corresponding frameworks and prescriptions to their limits (Pavlov & Micheli, 2023). Disruptions and contexts where they occur have stretched traditional management theories and frameworks to their limits. Therefore, the practice of OP management requires an alternative paradigm that is contextual in nature, treating volatility, and uncertainty as constant variables that organisations have to deal with (Pavlov, 2023).

Over the years, OP has been a matter of critical academic research, with scholars such as Brito (p.98, as cited in Ramirez & Lim, 2021) defining it from an output perspective covering effectiveness, operational efficiency and financial outcomes. According to Ion and Criveanu (2016), the concept of performance was initially taken from mechanics and sports fields to characterise “good” results to be achieved. Ion and Criveanu (2016) agree with Omar (2005) that the concept of performance is an outcome-based concept to achieve goals.

Maes et al. (as cited in Ramirez & Lim, 2021) argue that studies have conveyed their analytical findings using one primary format: performance models. These models primarily concentrate on predicting either failure (Amankwah-Amoah, 2016) or survival (Cader & Leatherman, 2011) and are regarded as the standard approach in the academic assessment of SMEs' economic performance.

In the 1970s, the concept of performance dealt with means and ends, focusing on how a company as a social system with certain resources is able to fulfil its goals (Hashem, 2015). The goals of an organisation give its activities the orientation by depicting the state of affairs the organisation seeks to achieve (Etzioni, 1960; Jenatabadi, 2015). Goals, the essence of performance, legitimise the existence of an organisation. They serve as the standard for measuring organisational success since they act as the measure to be used to determine the extent of organisational performance. Compared with other researchers, Lupton (1978) treated the concept of OP in the most careful and explicit manner. Stanciu et al.(2019) argues that in an effective organisation, productivity and levels of satisfaction and motivation of its members are, while turnover, costs, labour unrest are low or absent.

Katz and Kahn (as cited in Flood, 2017) in their study on the social psychology of organisations, advance the view that the efficiency and effectiveness components of an organisation are parallel, although both are assessed as vital components of the overall organisational performance (OP) evaluated based on total returns. Therefore, Katz and Kahn argue that, effectiveness, efficiency and relevance as key performance dimensions have been extensively used in understanding performance. In the 1990s, Adam's (1994) argument was that OP was heavily dependent on employees' performance quality. Regular exposure of staff of an organisation to new and up-to-date knowledge and skills that would in turn help them to keep abreast with the new changes occurring in the market would enhance the performance of an organisation. Therefore, an organisation with high standard of performance level is able to keep its stakeholders demands fulfilled. This argument supports the relevance dimension of OP. In sum, in dealing with the concept of performance, three areas of OP come into play: goals (effectiveness), resources (efficiency) and satisfaction of stakeholders (relevance). Georgepoulos and Arnold (1957, as revised in 2016) contest the dimensions used to review the evolution of OP. They argue that with the exception of organisational productivity, most variables used to measure effectiveness are inadequate. In their view, morale and stakeholder satisfaction produce inconsistent results across organisations. It is also important to note that the variables for measuring effectiveness may be subjected to a third consideration such as

nature and volume of work that may alter the satisfaction of members. Drawing from Adam et al.'s (1997) argument, the study of organisational performance is incomplete without understanding the changes that have occurred over time with regard to performance management of employees. Table 3.1 below reflects how performance management has evolved from the rise of Taylorism and the contemporary notion of agile performance management.

Table 3. 1 Phases in the Evolution Performance Management

Period	Critical development regarding performance management
First Phase: 1908 – 1914	In 1908, Frederick Winslow Taylor applied his 'Scientific management' principles to find out how the work potential of individuals affected their productivity. Focus was on scientific selection, training and development of workers. A clear division of work between managers and workers was emphasised.
Second Phase: 1914 – 1920	In 1914, F.W. Taylor introduced a performance appraisal process that focused more on current worker productivity and ways to improve it over time. Focus was on the individual's personality as well as traits such as knowledge, punctuality, loyalty that are necessary to accomplish a task.
Third Phase: 1930 – 1960	Walter D Scott of WD Scott & Co. of Sydney (one of the largest consultancy firms in Australia) introduced the concept of rating his staff's abilities as early as World War I (1914 – 1918). He introduced his 'man-to-man comparison' scale, which Taylor influenced, a practice that was only acknowledged after the 1930s. Mid-1950s, Waalter's rating system was adopted by my companies, enabling managers to the performance of their employees against certain traits (personality) his formal performance appraisal process was commonly used by many companies.
Fourth Phase: 1960 – 1970	In the early 1960s, the introduction of on 'Annual Confidential Reports(ACR)', became common. These provided significant information about employee performance. ACRs became important sources of employee information, and any negative remarks about employees in the report would negatively affect their career growth. During the 1970s, employees communicated negative remarks from these reports so that they could take corrective measures. Gradually, performance appraisals based on inherited personality traits were transformed into evaluations based on goals and objectives.

Fifth Phase: 1980 – 2000	360 Degree Feedback Became Ubiquitous Multi-person rating became popular during 1980's & 1990's as 360-degree feedback. Some organisations did not accept it because it consumed a lot of their budget. Performance appraisal focused on motivating employees and improving organisational performance. Traits such as teamwork, conflict reduction, efficiency became common ingredients for enhancing performance.

Source: Wu (2009. p.10)

3.3 APPROACHES AND FRAMEWORKS TO THE STUDY OF ORGANISATIONAL PERFORMANCE

This section presents the various approaches and frameworks to studying organisational performance in small and medium enterprises (SMEs). Since performance approaches refer to the various methods, strategies, and techniques used to manage and improve performance within an organisation, a review of literature on approaches to the study of organisational performance is critical because it allows for the identification of tailor-made strategies that are aligned with SMEs and the context in which they operate. Important to note, performance frameworks are critical in helping an organisation to measure and manage performance, aligning it with organisational goals and objectives.

3.3.1 Performance Approaches

This section presents literature on four (4) approaches to organisational performance, namely: the goal approach, systems approach, strategic approach and agile performance management. The aim is to identify strategies that organisations use to ensure performance.

3.3.1.1 Goal approach

Erkutlu (as cited in Chegini et al., 2016) defines the effectiveness of an organisation is the extent to which an organisation clarifies its purpose and ensures proper use of resources for the benefit of its members and community. This implies that effectiveness is realised if an organisation realises its goals (Chegini et al., 2016). Literature assessing organisational effectiveness has focused on using the goal approach to determine the organisations that exist. According to Aunurrafiq et al. (2015) and Centre for Evidence-Based Management (2016), the Centre for Evidence-Based Management (2016), the goals of an organisation serve many functions. Formulating organisational goals gives an organisation the orientation of its activities by depicting the nature of affairs the organisation intends to achieve or the extent to which an organisation is able to achieve specific performance outcomes (Ngwangwama, 2023). The nature of goals that an organisation wants to achieve legitimises

its existence. This approach is premised on the assumption that there should be a general agreement on the specific goals, and the people involved should feel involved in achieving them (Das & Suman, 2015). To accomplish the limited number of stated goals, the required resources should be available to ensure successful implementation. The goal approach is an important criterion for identifying the performance of an organisation.

Demeke and Tao (2020) opine that the performance of an organisation consists of “achieving the goals that were given in the convergence of enterprise orientations.” Performance is not just an outcome but a comparison between the outcome and the target (goal). Using the shareholder view-to-goal approach, shareholders determine a specific purpose for forming organisations. The attainment of goals is indicative of the extent to which an organisation can fulfil the expectations of shareholders, as well as survive in a highly competitive marketplace (Demeke & Tao, 2020). Ngwangwama (2023) further explains that “organisational performance depicts the outcomes of the actions or activities, which members of the organisation carried out to measure how well the organisation has accomplished its objectives by meeting the needs of stakeholder”. Thus, organisational performance is the measure of how well an organisation achieves its goals. “Goal approach directs the owners-managers to focus their attentions on the financial measures of performance”. Such financial measures of performance include return on investment, profits, and revenues. Chong (2008) added another measure, returns on sales. Financial measures are believed to be objective, easy to compute as well as simple to compare with the set goals (Chong, 2008). According to Gomes and Romão (2014) the availability of performance measurement tools, organisations can monitor the implementation of their business plans and strategies towards goal achievement.

Firstly, a critical weakness of the goal approach is that it makes studies on organisational performance “stereotyped and largely dependent on the assumptions of the model”. Regarding stereotyping, studies on organisational performance always report that organisations are incapable of achieving their targets. Secondly, it is also assumed that whereas initially, organisations claim that they have set goals, it appears that they have certain goals that are different from those that were initially set (Etzioni, 1960). In fact, it has been stated that goals as norms depict different targets. On the other hand, because of the stakeholder view of organisations, with varied goals, it is possible that the nature of goals that organisations pursue are varied and sometimes competitive.

The goal approach enables the owners-managers to evaluate performance against the predetermined goals. Every organisation desire to achieve both financial and non-financial targets. Gomes and Romão (2014), non-financial measures are necessary for enabling an organisation to achieve its long term target. The use of financial and non-financial measures is in congruence with the goal approach where the owners-managers assess the extent to which predetermined goals are achieved (Lumpkin & Dess, 1996). Achievement or no achievement affects the extent to which owners-managers feel satisfied with their targets set.

According to Nur ' et al. 2011.), studies have revealed that the most commonly used indicators of measuring business performance in SMEs are profit, return on investment (ROI), turnover or number of customers. However, Nur ' et al. (2011) argue that SMEs frequently hesitate to disclose their actual financial performance publicly, leading researchers to discuss the necessity of using subjective measures, such as the seven-point Likert scale, in assessing business performance. It is crucial to recognize the potential confounding factors between subjective (also referred to as perceived or perception-based performance) and objective measures.

On the other hand, Nur ' et al. (2017) advise the best way to measure the performance of an organisation is through the business performance measurement (BPM) system. PBM analyses and investigates each quality that affects the performance of a business, hence classifying business performance into two: a) operational business performance (OBP), and, b) strategic business performance. All organisational functions are investigated at both high and low levels of activity (Nur ' et al., 2017). It has been established that SMEs are not comfortable revealing their actual financial performance. The reluctance by SMEs to reveal their actual financial information informs the decision most scholars have resorted to the use of subjective measures of measuring performance, notwithstanding the aspects of differentiation that may confound between subjective and objective measures (Nur ' et al., 2011).

A critical examination of literature on measures of performance in SMEs reveals that subjective measures of performance are appropriate alternatives to measures of performance that are objective in nature. According to Nur ' et al. (2011), conducting research on s objective measures of performance that are subject to manipulation resulting in errors of accuracy makes it difficult to estimate performance accurately. This is view is supported by Song et al. (as cited in Nur ' et al., 2011) who argues that managers prefer to provide subject performance data during research studies in order to protect the confidentiality of their data.

According to Pelham and Wilson (1996), “evaluation of subjective perceptions is commonly and comprehensively used in social-science research”. The use of subjective measures of performance has been generally acceptable because of its positive correlation with objective measures (Vij & Bedi, 2016; Wall et al., 2004). Although research studies (Vij & Bedi, 2016; Wall et al., 2004) have reported a positive correlation between objective and subjective measures of performance, equivalence assumptions between objective and subjective measures regarding their functions are still debated. It has also been established that most objective and subjective measures of performance are designed for large organisations, thus, it is difficult to establish whether existing ones are applicable to SMEs (Nur ’ et al., 2011). This void in knowledge calls for the identification and testing of an SME based framework for measuring SME performance optimisation.

In the context of SMEs, Březinová and Průsová (2014), state that most SMEs have formally or not formally determined strategy. This observation highlights the often fluid and adaptive nature of strategic planning in smaller enterprises, which can be a significant advantage in rapidly changing markets. SMEs goals are based on personal goals and interests of the owners. The approach taken by SMEs in selecting goals is different from what large companies do. This distinction is crucial, as it reflects the unique challenges and opportunities that SMEs face, allowing them to prioritize aspects like quality, innovation, employee retention, customer satisfaction, and flexibility (Monika, 2014). SMEs have been found to focus on goals such as; quality, innovation, employee retention, satisfaction of customers, and flexibility, among others (Monika, 2014). Ioniță (2013) asks a fundamental question: what makes some SME owners/managers have economic goals while others seem rather interested in non-economic ones? The response seems to come from Oxford Dictionary definition of success, which it defines as the accomplishment of a purpose. Since performance is the achievement of an outcome, then this means that the achievement of an outcome leads to goal attainment, then that is considered as success (Ioniță, 2013). In Tanzania, Rose and Romanus (2016) conducted a study to establish the relationship between financial goals and financial decisions of SMEs in SIDO Dodoma and Dares Salaam, Tanzania. Their study revealed a significant relationship between financial goals and decision making. This finding is in line with investment decision theory which prescribes rules in keeping with objectives of shareholder wealth maximisation (Mao, 1979, as cited in Rose & Romanus, 2016). Therefore, business activities are geared towards achieving specific goals.

3.3.1.2 The Systems Approach

The systems approach (theory) was first introduced by Biologist Ludwig Von Bertalanffy in the 1940s and furthered by W. Ross Ashby and George Bateson. Lai and Huili Lin (2017, p.1), agree with this view and state that ...the systems theory developed in the 1950s from the field of biology against “the backdrop of a need to have a system of systematic theoretical constructs to discuss the empirical world”. General systems theory is the skeleton of science because its sole purpose is the desire to provide a framework or structure on which to mount other components that allow for the complete functioning of the entity in a logical flow of knowledge (Boulding,1956; von Bertalanffy,1951; Lai & Huili Lin, 2017). Huili Lin (2017) argues that systems theory originates from cybernetic systems theory in mechanical engineering. The term cybernetics has been used to refer to systems of control and communication in the machine system. Cybernetics as a concept has been very useful in explaining the behaviour of social systems. The idea of equilibrium emerges from the ability of a system to rely on multiple feedback loops and control mechanisms to help maintain the system's state of stability (Lai & Huili Lin, 2017).

There are multiple definitions of a system. According to Searcy et al., (2008, p.185), a system is “a set of two or more elements related by some interaction, acting together to achieve some common purpose”. The systems approach, sometimes called the systems resource approach focuses on the input-process-output relationship. To a greater extent, it explains an organisation’s effectiveness. According to Searcy et al.(2008), a system is a “set of interrelated parts working toward some common purpose.” For Hersh (2002) a system has been defined as “a combination of elements or parts that form a complex or unitary whole.” It should be noted that in the study of organisations and performance, it is the relationship between parts rather the nature of parts that determine how individuals, or process/function. Taking this view allows for the application of the same principle to various situations or phenomena. Systems resource approach or theory provides then necessary tools to structure complex situations that can facilitate consideration of a range of complex interacting factors and interest, thus providing an opportunity for trade off to be made between the different factors/actors.

Systems approach enables organisations to understand and solve problems in various situations (Searcy et al., 2008). The application of the system resource approach can be effective if a robust relationship exists between the resources that an organisation receives

and its output (Ashraf & Abd Kadir, 2012; Demeke & Tao, 2020). It has been argued that to understand the organisation from a systems approach, emphasis is placed on understanding the organisation as a whole, but also as part of a larger community of organisations with mutual dependence. Demeke and Tao (2020) opine that the underlying principle of the systems approach of performance is that any part or activity of an organisation has an effect on all parts of the system (organisation). The theory is anchored on the premise that using input and output measures of effectiveness in the systems resources approach seems appealing. Hersh (2002) state that the systems approach can be classified in a number of different ways. For example, Blanchard et al. (2002) argue that there is a distinction between hard or engineering and soft system approaches. In the hard or engineering systems approach, the statement of objectives is defined in the early stages of understanding the problem, while in the soft systems approach, objectives evolve as the people further their understanding of the problem. According to Hersh, (2002) engineering approaches pursue quantitative approaches to understanding the problem, while soft system approaches are descriptive and qualitative. The choice of the approach to be used in any of the approaches largely depends on the nature of the problem being investigated.

General Systems Theory is a theoretical framework that seeks to understand the behaviour and interactions of complex systems. While it has been widely applied in various fields, including biology, sociology, and management, it has its critiques. General Systems Theory is often seen as equilibrium-oriented and static, particularly in mid-twentieth-century functionalist sociology. This focus on order and equilibrium has been criticised for being politically conservative and oriented towards maintaining the status quo, rather than being open to creativity and change. In addition, it places an inordinate emphasis on the adaptation and coping discourse, which can lead to a conservative, judgmental, personal deficiency, and residual approach to understanding and addressing complex social issues (Montuori, 2011).

While there may be a need for more direct empirical testing and demonstration of General Systems Theory in the context of small and medium enterprises (SMEs), the theory's concepts and principles can still be applied to gain insights into these areas. General Systems Theory recognises that SMEs are complex systems composed of interconnected elements (Montuori, 2011; Sánchez-García et al., 2023). It emphasises the interdependencies and interactions between organisational components, such as employees, processes, resources, and external factors. By viewing an SME as a system, General Systems Theory can help identify the factors contributing to resilience and performance optimisation. Also, the theory

highlights the importance of feedback loops and adaptation within systems (Sánchez-García et al., 2023b). In the context of SMEs, this means understanding how the organisation responds to internal and external changes, learns from experiences, and adjusts its strategies and processes accordingly. By analysing feedback mechanisms and adaptive behaviours, General Systems Theory can provide insights into how SMEs can enhance their resilience. This is supported by a study on modelling organisational resilience in small and medium enterprises (SMEs): a system dynamic approach in Tourism SMEs in Spain by Sánchez-García et al. (2023), which revealed that the systems method supports organisational resilience since it allows for continuous review, improvement or rethinking of the factors and relationships that lead to resilience. Further, a study by Bugwandin and Bayat (2023) on organisational cybernetics: a system thinking used for SMEs in KwaZulu Natal, South Africa, revealed that systems theory is factual in determining the interconnectedness and interdependence of elements within a system. The authors remained non-committal about whether systems thinking can be globally applied in the management of SMEs.

3.3.1.3 The strategic Approach to Performance

Strategic performance management means an organisation aligns its overall organisational strategy with employees. Performance expectations, information exchange regarding current and future work, and leadership are aligned to guarantee that everybody works towards the same goal (Layland & Redding, 2020). It balances large-scale targets with employee-centricity, empowering employees to maximise their full potential by constantly pushing organisational activities in the right direction. Strategic performance management is defined as performance measurement, monitoring, and improvement methodology that helps achieve overall organisational objectives.” The question of what are the key components of a strategic performance management system is key to understanding the strategic nature and approach to performance. The six key components of a strategic performance management system to accelerate individual improvements while constantly moving in tandem with the holistic organisational direction are:

- Goal-setting and identification To allow top management and business leaders to study trends, perform forecasting, and set tangible goals for the organisation
- Outcome-oriented system: Monitoring organisational performance and growth in line with the goals that are already set; can cover the four elements of the balanced scorecard

- Workforce segmentation: Segments employees into groups based on performance parameters for easy monitoring and alignment
- Employee-level performance management: Tracks employee performance continuously with respect, empowers regular feedback and supports check-ins
- Seamless integration: Enables integration of employee performance management systems and organisational KPI dashboards for alignment of data
- Effective communication: Provides an internal marketing, communication, and feedback mechanism to widely share top management goals with the entire workforce, and encourage self-improvements.

Gomes and Romão (2012) aptly argue that organisations develop three important strategies if they are able to address the challenges brought about by new business environment: a) training of staff in the use of systems and technologies purposefully to equip staff with organisational knowledge to deal with responsiveness and manage change, b) “choose for collaborative platforms involving all relevant stakeholders (customers, suppliers and employees)”, c) find better alternatives of gaining superior performance using frameworks to assists management processes (Gomes & Romão, 2014). These strategies are essential for fostering resilience and adaptation in today’s rapidly changing environment. The shift in the business environment, the new business environment is driven by the great predominance of intangible assets such as knowledge or innovation to manage complexity and uncertainty (Gomes & Romão, 2014).

According to Gomes and Romão (2014, p.2), “competitive advantage is seen as a process of continuous improvement, looking for best practice and enhancing new capabilities.” Continued improvement includes search for products or services as well as developing robust efficient processes and procedures aimed at developing strategic dynamic capabilities (Teece et al., 1997). In furtherance of this argument, Prahalad and Hamel (2003) state that the construction and operation set of a set of core competencies determine sustainable competitive advantage. The strategic constituency approach deals with the effect of the organisation on shareholder’s interests. From this view, it is safe to argue that effectiveness refers to the minimal satisfaction of all of the organisation’s strategic constituencies (Ashraf & Abd Kadir, 2012).

The strategic approach to performance management involves formulating and implementing significant goals and actions by an organisation's managers on behalf of stakeholders, based

on consideration of resources and evaluation of internal and external environments. This approach can lead to improved performance at both the individual and organisational levels. It can also increase market share and profitability by aligning actions with industry conditions and goals. Additionally, strategic management enables sound future planning, better decision-making, and efficient resource allocation (Soboleva et al., 2018; Winingar, 2021). However, strategic management can be complex and time-consuming, requiring strong leadership and properly structured resources for effective implementation. Predicting the future accurately is challenging, and continuous monitoring and assessment are necessary to adapt to changing circumstances (Soboleva et al., 2018). Furthermore, there is a potential for misleading reports if performance management is not conducted accurately.

In a study by Winingar (2021), whose objective was to explore the strategies used by leaders in small and medium enterprises (SMEs) to support performance management to promote organisational growth in Washington D.C, established that effective management is a key drive of growth in SMEs. Winingar (2021) argue that performance management involves monitoring the progress of objectives and achievement for growth. Another study by (Shah et al., 2020) entitled, “promoting strategic performance through strategic orientation and strategic renewal: a moderated mediation model” aimed at exploring how strategic orientation and strategic renewal could improve strategic performance among SMEs in Pakistan. The study by Mapfumo and Zimuto (2020) whose objective was to analyse the impact of strategic management practices on performance of SMEs in Masvingo, Zimbabwe identified the significant role placed by strategic management practices, and as such, recommend that SMEs should have strategic plans if they are to achieve performance.

3.3.1.4 Agile Performance Management in a VUCA

The notion of agile and responsive performance has gained momentum after the COVID-19 pandemic disrupted not only work, but also the worker, workplace, and employee productivity, exposing serious questions about our current performance management weaknesses. Wigert and Barrett (2020:1) argued that the “COVID-19 pandemic threw performance management systems into chaos”. According to Kanyangale and Chikandiwa (2023), there are five pitfalls in employee performance management in disruptive times in the South African university. First, there is the pitfall of inflexible performance planning and timing of feedback for uncertain times. Organisations used rigid performance planning manifest in different ways such as setting annual performance goals, and not reviewing them

along the year; lack of adaptation of performance metrics to suit disruptive time; an individual-focused performance which fails to recognise teamwork explicitly; and lack of regular performance check-ins to review and up-date near-term goals.

The second is the pitfall of weak performance feedback culture which was more glaring in the South African Higher Education Institution (HEI) during the COVID-19. Weak performance feedback culture has exposed the (a) over-reliance on the annual rear-view of employee performance, (b) lack of bottom-up feedback to monitor check-ins by line managers, (c) weak inclusive psychological safety, and (d) lack of coaching conversation between line manager and employee.

The third pitfall depicts how line managers predominantly focus on the process-related aspects of performance management for accountability and not for employee development. As a result, there is little effort to identify and act on employee developmental opportunities during the disruptive event triggered by coaching conversations.

The fourth pitfall is evident in the perception that HR is the centre of performance management, making line managers and employees feel peripheral and detached from the bureaucratic chores of performance management. The pitfall is when employees and line managers in the South African HEI think that they engage in performance management for the sake of the HR department.

The lack of compassionate leadership for performance is manifested when a binary choice between compassion or performance shapes the behaviour of line managers at the South African HEI. The pandemic increased the call for managers to be understanding and lenient with employees as they navigate various work and personal stressors (Menon & Motala, 2021). Given the identified pitfalls and solutions in the South African HEI, Kanyangale and Chikandiwa (2023) proposed a framework which pronounces an agile, continuous, and holistic approach to performance management in ways which revolve around collaborative performance conversations and coaching for performance. The four components of Agile performance management system framework include agile planning, performance feedback culture, performance development, and performance review in a VUCA with regular check-ins and ongoing conversations between feedback giver, receiver and continuous coaching as shown in figure 3.1 below.

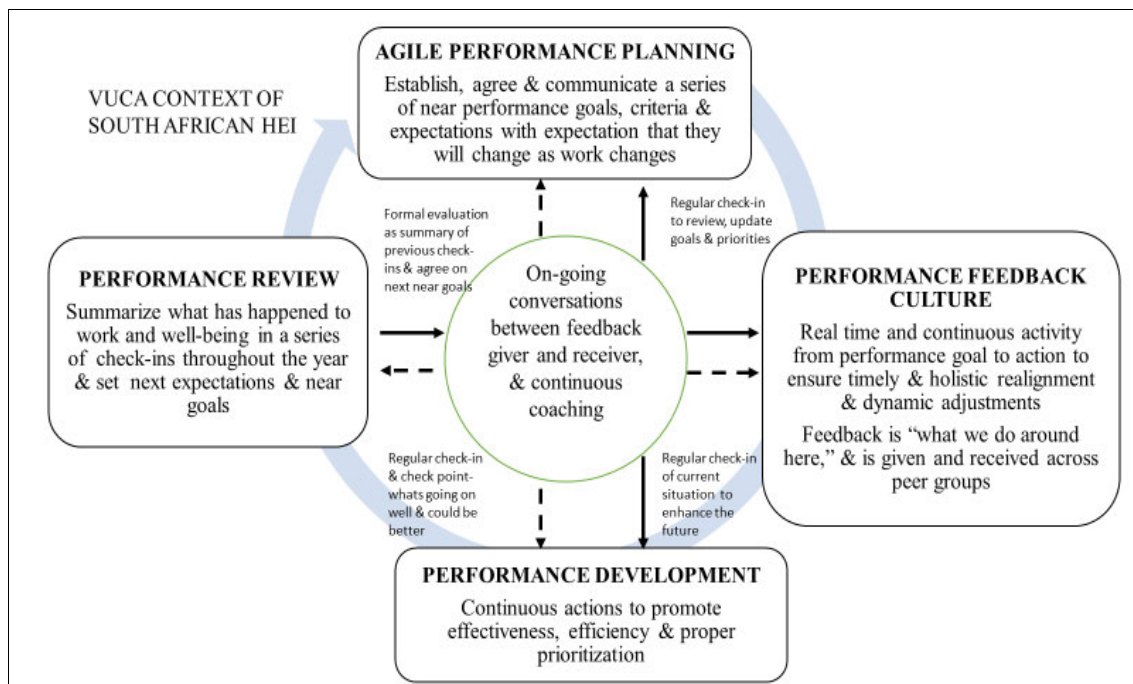


Figure 3. 1 VUCA context of South Africa Higher Education Institutions

Source: Kanyangale and Chikandiwa, (2022:154)

In agile performance management, check-ins facilitate feedback in each of the four elements and integrate the notion of manager-as-coach who seeks to unlock employee potential to perform and meet desired goals. In this framework, check-ins are regular discussions between the line manager and employee throughout the year between goal setting and formal evaluation.

The process of an agile and continuous performance management system begins with goal setting. Line managers and employees must discuss goals and revise them to align with the priorities as work changes. Agile performance planning hinges on establishing, agreeing and communicating a series of near-term goals, criteria and expectations that can be tracked more regularly and with greater relevance to the individual's work. The underlying assumption is that near-term goals are achievable within a short period and can change quickly in response to changes in work and external changes. Ongoing performance and coaching conversations are a source of feedback, shaping and reinforcing the assumptions and behaviours of employees and line managers regarding the nature, value and quality of performance feedback. In agile performance management, feedback is the key to shaping growth, improvement and course correction. As such, feedback involves real-time and continuous activity from performance goal to action to ensure timely and holistic realignment and dynamic adjustments.

Furthermore, regular, meaningful conversations are critical for on-the-job learning and performance development in agile performance management. Ongoing check-in and coaching conversations focus on what is going well and what could be better. Understanding performance, identifying gaps, and improving future performance are essential issues for performance development. The continuous conversations focus on actions to promote effectiveness, efficiency and proper prioritisation of activities for employee and organisational performance improvement (Kanyangale & Chikandiwa, 2023).

In the context of SMEs, Simpson and Mulhaney (2023) argue that SMEs can be identified by their comparative change in vulnerability to volatile, uncertain, complex and ambiguous (VUCA) conditions due to higher levels of competition. Simpson and Mulhaney(2023), state that in studies where VUCA has been established as a threat, organisations shift attention to operations to create stability, predictability, managing risk, rather than managing profound uncertainty. However, Baron and Wozny (2021),Woltés and Fernández-Mesa (2023) and, Simpson and Mulhaney (2023), argue that VUCA conditions are dynamic. Therefore, when a more flexible perspective is used by business leaders, then opportunities are available. In a VUCA situation, managers should have skills to deal with uncertainties and turbulence. A redefinition of leadership must take place. Skills such as drawing up a vision, which is less important in a VUCA environment, especially with the difficulty of generating future perspectives based on current information must change (Vicente & Annabel, 2022). In a VUCA condition, the ability to adapt becomes fundamental, while dynamic capabilities enable a company to adapt quickly to the VUCA reality by deploying internal and external competences (Woltés & Fernández-Mesa, 2023). The methods and skills required to respond and survive in a VUCA set-up are varied and contextually specific.

The study by Troise et al., (2022), titled “How can SMEs successfully navigate VUCA environment: the role of agility in the digital transformation era in the Italian SME context established that in a VUCA condition, organisational agility that is central to survival and compete in today’s turbulent environment is the ability to anticipate or respond quickly to external changes. Although research on VUCA indicates a positive relationship between agility and performance, indicating that agility contributes to the success of SMEs, studies on capabilities that enable firms to become and remain agile are nascent (Troise et al., 2022).

Lastly, performance evaluation includes measuring effectiveness in meeting expectations for achieving results and how those results are achieved (i.e., behaviours). Lagging indicators are essential to reveal what has already happened. The formal performance evaluation, as the final step in the performance appraisal summarises what has been already discussed throughout the year to avoid surprises. Having discussed the evolution of performance from Taylorism all the way to the recent development of more agile and responsive performance management, it is important to shift attention to the context of SMEs and the multidimensionality of performance and its antecedents.

3.3.1.5 Performance measurement in SMEs

While the previous sections discussed performance measurements in both large enterprises and small and medium-sized enterprises (SMEs), this section offers a nuanced analysis specifically focused on performance measurement in SMEs. The goal is to develop clear metrics that will help clarify the dimensions of performance optimization within the context of SMEs.

Historically, the concept of organisational performance primarily focused on financial ratios, such as profitability, return on assets (ROA), return on investments (ROI), and return on equity (ROE). However, there has been growing criticism of traditional performance measurement systems that rely solely on financial metrics, highlighting their short-term focus (Kaplan & Norton, 1996). As a result, and like in many large organisations, many researchers have adopted a more balanced approach to performance measurement in SMEs, integrating both financial and non-financial performance indicators (Ho, Ahmad, & Ramayah, 2016; Simon et al., 2015). While financial performance is often viewed as the ultimate goal for any organisation, reflecting how effectively a company utilises its assets to generate revenue (Chen, Tsou, & Huang, 2009), non-financial performance measures are equally important. These measures pertain to the long-term operational objectives of the organisation, serving as future performance indicators that cannot be captured by traditional financial metrics (Blazevic & Lievens, 2004; Prieto & Revilla, 2006). Therefore, embracing this dual approach to performance measurement is essential for SMEs aiming for sustainable growth. By recognising the value of non-financial indicators, such as customer satisfaction, employee engagement, and innovation, organisations can cultivate a more comprehensive understanding of their performance. This holistic perspective not only enhances decision-making but also positions SMEs to adapt and thrive in an increasingly complex business landscape.

When examining SME performance, one significant aspect to consider is the use of performance models/frameworks. These models have largely dominated scholarly efforts aimed at analysing the economic output of small businesses, as noted by various researchers (Humberto & Thien, 2021). They typically focus on predicting outcomes related to failure, survival, or success. Performance models often utilise discrete or continuous time options to estimate the timing of bankruptcy, which is crucial for forecasting potential failures.

In these models, covariates are employed within multivariate frameworks as key indicators to assess the likelihood of a firm's failure. This predictive capability allows for a deeper understanding of the factors influencing SME performance, enabling stakeholders to make informed decisions based on the potential risks and opportunities identified through these models (Humberto & Thien, 2021). In addition to traditional performance models, it is essential to explore other dimensions of performance measurement in SMEs. This includes qualitative assessments that capture customer satisfaction, employee engagement, and innovation capacity, which are vital for long-term sustainability. By integrating both quantitative and qualitative measures, SMEs can develop a more comprehensive understanding of their performance landscape, ultimately leading to more effective strategies for growth and resilience in a competitive market. It should also be noted that these models are not distinctly applied to SMEs. They are generic in nature and apply to both large and small organisations. The section below presents the generic and yet context-specific frameworks and models of organisational performance. Such frameworks provide a holistic understanding of performance by integrating both financial and non-financial metrics, enabling SMEs to assess factors like customer satisfaction and innovation alongside traditional financial indicators. Additionally, they facilitate benchmarking against industry standards, support strategic decision-making, and encourage innovation, ultimately fostering a culture of continuous improvement. By leveraging these tailored models, SMEs can enhance their performance, adapt to changing market conditions, and achieve sustainable growth.

3.3.2 Performance Frameworks

To get a critical and rich understanding of performance measurement, it is important to discuss a variety of frameworks that are used in managing employee and organisational performance. Specially, this section reviewed literature on three performance frameworks,

namely the Balanced Scorecard (BSC), the European Framework for Quality Management (EFQM) and the Performance Prism (PP).

3.3.2.1 The Balanced Scorecard

In the 1980s and early 1990s, many organisations focused on financial performance using lagging indicators, not paying close enough attention to other aspects of their strategy and were then surprised when they did not achieve their financial goals (Kaplan and Norton, 1996). Norton and Kaplan conducted a year-long research project in 1992 with 12 companies at the leading edge of performance measurement in America. It is at the end of this study that Norton and Kaplan (1992) devised a “balanced scorecard” a set of measures that gives top managers a fast but comprehensive view of the business. The balanced scorecard includes financial measures that detail the results of actions already taken. And it complements the financial measures with operational measures on customer satisfaction, internal processes, and the organisation’s innovation and improvement activities operational measures that driver future financial performance”.

Kaplan and Norton (1996) observed that most traditional management systems predominantly focused on the financial performance of an organisation in the 1980s and 1990s. The financial approach presented a very unbalanced view of organisational performance with major limitations. For example, financial data typically reflect an organisation’s past performance. Therefore, the data may not accurately represent what may happen to the organisation in the future. There was a need to balance the attention of managers on a short list of critical indicators of current and future measures of financial and non-financial performance to get a holistic picture (Kaplan & Norton, 1996; Wu, 2009). Financial measures include profit before tax and turnover, while the non-financial measures of performance include aspects such as customer satisfaction, time to deliver products/service, time is taken to receive a service (waiting time) as well as aspects related to whether current or former customers can refer others to the same organisation. Aligning all levels of staff around a single strategy ensures that the strategy can be executed more successfully (Kaplan & Norton, 1996).

Another weakness is that traditional financial measures do not cover the intangible assets such as organisational culture, competence of employees and leadership, which are critical to getting financial results. Kaplan and Norton (1996) suggest that the Balanced Score Card (BSC) allows managers to review organisational performance from four perspectives:

financial, customers, learning and development and internal business processes. From the customer perspective, the organisation must be clear about the specific market segments to compete that might lead to the attainment of financial goals. From a financial perspective, the executives should establish in time before strategy implementation, whether to emphasise revenue, market growth, profitability, or cash flow generation, while the internal business process and learning and growth focus on improving the business process to deliver value and how the organisation will sustain its ability to change and improve respectively. Figure 3.2 presents the four different perspectives of the balanced scorecard (BSC), the underlying logic of each perspective, and the need to clarify objectives, measures, targets and initiatives which drive strategy and achievement of the vision.

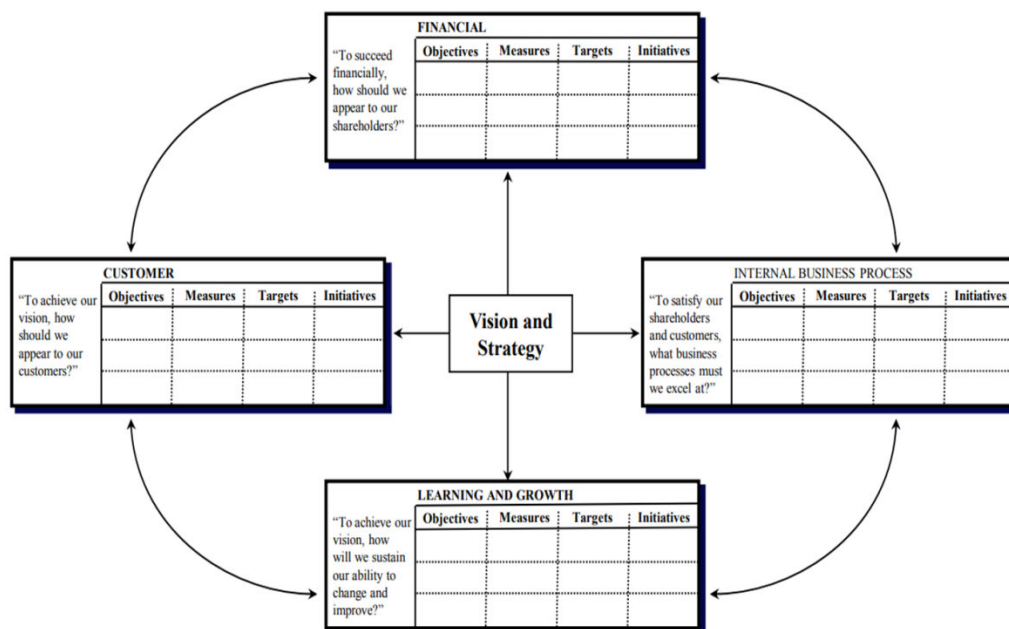


Figure 3. 2: The Balanced Scorecard

Source: Adapted from Kaplan and Norton (1996:9)

According to Kaplan and Norton (1996), the purpose and measures of the BSC are driven by an organisation's vision and strategy. Through the use of the BSC, managers can translate the company's vision and strategy into a set of logical and coherent measures of performance. Whereas the BSC recognises the significance of financial measures of performance, the scorecard focuses on the value drivers for superior long-term financial and competitive performance (Kaplan & Norton, 1996). It has been established that the balance is more than an operational measurement system. Managing organisational, divisional and functional

strategies become effective if scorecards are embedded in the management system. The balanced scorecard (BSC) has enhanced organisational functions/processes by:

- Clarifying and translating vision into strategy
- Communicating and ensuring that strategic objectives linked to measures
- Aligning strategic targets to strategic initiatives
- Building feedback and learning into all strategic initiatives.

According to Kaplan and Norton (1996), senior executives of the organisation should be able to translate the organisation's business unit's strategy into clear strategic objectives. Although the use of the BSC has been appreciated, its framework has suffered some challenges in application. First, the framework is complex in design. Without clarity of mind regarding organisational vision, executives cannot identify the key strategic initiatives to achieve long-term growth and survival. The key weakness of the balanced scorecard stems from the framework's inability to explain the causality between some of the measures and performance of the organisation (Abdelnabi Salem et al., 2012). For Abdelnabi Salem et al. (2012), "the lack of cause and effect relationship is crucial because invalid assumptions in a feed forward control system will cause individual companies to anticipate performance indicators which may be faulty. The second significant weakness of the BSC is its lack of recognition of the importance of time in the cause-and-effect relationship between the various dimensions. This makes it difficult to establish how long an organisation may as an example, build innovation and learning (Abdelnabi Salem et al., 2012). Although the BSC has several limitations. Abdelnabi Salem et al. (2012), aptly argue that "the SBC has a good coverage of the dimensions of performance". To them, the only limitation is that the BSC does not provide mechanisms for maintaining them.

The capacity of senior executives to translate their organisation's business unit strategy into clear strategic objectives, as highlighted by Kaplan and Norton (1996), is vital for effective leadership and overall organisational success. While the Balanced Scorecard (BSC) framework is applauded for its strengths, there are significant challenges it faces, such as its complex design, which can obscure clarity in strategic planning and hinder the identification of key initiatives necessary for long-term growth. Additionally concerns arise about the BSC's inability to establish clear causality between certain performance measures and organisational success, which can lead to misguided interpretations of data. The lack of consideration for the time aspect in cause-and-effect relationships further complicates

evaluations of long-term outcomes in critical areas like innovation and learning. Ultimately, while the BSC effectively covers essential performance dimensions, addressing these limitations is crucial for organisations to fully harness its potential as a strategic management tool.

It is important for scholars of strategic management to be clear that the BSC has evolved into four generations over the years from its initial emphasis on a set of metrics of performance to a comprehensive system for managing the organisation in the strategic and operational dimensions, extension of BSC using strategy map to visualise the strategy and the occurring cause-and-effect relationships between its various components, and ultimately the transformation of the BSC into a model of organisational synergy. With emphasis on the measurement of strategic readiness of intangible assets. It is important for scholars of strategic management to be clear that the BSC has evolved into four progressive generations over the years as presented below in Table 3.2.

Table 3. 2: First, Second, Third and Fourth Generation Balanced Scorecard Iterations

1st Generation	2nd Generation	3rd Generation	4th Generation
Aims to solve the issue of control and of "getting a grip on the organisation	Focuses on what drives performance	Systematic and methodical implementation of the strategy	Recognize that management involves uncertainty and risk; they emphasize agility and responsiveness and the ability to learn when executing the strategy
Little about how this measure selection activity could be done, beyond general assertions about the design philosophy, e.g. "putting vision and strategy at the centre of the measurement system"	Filter (i.e. choose a few specific measures to report), and cluster (i.e. decide how to group measures into "perspectives").	New features intended to give better functionality and more strategic relevance	Top management needs to empower people to make decisions
Mixture of financial and non financial.	The attitudinal approach to measure selection proposed initially by Kaplan and Norton (e.g. "To succeed financially, how should we appear to ourshareholders?") was quickly recognized by Kaplan and Norton as weak, and quickly replaced by the concept of "strategic objectives" (Kaplan and Norton, 1993):	Validation of strategic objective selection and target setting	Organisational Value perspective
The design challenges presented by first-generation balanced scorecard design are severe	Direct mapping between each of the several "strategic objectives" attached to each perspective and one or more performance measures	Integrative process helped identify inconsistencies in the profile of objectives chosen	Incorporates the organisation"s values as a driver of performance and change
Limited number of measures (max 25)	Second key innovation concerned with causality	Multiple balanced scorecards within complex organisations and therefore many more measures.	Address both the discipline and culture of performance

Clustered in 4 groups relating to the 4 perspectives: financial, customers, internal processes, learning and growth.	More or other groups are used. Perspectives redefined.	Perspectives regrouped as Outcomes (financial + customers) and Activities (internal processes + learning and growth).	Encourage judgement and evidence
Measures are chosen to relate to what's important to measure for the organisation: difficult to choose most appropriate from many possibilities.	Measures are chosen to relate to specific strategic objectives, the design aim being to identify about 20-25 strategic objectives each with one or more measures and assigned to one of four perspectives. Clustering regarded as more important than filtering	A destination statement describing the Organisation after successfully implementing the strategy is developed up front. It guides the selection of objectives and measures.	The organisation re-looks at learning, governance, values and performance culture
Some attempt is made to represent causality	The major causal relationships between strategic objectives are visually documented by laying out the results in a strategy map, a framework for describing strategy.	The strategic linkage model, a simplified version of the strategy map is introduced. Strategic objectives are segmented into two perspectives, activities and outcomes. Linkages indicate hypothesized causal relations between strategic objectives.	Opens up opportunities for leadership and management, to deliver results
Measures should be chosen in a way that gains the active endorsement of the senior managers of the organisation.		The "imagining" exercise presupposes the active participation of management.	
Solve the issue of control and "getting a grip on the organisation"			

Source: (Narayanamma et al., 2016,p.80-81)

In the context of small and medium enterprises, BSC is a strategic management performance metric that helps companies identify and improve their internal operations to achieve better external outcomes (Kaplan & Norton, 1996). The BSC provides small and medium enterprises (SMEs) a structured framework for measuring and evaluating their performance. It allows SMEs to track and monitor key performance indicators (KPIs) across different

perspectives, such as financial, customer, internal processes, and learning and growth (Dudic et al., 2020; Malagueño et al., 2018; Reynolds et al., 2019; Willetts & Atkins, 2023).

By using the BSC, SMEs can comprehensively understand their performance and identify areas for improvement. This is supported by results from a study by Dudic et al. (2020) whose aim was to research the applicability of the balanced scorecard in small and medium-sized companies as the basis for a model for assessing innovative activities in the Republics of Slovakia and Serbia. Their study established that by applying the BSC model to SMEs, a positive business effect can be achieved on company performance. These results are supported by Willetts and Atkins's (2023), study which focused on examining performance measurement to evaluate the implementation of big data analytics to SMEs using benchmarking and the BSC approach in SMEs in the UK. A study by Reynolds et al. (2019) on a generic balanced scorecard for small and medium manufacturing enterprises in South Africa revealed that there is a greater emphasis on financial and customer perspectives that are conducive to the sustainability of SMEs. A study by Damayanti et al. (2023) aimed to investigate the impact of implementing the BSC perspective on the performance of SMEs in the food and beverages, fashion, craft and services sectors in central Java and Yogyakarta in Indonesia. The study revealed that the BSC is more effective in the food and beverage sector. However, the study did not establish a significant effect of the BSC on performance in fashion, craft, and service. The study emphasises the need to maintain a positive relationship with customers since this increases revenue and profitability.

3.3.2.2 The European Framework for Quality Management (EFQM)

The European Framework for Quality Management was established in 1988 by 14 companies with the sole purpose of improving organisational performance and developing a culture of improvement and innovation (La Rotta & Pérez Rave, 2017). Initially launched in 1992 by the European Foundation for Quality Management (EFQM), the EFQM Excellence Model was created to help organisations - regardless of size or sector - to develop and implement their strategies to increase the competitiveness of European organisations. The EFQM recognises that to harness the talent of people in the organisation, attention should be paid to improving and developing organisational processes. In 2019 the EFQM Model was reviewed and transformed in two main ways to make it fit for purpose, ready for a new decade of transformation, technological advancement, culture change and disruption (Sümerlı et al., 2013). First, based on design thinking, the review of the EFQM refined the model by

clarifying how stakeholders should be considered and measured, Second the EFQM produced a clear outline of the RADAR tool, which is key to the application of the Model (Sümerlı et al., 2013) The acronym called RADAR reveals the logic that an organisation needs to first determine the Results it is aiming to achieve as part of its Strategy. Second, it should have in place an Approach that will deliver the required result, both now and in the future. Third, deploy this approach appropriately. Fourth, an organisation should Assess and Refine the deployed approach to learn and improve (Wu & Mgt, 2009).

The focus of the EFQM Model has become less about assessment and recognition and more about providing a roadmap of questions and ideas about how an organisation could be successful in improving its performance, driving change, fulfilling the needs of society and nurturing people (La Rotta & Pérez Rave, 2017). The EFQM Model helps us ensure consistent alignment, realisation and outcomes (why, how and what) and permeates the entire organisation. In essence, the EFQM advances that, “customer results, people results, and society results are achieved through leadership driving policy and strategy, partnerships and resources and processes, which lead to excellence in key performance results”. The EFQM Model is a management framework that supports organisations in managing change and improving performance in pursuit of long term, sustainable future (La Rotta & Pérez Rave, 2017; Sümerlı et al., 2013). Regardless of size, organisations are under immense pressure to improve their performance. To meet customer expectations, organisations are turning to the use of acceptable standards (global) to measure their performance. As such some organisations that operate in highly competitive global environments have turned to the use of the European Framework for Quality Management (EFQM), promoted in the United Kingdom as Business Excellence by the British Quality Foundation (BQF).

From the model, two issues emerge, enablers and results (La Rotta & Pérez Rave, 2017). Enablers are concerned with how the organisation approaches excellence. The enablers of excellence include but are not limited to leadership, policy and strategy, people, partnerships, and resources and processes. On the other hand, results focus on what the organisation has achieved by deploying and using enablers. Four key result areas are of significant interest: customer results, and people results (perception and satisfaction of employees), society (community and environmental concerns) results, and performance results (results relative to targets) (Sümerlı et al., 2013). According to Wu and Mgt (2009b), excellent organisations ensure that their stakeholders are satisfied with what they achieve, how they achieve it as well

as what they are likely to achieve. Figure 3.3 below depicts the various components of the enablers, results, innovation and learning which constitute the **EFGM Model**.

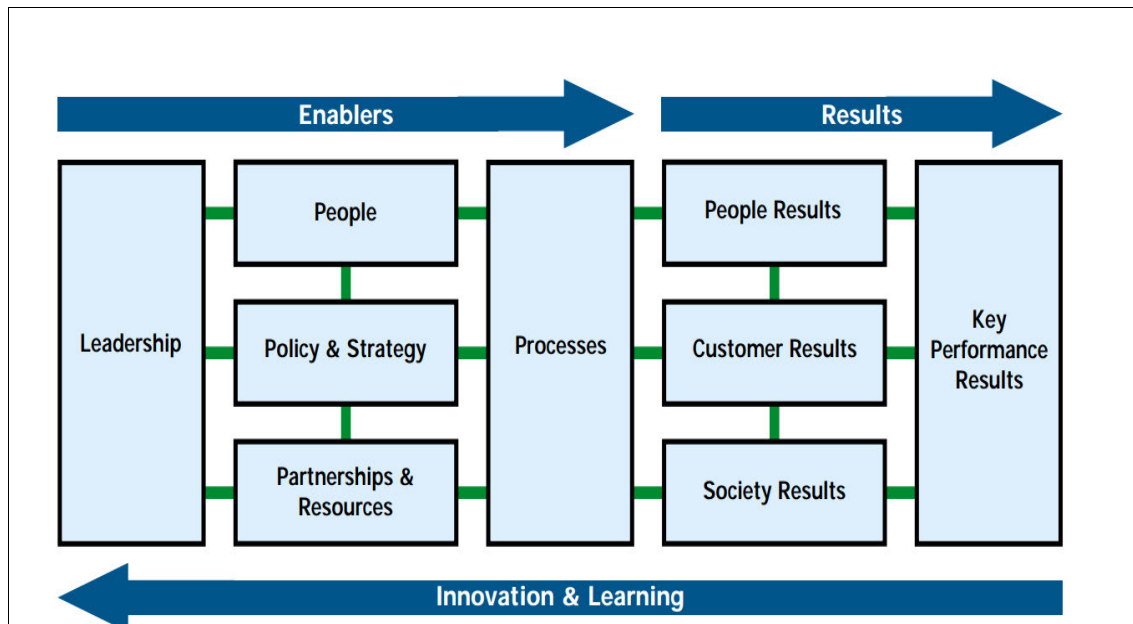


Figure 3. 3 EFGM Model

Source: EFQM (as cited in Sümerlı et al., 2013, p7-8).

The EFQM Model focuses on various aspects of result areas, giving primacy to the customer, people, society and critical results. It is paramount to underscore their need to take a long-term, stakeholder-centric view, which necessitates innovation and learning. In the EFQM Model, understanding the cause-and-effect linkages between why an organisation does something, how it does it and what it achieves because of its actions is very important. Table 3.3 depicts the enabler criteria, result criteria with their respective descriptions and what is expected in each aspect when it comes to EFQM.

Table 3. 3 Description of the EFQM model enabler criteria, result criteria and expectations

Enabler criteria	Description	What is expected
Leadership	Leaders need to demonstrate their commitment to excellence and continuous improvement and support improvement and involvement by providing adequate resources and support	Leadership is positioned as an activity, not a role. Leadership behaviours are evident across all levels and parts of the organisation. Leadership behaviour inspires others, reinforces, and when necessary, adapts the values and norms, helping to steer Organisational Culture.
Policy and strategy	Policy and strategy include the organisation's mission, vision, values and strategy, how these reflect a total quality orientation and how these are developed, communicated, implemented, regularly updated and improved	An outstanding organisation is defined by a Purpose that inspires, a Vision that is aspirational and a Strategy that delivers.
People	Human resources concern the management of the people in the organisation, how their full potential is released, their resources improved, capabilities sustained and developed; how performance is continuously assessed; how people are involved, empowered and recognised	
Resources	Resources refer to how the resources of an organisation are effectively deployed in support of policy and strategy	
Process control	Process control addresses how processes are identified, reviewed, and revised to sustain continuous improvement of the organisation's service	
Result criteria		
People	Comprehensively measure and achieve excellent results with respect to their professionals	
Customers	Comprehensively measure and achieve excellent results with respect to their customers.	An outstanding organisation recognises that Creating Sustainable Value is vital for its long-term success and financial strength.
Society	Comprehensively measure and achieve excellent results with respect to society	Establishes, develops and maintains a relationship with the Key Stakeholders in its Society, leading to mutual benefit for both the organisation and its Society

Results	Comprehensively measure and achieve excellent results	an outstanding organisation provides results data for: Stakeholder Perceptions, Creating Sustainable Value, Driving Performance & Transformation

Source: Adapted from (La Rotta & Pérez Rave, 2017; Sümerli et al., 2013)

According to the Institute for Total Quality Management (2019), the EFQM supports organisations in managing change and improvements. Although developed in the 1990s, the model has undergone developments to ensure that it is aligned with the times and can be used as a tool for long-term sustainable operations. The latest model has shifted from being a simple assessment tool to one that offers a framework and methodology to help with the changes, transformation, and disruption that individuals and organisations face every day. The 2020 EFQM Model is based on asking three questions; why, which seeks to clarify direction while how emphasises execution and what? The third question is what focuses on results. In this way, direction, execution and results are the three critical aspects of EFQM. To be specific, the following are the three key questions:

- Why does this organisation exist? What Purpose does it fulfil? Why this Strategy? (Direction)
- How does it intend to deliver on its Purpose and its Strategy? (Execution)
- What has it achieved to date? What does it intend to achieve tomorrow? (Results)

These questions drive the three key sections of the new framework, namely Direction, Execution and Results. Despite its usefulness, the model has several variables which are rarely used. According to Dahlgaard et al. (2003), the sophisticated nature of the assessment criteria (2013), lots of activities and processes that involve paper, cumbersome procedures and the lack of focus make this model less usable. The European Foundation for Quality Management (EFQM) model is widely used for assessing and improving organisational performance. It provides a structured approach to quality management and encourages continuous improvement. While the EFQM model applies to organisations of all sizes and sectors, its implementation in small and medium-sized enterprises (SMEs) without clear procedures for quality management may have some considerations.

This view is supported by Dahlgaard et al. (2003), who states that, “weaknesses include lack of infrastructure, excessive bureaucracy, time consuming and a lack of focus.” Organisations

face three main problems when using this model: first, there is a general lack of tools to follow when using the model to improve performance. A case in point is the lack of clarity on conducting self-assessment (Striteska and Spickova, 2012) and the failure to understand how to assign weight to what is to be measured. Tools are context-specific, and, as such, interpreting and developing context-specific tools may create variations in approach and results. The second weakness in using the EFQM as a quality model of performance is the lack of structure in a manner that employees play a significant role in the organisation's performance. Adopting an expert view while implementing such a model implies that external consultants take a lead role in ensuring that the organisation achieves the desired level of performance. This leaves employees who are a key driver of organisational success outside the implementation framework (Dahlgard et al., 2003). The last weakness is that existing models lack guidance for integration at the operational/process level. It is claimed in the EFQM that the model is practical and non-prescriptive. It enables organisations to "integrate existing and planned initiatives, thus removing duplication and identifying gaps." It might well be that this challenge could be caused by a lack of consistency between intentions and the structure of the EFQM model. According to Dahlgard et al. (2003, p.6), *"the inconsistency is observed between leadership intention and practices(processes) in particular. The cultural aspect in terms of values, vision and mission building was explicitly focused on under leadership, while this focus was more or less ignored in strategy, partnership and resources as process criteria. These inconsistencies seem to be a major defect of the model and may have been the reason for many companies' problems with implementing the model as an overall framework for strategic planning and improvement of the business."* The challenges stated above, therefore, call for flexibility in quality excellence models. Flexibility allows organisations to adapt to new needs and challenges. Flexibility should allow organisations to carefully integrate operating framework variables that affect processes and operations. Despite its known weaknesses, it is a critical framework that helps organisations to implement their strategies. The framework enables executives to develop a holistic view/map of everything the organisation does (Derek, 2006). Perhaps the revised version of the 2010 EFQM offers a better understanding of the approach for using and applying the model. Fonseca et al. (2021) argue that it is a comprehensive and updated business model that encompasses sustainability and emphasises the concept of transformation and organisational performance coupled with a solid theoretical and practical base. According to Wartz (as cited in Fonseca et al., 2021) with 23 criterion parts and one result criterion, with a host of 112 guidance points, the RDAR assessment tool ably provides the logical

framework that other strategic frameworks fail to provide. Fonseca et al. (2021) warns that although a useful tool for measuring performance, the 2020 European Foundation Quality Management Model (EFQM) is generic and not prescriptive, thus leaving its guidance generic and sometimes hard to implement.

The application of the EFQM was reported by (Gallo et al., 2023), whose study analysed and compared the existence of balanced scorecard and EFQM models in small and medium-sized enterprises in the Czech Republic, concluding that the application of the models has clear justifications. The authors argue that through their experience as consultants and results from the study, a well-implemented EFQM can enable an enterprise to identify their strengths and weaknesses to improve its performance. Correia et al. (2020) study on small and medium enterprises (SMEs) pursuing organisational excellence: a toolkit for improvement established that (through literature and views from practitioners) that although not fully implemented, SMEs are implementing excellence models to improve their performance. Střeleček et al. (2024) argue that unlike imperfections in different models, the excellence model provides positive results for smaller organisations.

3.3.2.3 The Performance Prism

Andy Neely and Chris Adams developed the Performance Prism in 1994 as a second-generation framework for measuring performance. It is an important measurement framework that enables managers/organisations to identify the right performance measures and improves models such as the Balanced Scorecard and the European Framework Quality Model in measuring the contribution of organisations to stakeholders (Neely et al., 2001). Its Cranfield University developers refer to the Performance Prism (PP) as a ‘second generation’ scorecard and management framework. There are three major reasons why a new framework was needed to replace first-generation models, such as the balanced scorecard and the performance pyramid (Neely et al., 2001; Neely & Adams, 2012; Neely et al., 2002).

The first-generation performance framework focuses solely on the needs of one or two stakeholder groups, which ignores other stakeholders such as employees and suppliers (Neely et al., 2002). The performance prism (PP) framework focuses on the reciprocal relationship between the organisation and its stakeholders, as opposed to just stakeholder needs. In addition, most performance measurement frameworks ignore the changes that should be made to the organisation’s strategies, processes and capabilities to meet the needs of stakeholders. The performance frameworks are erroneously informed by the assumption that

if one measures the right things, the rest will fall into place automatically. Lastly, there is also a ‘quid pro quo’ relationship between the organisation and its stakeholders. However, previous performance management is not clear whether such stakeholders are delivering what the organisation wants from them (Severgnini et al., 2019a). There is a need to focus on stakeholders’ performance measurement to understand how stakeholders deliver what the organisation wants from them.

The distinguishing characteristic of the PP is that it uses as its starting point all organisation’s stakeholders, including investors, customers and intermediaries, employees, suppliers, regulators and communities, rather than strategy (Severgnini et al., 2019a). As organisations work in a complex environment with multiple stakeholders, understanding and managing the expectations of these stakeholders to achieve long-term success is key. PP, with its comprehensive stakeholder orientation, encourages executives to consider the wants and needs of all the organisation's stakeholders, rather than a subset, as well as the associated strategies, processes and capabilities (Najmi et al., 2012.; A. Neely et al., 2001; A. Neely & Adams, 2012; Neely et al., 2002; Severgnini et al., 2019a). According to advocates of performance prism, strategy should follow from stakeholder analysis.

There are five ‘facets’ to the performance prism (PP) which lead to key questions for strategy formulation and measurement design:

1. Stakeholder Satisfaction: Who are our stakeholders and what do they want and need?
2. Strategies: What strategies do we need to satisfy these wants and needs?
3. Processes: What processes do we need to execute these strategies?
4. Capabilities: What capabilities do we need to operate our processes more effectively and efficiently?
5. Stakeholder Contribution: What do we want and need from our stakeholders if we are to develop and maintain these capabilities?

The Performance Prism (PP) is a management framework that reflects the complexities of organisations and the multiplicity and reciprocity of stakeholder relationships. The comprehensive nature and flexibility of the Performance Prism contribute to its applicability in different organisations. According to Severgnini et al. (2019);

“the idea behind the performance prism is that, although there are many systems with financial and non-financial measures such as the Balanced Scorecard itself, there is a need for a second generation performance models to assist organisations in updating /developing scorecards that are appropriate to the demands of the competitive environment, putting stakeholders first.”

As a starting point, managers should be able to think about what the needs and wants of all stakeholders are, as well creating an endeavour to satisfy such needs and wants. As a precondition for value creation, there is a need to create internal consistency in terms of ensuring that strategies, processes and internal capabilities are properly configured to deliver value to external stakeholders. The third requirement in using the performance prism is to ensure that there is external consonance so that stakeholders can contribute to the organisation (Severgnini et al., 2019a). Unlike the balanced scorecard which mentions customers and shareholders, the performance prism introduces employees, suppliers, partners and middlemen as the other important group of stakeholders. PP allows organisations to develop strategies, business processes and measures geared to the specific needs of all important stakeholder groups. By taking a broad stakeholder perspective that includes regulators and business communities, the Performance Prism enables an organisation to more directly address the risks and opportunities in its business environment.

According to Teece et al. (1997), “capabilities are the combination of people, practices and infrastructure that enable an organisation to create value.” It has been argued that without the right capabilities, an organisation may fail to execute its strategy and satisfy stakeholders. The fourth facet raises the questions: what capabilities does the organisation require to operate per process? (Severgnini et al., 2019). Answering this question calls for an immediate determination of measures to be used to assess whether it has the required capabilities to sustain its operations and create an advantage over its rivals. The last facet focuses on what stakeholders can contribute to the organisation’s performance. In Neely et al. (2001), the performance prism recognises that organisations deliver value to stakeholders, and in turn enter a relationship with their stakeholders, thus receiving something from the relationship. For example, employees want a safe and respectful environment to work, a good salary and, in turn contribute their effort, time, and initiatives to the organisation. Reciprocal value creation processes are evident among all stakeholder groups. The performance prism is a less prescriptive measurement frame. It is a useful tool that the organisation can use to influence

team members' thinking on issues that are pertinent to organisational management and success.

Melnyk et al. (2014);Taticchi et al. (2010) and Severgnini et al. 2019) state that performance measurement is a critical condition for organisational efficiency and effectiveness. Severgnini et al. (2019) add that the performance prism (PP) is a valuable tool for SMEs to allocate scarce resources, thus, enabling companies to obtain the best possible performance. From Chillida's study, SMEs can improve their performance if they can create stakeholder satisfaction and engagement with key players and build mutual relationships for the benefit of the organisation. According to Ates et al. (2013), the Performance Prism comes alive to the realities of SMEs. The five facets of the model give rise to key tenets of effective organisational management which apply to SMEs: strategy alignment, development of strategy, understanding and focusing on stakeholders, a reciprocal relationship between the organisation and stakeholders, dynamic capability, process orientation, depth and breadth, causal relationships and simplicity and clarity. Figure 3.4 shows the performance prism with its five facets and details which affect performance.

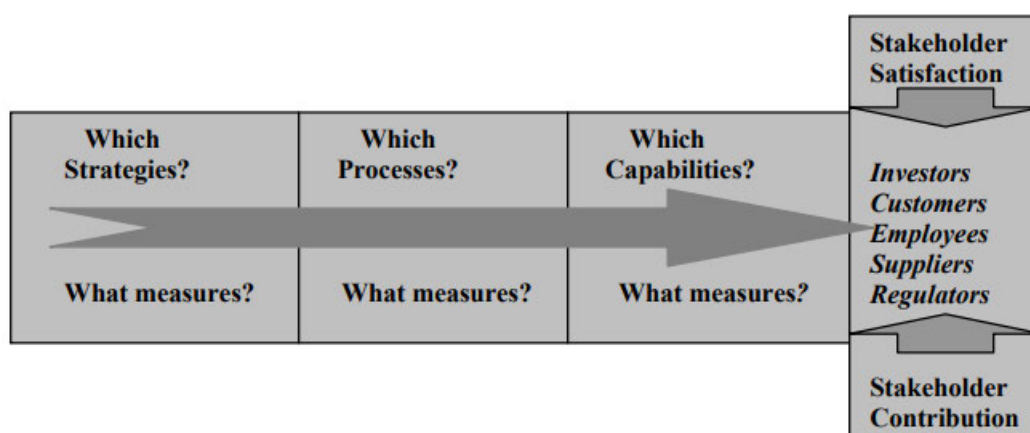


Figure 3. 4: Performance Prism

Source: Adopted from Neely et al. (2001, p.5)

Neely et al. (2005) advance the view that every performance system presents several individual performance measures which contribute to team and organisational level performance. Figure 3.6 presents a framework for measuring performance which takes cognisance of individual-level performance measures as part of the performance management system in a VUCA environment. Firstly, it is important to acknowledge that measuring performance at an individual level as part of organisational-level performance raises four key

questions: What performance measures are/should be used? What are they used for? What costs does an organisation incur for using such measures? And lastly, what benefits does an organisation derive for using them? Neely et al. (2005) claim that the manufacturing task and its performance dimensions can be defined in terms of quality, speed of delivery, delivery reliability, price (cost), and flexibility. Although these are defined as key measures/dimensions of manufacturing tasks, it is not clear what these generic terms mean. As an example, Wheelwright (as cited in Neely et al., 2005) uses flexibility in the context of varying production volumes while Neely et al. (2005) use the firm's ability to introduce new products rapidly as a measure of flexibility.

The second component of the performance measurement framework is the performance measurement system as an entity. This component of the performance measurement system identifies the various dimensions of a performance measurement system. For example, Leong et al. (as cited in Neely et al., 2005), state that manufacturing tasks and their dimensions can be conceptualised as quality, time, price (cost) as well as flexibility. For Fitzgerald (1991), every organisation may adopt two sets of performance measurement systems, those that relate to results (competitiveness, financial performance) and those measures that focus on the drivers of results (flexibility, quality, resource utilisation as well as innovation).

The third component of the performance measurement framework is the environment. The environment is premised on the assumption that once a performance management system has been developed; it has to be implemented in the organisation. The implementation of the system naturally leads to an interaction with the external environment (internal and environment) (Neely et al., 2005). Managing the interface between the organisation and the external environment must form an integral part of an organisation's performance measurement system because in managing their relationship with the external environment, organisations set goals and get feedback from the environment regarding how well they are doing in their pursuit of organisational performance. This, therefore, requires that the strategy of the organisation should be aligned with the nature of the environment as well as the specific objectives that the organisation intends to achieve (Neely et al., 2005). Xie et al. (as cited in Vicenzi et al., 2020) argue that although marketing and operations (manufacturing) are key to innovation, different objectives at each functional level breed conflict in the design and development of new products.

It is assumed that this conflict emerges due to the evaluation and reward systems used by the organisation. As an example, the marketing function is evaluated based on the company's profitable growth resulting from growth in sales, market share, and new markets entered. Although the marketing function is key to the growth of an organisation, those charged with the marketing function are more oriented towards sales growth rather than generating profit from the sales function. Regarding manufacturing, the focus is on cost management rather than profit. An examination of the system of evaluation used to measure performance shows that the system of evaluation and reward means that marketers are encouraged to generate change. This calls for generating new products, gaining access to new markets as well as developing new programs. On the part of the manufacturing task, changes may be accepted if such changes lead to cost reduction (Neely et al., 2005). Baird (2017) is of the view that that, performance measurement system must essentially do four things: a) help assess whether an organisation is receiving the expected contribution of employees and suppliers, b) assess whether the company is giving each stakeholder so that it can contribute to the growth of the organisation, c) enable the company to build processes that contribute to achieving the strategic goals, and d) help the organisation to assess and monitor strategic planning following the agreements negotiated with key stakeholders". It has been argued that, perhaps, non-financial indicators reflect the investment and performance of the intangible resources of the organisation, which most likely helped to predict the future of the organisation (Chong, 2008; Gomes & Romão, 2012).

Although the performance prism is a suitable tool for measuring organisational performance by juxtapositioning the five facets, it has been established that the prism has its own limitations. Some of the noticeable limitations of the performance prism are: lack of a common definition of which a stakeholder is, conflicts with the needs of stakeholders and its failure to pursue the route of a performance maximisation model because of its multi-stakeholder-orientation. Also, the model does not provide guidelines needed to develop organisational performance models and fails to explain the link between drivers and results (Striteska & Spickova, 2012). Elmgasbi (2019), claims that the performance prism does not apply in the developed analysis of organisational effectiveness. Although the model is applicable to small and medium enterprises (SMEs), it has been established that the model was initially designed for large organisations. Thus, an approach that was designed for use in large organisations cannot be forced to work for small organisations (importantly, the small firm is not a downscaled version of a large organisation) (Ates et al., 2013). Researchers such

as Striteska and Spickova (2012) state that, “since a dominant theory has not been developed, most companies simply continue with what they have used in the past ...” This void in research requires more research on the subject to provide an integrated model for performance measurement, optimisation, and management (Wu, 2009).

Organisation performance has been identified as a subjective interpretation of reality that reflects many issues that centre on measurement as well as the approach to use in measuring it (Lebas, 1995, Ali et al., 2020). In every organisation, there are quantified repeatable activities to utilise processes for the organisation to achieve its objectives. Organisational performance therefore denotes the extent to which organisational goals have been achieved (Demeke & Tao, 2020). The performance of every organisation has significant bearing on current and future actions of an organisation. These actions may involve the refinement of current strategic actions as well as proposing a future course of action to ensure better results. Researchers such as Demeke and Tao (2020) have aptly argued that “there no agreement in literature on how to measure organisational performance, and the problem is multilevel”.

Severgnini et al. (2019b) conducted a study to establish the “applicability of performance prism in SMEs: a multi-case study” involving five micro and small businesses in sports segments, drug stores, clothing, department stores and apparel faction in Parana, Brazil. The analysis revealed that there are few studies that discuss the performance prism framework. Further, there are fewer studies that have tested the validity and application of the performance prism in SMEs. Importantly, study results showed that the firm dimensions of performance prism: stakeholders, the contribution of stakeholders, strategies, processes and capabilities apply to micro and small businesses. A key contribution of Elizandra et al. (2019) study is the inclusion of a six dimension performance dynamic. This dynamic is weighted as sales amount not profit contribution of stakeholders.

Garengo et al. (as cited in Severgnini et al. 2019b) further argue that the implementation of the performance prism enables SMEs to better manage uncertainties, innovate as well as increase the sustainability of processes. Zuzana et al. (2021) argue although research on performance implementation of performance systems in SMEs is underestimated, its implementation has become an integral part of organisational improvement. This has been compounded by a lack of theoretical and empirical support. In their study on performance measurement system: implementation process in 336 SMEs in Slovakia, Oláh et al. (2019), the study established that results for implementing performance measurement systems are

mixed, with 64% indicating satisfaction with implementation while 36% were dissatisfied. The study further revealed that implementing challenges of performance measurement were partly due to size, with existing performance measurement systems having been designed for large organisations. The study also established that in SMEs, goal-driven results allow feedback, hence improving continuous improvement. A key insight from the study is the need for SMEs to focus on process management to improve performance.

Having reviewed various performance frameworks, it was possible to identify factors such as capabilities, and resources that are linked to resilience and performance optimisation in SMEs. This review has also helped to identify frameworks for enhancing performance measurement. The next section presents performance measurement in organisations specifically SMEs.

3.4 THE CONCEPT OF ORGANISATIONAL PERFORMANCE AND ITS ANTECEDENTS IN SMES

The performance of SMEs is of primary importance for the economy and society in general. SME performance is multidimensional and there is no consensus on how SME business success or performance should be measured or on the critical factors contributing to performance. The definitions of success are either simplistic or fuzzy at best, and the number of factors contributing to the survival and performance of an SME is potentially huge. According to Wiklund and Shepherd (2005), performance is defined from an output perspective. There are different categorisations of SME business performance, which are evident in the literature. For example, a systematic literature review for antecedents and moderators of performance management of SMEs by Kafetzopoulos (2022) revealed seven categories of business performance, which are (1) firm performance, (2) international and financial performance, (3) innovation and (4) export performance, (5) customer satisfaction, (6) entrepreneurial performance and (7) social capital. Firm performance is the ultimate measure of organisational outcome, and it is affected by many market contingencies and organisational conditions. In understanding SME performance, it is key to highlight its dimensional nature and consider all the organisational stakeholders and the balance and potential trade-off between short-term and long-term objectives.

Firm performance may be operationalised in research using financial and non-financial aspects of performance. Kafetzopoulos (2020) noted that research on SME performance is based on firm performance, financial performance and business growth measures. In addition,

there are financial performance measures in SMEs which often focus on company sales growth, profitability, net profit margin, financial results and cash flow. Innovation performance is directly related to innovation management systems and types of innovation (e.g. process innovation, product innovation, marketing and organisational innovation).

Furthermore, international performance is about the degree to which a firm's objectives are achieved in international markets because of the configuration of international SMEs' culture, strategy and structure. This is relevant as some SMEs compete in the international market. SMEs export performance refers to export performance, survival and expansion, and the consequent economic growth.

Neely et al. (2000) assert that there are two basic types of performance measures in any organisation, those that are related to results (financial performance) and those that focus on the determinants of the results (quality, flexibility, resource utilisation and innovation). In this regard, there are ways and tools to measure business performance using sub-dimensions such as financial performance, non-financial performance, innovation performance and quality performance in the context of small businesses. Santos and Brito (as cited in Ramirez and Lim, 2021) define firm performance as "a set of organisational effectiveness that covers operational and financial outcomes". On his part, Omar (2005) suggests three primary measures of performance: profitability, cost minimisation, and innovation.

Ion and Criveanu (2016) aptly argues that performance consists of achieving goals, thus requiring comparing outcomes and objectives. Lebas (1995) argues that performance is a future-oriented concept designed to reflect the particularities of each entity. In his final analysis of performance measurement and management, Labs (1995) agrees with the view that performance is a goal-driven phenomenon, dependent on capability and future. Therefore, this study adopts the definition that performance is a goal-oriented concept that seeks to compare outcomes with planned objectives/goals (Aisjah et al., 2023; Ion & Criveanu, 2016; Lebas, 1995). The adoption of this definition is premised on the strength that, the Oxford Dictionary definition defines success as the accomplishment of a purpose. Since performance is the achievement of an outcome, then this means that the achievement of an outcome leads to goal attainment (performance), hence success (Ioniță, 2013).

It is critical to highlight that Wiklund and Shepherd (2005) and Richard et al. (2009) define performance from the organisational level where financial, product and market share return are key. It should be understood from the onset that there is a diversity of approaches that use single, multiple or aggregated performance measures. The critical issue is that there is a lack of clarity on how to operationalise the concept of performance, as well as the absence of

methodological consistency in formulating key performance constructs for SMEs (Richard et al., 2009). Chong(2008) points out that the use of the two measures of performance (financial and non-financial) is problematic. As a result, new performance measures have adopted a hybrid approach, where financial and non-financial measures are used. Combining the two measures of performance, financial and non-financial measures of performance, enables managers to gain a broader perspective on measuring and comparing their performance (efficiency and effectiveness). Echoing what Lord Kelvin (as cited in Lebas, 1995), *measuring performance is a complex, frustrating, difficult, challenging, important, abused and misused, yet, if you cannot measure it, it does not exist.*

Norton and Kaplan (as cited in Gomes & Romão (2014) and Prahalad and Hamel (as cited in Gomes and Romão, 2014) argue that the intangible aspects of organisational performance can be a source of sustainable competitive advantage and are the resources that can be easily imitated by competitors. On the other hand, Alves and Lourenço, (2022); Gomes and Romão (2014) identified the key mistakes organisations commit when they attempt to measure the non-financial performance. These include: lack of alignment between measurements with strategy, failure to validate the measure, i.e. companies are not able to validate the model which leads to measure, resulting in the measurement of many things that are not necessary to the objective of measurement, inability to set up the right goals and measures to create a common thread with the purpose of the measure and strategy of the organisation, and wrong measurements which may not be statistically validated. Fischer and Lundtofte (2020), claim that most companies use performance measurement systems that are an extension of financial reports. Another noticeable weakness of traditional accounting measures is the likelihood of misleading signals for continuous improvement and innovation in the organisation. According to Maltz et al. (as cited in Gomes and Romão, 2014), financial measures are non-aligned with the capabilities and skills of today's organisations in ensuring that they prepare for the future.

3.4.1 Antecedents of Performance

Kafetzopoulos (2020) and Curado et al.(2022) identify two key gaps when it comes to understanding antecedents of SME performance for research. First, he asserts that literature lacks a rigorous synthesis of the antecedents of the SMEs' performance. This is problematic as without understanding the antecedents, the SMEs' performance cannot be systematically managed and methodically researched. Second, there is a lack of systematic literature reviews providing an in-depth understanding of which antecedents are influencing the SMEs

capability to increase their organisational durability. Different antecedents that have a positive effect on performance, reflect organisational characteristics as the key enabling factors in performance. Organisational characteristics are the key enabling factors in SMEs' performance because the organisation's existing capacities can either facilitate or limit their performance output (Khosravi et al., 2019). Kafetzopoulos (2020) explicitly state that organisational-related factors can be arranged into five categories, namely: (1) *innovation antecedents*, (2) *human resources antecedents*, (3) *organisational strategy antecedents*, (4) *organisational context antecedents* and (5) *knowledge – learning antecedents*. Organisational strategy antecedents are justified by resource-based theory while knowledge–learning antecedents are informed by the knowledge management theory. Furthermore, human resources antecedents are informed by human capital theory and innovation antecedents by the innovation diffusion theory. Lastly, organisational context antecedents can be supported by contextual theory. Given the above different types of antecedents, it is important to highlight that SMEs' performance is determined by the firm's inherent characteristics and strategy, and the external environment in which it operates. To realise their strategies, organisations must develop and deploy policies, plans, goals and processes based on the capabilities of their people and their partnerships and resources.

Organisational strategies antecedents include management programs, systems, forms, relationships, practices, etc., that show the path to achieve the objectives of SMEs (Kafetzopoulos, 2020). Adopting strategy in firms such as entrepreneurial orientation, strategic orientation, cooperation or risk orientation leads to enhanced SMEs' performance because firms with this strategic posture create opportunities that enable the introduction of new products and brands ahead of competitors. Below is a brief explanation of each antecedent and how it influences SME performance.

Organisational context antecedents refer to organisational factors and contingencies that can potentially influence a process and the way it is executed altering the desired outcome. The organisational context encourages the individuals to innovate more, while it supports them to manage their time to maintain the equilibrium among the incompatible demands for exploitation and exploration.

Knowledge – learning antecedents suggest that knowledge and learning are drivers of SMEs' performance. The fundamental concept is that learning may help firms in reducing the complexity and risks in a SME.

Human resources antecedents refer to collective knowledge, skills, abilities and traits at the unit level. Human resources in SMEs often have a greater and more direct influence on organisation-level outcomes than in large firms.

Innovation antecedents are critical to a firm obtaining a dominant position and achieving higher profits. Innovations have a considerable impact on corporate performance by producing an improved market position that conveys competitive advantage and superior performance. SMEs which have more innovative elements place more emphasis on management techniques and reach sustainable levels of higher performance. Innovativeness is a strategic means by which SMEs deal with changes in the internal and external environments to respond to the turbulent environment. Figure 3.5 provides more details on the various categories of the antecedents which support the achievement of SMEs' performance and the internal and external moderators which together form part of a model of SME performance according to Kafetzopoulos (2020).

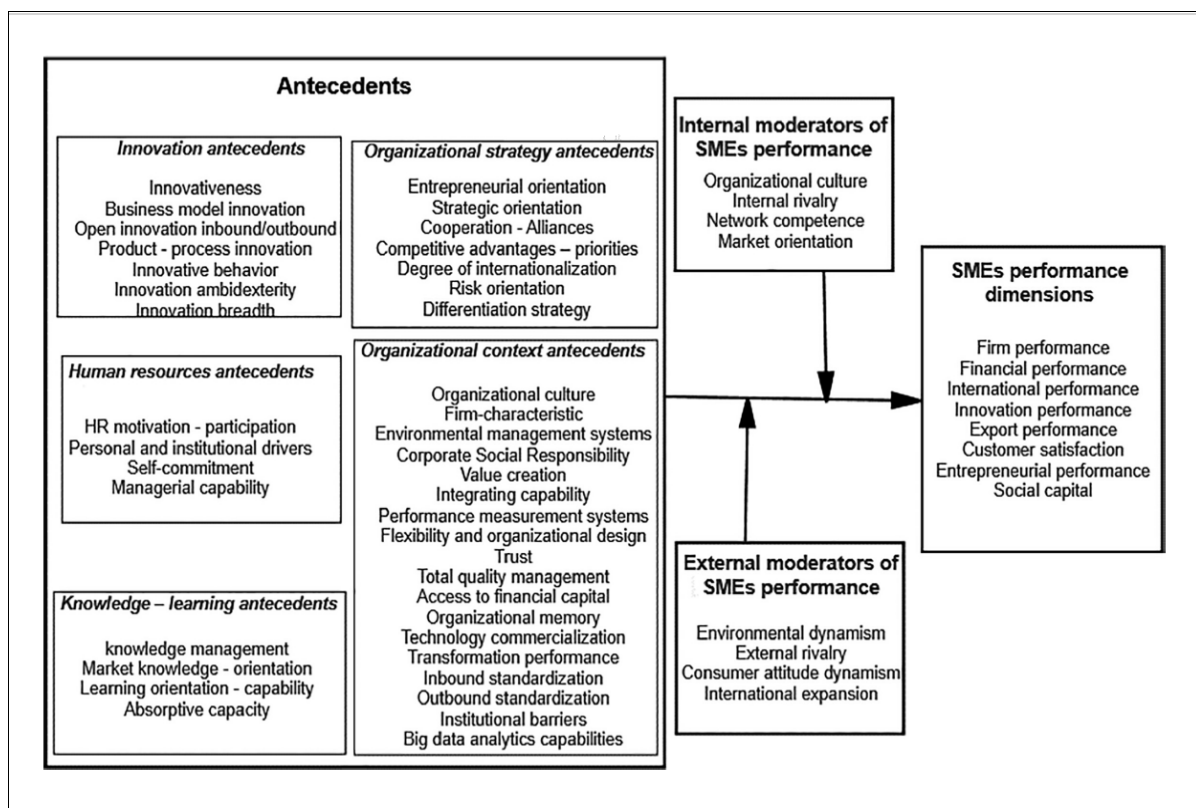


Figure 3. 5 Conceptual model of SME performance

Source: Kafetzopoulos (2020:305).

One of the key insights in Figure 3.5 is not only the details which constitute each category to enhance conceptual clarity but also the linkage of the antecedents to multi-dimensional SME performance. It is equally vital that technology is recognised as an antecedent and that contemporary SMEs use it as an enabler to compete and boost performance. In the digital era, ventures and entrepreneurial firms operate with the help of digital technologies as they adapt to changing technological, business, cultural, and political environments. For instance, most “born-digital” or “go-digital” firms operate solely on the digitalised value chain and business model empowered by digital technology infrastructure. Relationships, intra-and inter-unit communications, products and services, and interaction with customers and ecosystems occur virtually in go-digital or born-digital firms.

Wiklund and Shepherd (2005) reviewed 34 empirical studies from the entrepreneurial field that had been conducted to measure some aspects of performance. The focus was to describe the results of an exploratory study that tested variations across two methods of data collection (telephone and mail) and three sources of information used in measuring the performance of new ventures (annual sales, number of employees, return on sales, growth in sales, and growth in employees) in Massachusetts. Results of their analysis indicate that growth as a significant proxy of performance may be more accurate than key accounting measures. Drifting away from the traditional approach of measuring performance using unidimensional measures, this study adopts a multidimensional approach to small and medium enterprises (SME) performance. Integrating different dimensions of SME performance enhances the plausibility of understanding performance.

Integrating financial measures of SME performance with non-financial measures allows for an analysis that is both quantitative and qualitative. For the financial performance component, most studies focus on self-reported measures of gross margin, profitability, and cash flow relative to competitors. On the other hand, for the growth component of performance, studies tend to use four proxies: sales and current number of full-time equivalents and sales and employee growth relative to competitors (Wiklund and Shepherd, 2005).

3.5 TYPOLOGY OF SME PERFORMANCE MODELS/THEORIES

Performance models are analytical tools used to predict various performance metrics. As such, this study reviewed three (3) performance models to understand the metrics used to measure performance. According to Kats et al. (as cited Abouzeedan & Busler, 2004) SMEs are a predominant type of business and as such, provide a fertile ground for research. This

assertion is supported by Setiawan and Iskandar (2022), who argued in their study that was conducted in the Sukabumi Regency area of Indonesia that micro, small and medium enterprises (MSMEs) significantly contribute to exports and trade, thus becoming an essential contributor to the growth of a nation. SMEs offer attractive ways to study management issues because of their high mortality rate. Their performance forms the bedrock for a nation's development. SMEs offer the seeds for future larger companies (Abouzeedan & Busler, 2004). Castrogiovanni (as cited in Abouzeedan & Busler, 2004) states that few studies examined the factors influencing the performance of SMEs. Even after much research in the field of small and medium enterprises and entrepreneurship, results still show that their performance and survival has not improved either. This finding is supported by the results of a study by Rekarti and Meiwanto Doktoralina, 2017) on “improving business performance: a proposed model for SMEs” in the culinary subsector in Indonesia which established that, despite multiple initiatives to improve SME performance, the sector has not been optimised due to lack of performance.

In an old but still helpful article entitled, *Typology Analysis of Performance Models of Small and Medium Enterprise*, Abouzeedan and Busler (2004) suggest that there are two categories for classifying theoretical models for SMEs: Firm dynamic theories of performance and prediction theories/models. Dynamic theories focus on the survival of the firm, especially about how the firm responds to the dynamism of the external environment. Aisjah et al. (2023), agrees with this view and states that the rationale behind performance disparities among organisations is “due to their competitive advantage attributed to resources that are unique, valuable, imitable or reproducible and irreplaceable”. Prediction models of performance are statistical approaches that are used for generating future outcomes of firms (performance) (Steyerberg et al., 2010).

Firm Dynamic theories include: Stochastic Theories, Learning Model Theories and Hazard Modelling theories. Performance prediction models include: Z-Scores, ZETA-Scores, Networks (NN) and SIV models. This study focuses on Dynamic capabilities only because resilience itself is a dynamic concept. Dynamic capabilities are essential for an organisation to navigate through changing complex circumstances. Dynamic capabilities enable an organisation to connect internal and external environment (Guo & Cao, 2014).

3.5.1 Firm Dynamic capabilities

Section 2.4.2 in the previous chapter (chapter two) dwelt on the Dynamic Capability Theory, it is crucial to emphasise that firm dynamics is a multifaceted topic in economics, its history stretching back to at least the early 20th century. The word dynamic, according to the New Oxford English Dictionary, describes a system or process characterised by constant change, activity, or progress. The opposite of dynamic is static. The theory of the dynamic aspects of firms can be traced back to Alfred Marshall (1920). Marshall discusses the entry of firms, their growth, and finally, their decline and exit. In theory, firms grow by making good investments that allow them to earn a profit by satisfying tastes and demands of consumers better than their competitors. As such, firm dynamics concerns the aspects of firms, such as entry, growth and exit that depict change over time.

According to Abouzeedan and Busler (2004), the word “dynamic” is a relative term, used for different purposes. One example is “dynamics of order” which relates to the difference of a firm’s response and the demand from customers (Abouzeedan & Busler, 2004). In a slightly different vein, dynamics of inventory is about the difference between an organisation’s expected level of stock and real stock levels. The notion of dynamics is used in a narrow sense and context of SME performance model which is different from the broad phenomenon of dynamic capability as used by management scholars such Teece. Teece et al. (1997) introduced the concept of dynamic capabilities in strategic management to refer to a firm’s ability to integrate, build, and reconfigure internal and external resources/competencies to meet and shape quickly changing business environments. A capability is a collection of learned procedures and actions that enable an organisation to achieve a specific result. Dynamic capabilities are unique to each firm and encapsulate not only routines but also decades-old and difficult-to-copy business concepts and signature processes. What are the three types of dynamic capabilities? Three managerial operations that can make a capacity dynamic are sensing, seizing and transforming. First, the dynamic capability called sensing is about finding and assessing opportunities outside the firm. Second, the capability of seizing is about mobilising the resources to acquire value from those chances or opportunities. Lastly, transforming is about innovation, decentralisation, and knowledge management to gain competitive advantage, respond more quickly in times of fast change and have a better chance of succeeding. All businesses try to develop internal skills that give them a competitive advantage. Firms are constantly searching for new profits by looking for new technology, alternative behaviour and better organisational structures that will allow them to

out-compete their peers. Dynamic capabilities are the characteristics that allow businesses to adapt to quickly changing circumstances while maintaining a competitive advantage.

The study by Chumphong et al.(2020); Fitriati (2020) whose aim was to analyse whether innovation can mediate the relationship of dynamic capabilities with SME performance in Indonesia collected data from 350 SMEs. Structural equation modeling was used to determine the direct and indirect effect of dynamic capabilities on performance of SMEs. Their study revealed positive direct and indirect relationship between dynamic capabilities and SME performance in Indonesia. However, it is not clear whether the findings of this study can be generalised since this was conducted in just one South-Eastern Asia. Nevertheless, the study provides important insights on building dynamic capabilities to boost the performance of SMEs.

The study by Orisa et al. (2020) whose aim was to explore critical areas for enhancing the competitiveness of SMEs in the globalised economy established that strategies underpinned by Resource-Based Views (RBV) and Dynamic Capability are crucial in guiding Small and Medium Enterprises (SMEs) in picking the right strategies for their businesses. RBV, a component of strategic management (Lu, Shen & Yam, 2008), is bifurcated into two segments. The first segment focuses on strategies that enhance business productivity and bolster operational efficacy, while the second involves internal strategic formulation necessary for achieving exceptional business performance (Chumphong et al., 2020). Over time, academic researchers have indicated that both these methodologies offer distinct benefits in building organisational success and securing a competitive edge in rapidly changing environments (Barney, 1991; Teece, 2007). Although RBV is a popular concept in extant literature, it has been criticised for its general level of abstraction. Although it highlights the importance of skills and talents of employees in enhancing organisational performance, this just ends in form of inference without specificity in application (Chumphong et al., 2020).

3.5.2 Stochastic Theories of performance

Stochastic is an ancient Greek word that means "to aim at a mark, guess"(Taylor & Karlin, 1998). In other words, Stochastic refers to the property of being well described by a random probability distribution. In probability theory, the formal concept of a stochastic process is also referred to as a random process (Taylor & Karlin, 1998). In Mathematics; Stochastic process is about a family of random variables indexed by the real line. The theory

of stochastic processes is an important contribution to probability theory which has been used in different fields including finance to represent the random behaviour of various financial assets, and random behaviour of the price of one currency compared to that of another (such as the price of US Dollar compared to that of the Euro), and also to represent random behaviour of interest rates (Jitka et al., 2002).

A French engineer called Robert Gibrat proposed the Gibrat's Law of proportionate effect in 1931 which states that "the growth rate of a given firm is independent of its size at the beginning of the period examined" (Lotti et al., 2007). Gibrat's law means that individual firm growth is random, whereas firm size is the accumulation of aggregated randomness. From this, it can be deduced that the growth rate is a random phenomenon. Further, since Gibrat opines that a firm's growth rate is independent of its size, it can be concluded that there is no such thing as the optimum size of the firm. In simple terms, this means that the probability of a given proportionate change in size during a specified period is the same for most organisations in a given industry, regardless of their size. Researchers such as Evans (1987a), Hall (1987), Abouzeedan and Busler (2004) agreed with this view. According to Krasniqi et al. (2017 and Lotti et al. (2007), Gibrat assumes that factors such as the growth of demand, managerial capacities, innovation, organisational structure, and luck impact firm growth and are distributed across firms. For Wilson and Moriss (2000), the lack of inherent persistence of these factors overtimes makes the growth of the firm in period $t+1$ stochastic, not related to growth in period t , then some lucky firms might grow over the following period, becoming large, while some might not grow or sometimes even experience decline.

From the analysis of Gibrat's Law, it is evident that the growth of a firm in an industry is a random phenomenon, regardless of size. The only control factor that might be discussed in examining firm growth is the industry in which the firm operates. This view is supported by Becchetti and Trovate (as cited in Krasniqi et al., 2017) who advance that a firm's growth rate is a random phenomenon. A firm's growth should not be affected by other variables other than the industry in which it operates since industry factors affect all firms operating in that industry. Thus, the law fails to consider several factors because firm growth is a stochastic phenomenon. This view on industry being the only control factor to consider when determining firm growth attracted several studies, such as one by Krasniqi et al. (2017).

Lotti et al. (2007) argue that small and young firms have a higher growth rate than their larger and yet older firms. It is important to note that the explanatory power of Gibrat's law may be

limited as it was based on research studies using small samples. Lotti et al. (2007) introduced differential levels of managerial ability that have a significant bearing on the performance of firms. The differences in research findings can only be reconciled by testing whether a given population of organisations tend to confirm Gibrat's law or not, and those that converge around the concept of minimum efficient scale (MES) (Lotti et al., 2007; Nimfa et al., 2021.). Thus, studies have concluded that, Gibrat's law can be rejected "ex ante". A fundamental reason for rejecting Gibrat's law is its inability to allow for uncertainty and some level of dynamism (Abouzeedan & Busler, 2004). Although Stochastic theories of performance have been relevant in explaining and predicting the performance of SMEs, their weaknesses are highlighted. Coad (2013) rejected Gibrat's law due to the existence of autocorrelation structure in the growth shocks and negative relationship between growth rate variance and firm size respectively. Further, using historical data in making predictions on performance is a major lapse. Reliance on historical data makes it difficult to determine the effect of emergent factors on the performance of an organisation (Lewis, 2014). In the domain of small and medium enterprise (SME) performance, the central focus of stochastic theories is the concept that firm growth and size are independent. This implies that a large set of variables which might affect small firm growth are not taken into consideration as the law assumes that firm growth is a stochastic phenomenon.

Gibrat devised a model of the dynamics of individual firms that predicts that all firms grow at the same proportional rate, irrespective of their initial size (Simbaña-Taipe et al., 2019) conducted a study to establish the relationship between firm size and growth relative to Gibrat's law in Ecuador. A sample of 2,915 manufacturing companies participated in the study from 2012-2016. Results of regression analysis revealed that smaller companies grow at higher rates than larger companies. These findings allowed the researchers to reject Gibrat's law. However, the findings by (Zhou and Zondo, 2023) from a study on titled "do firm's growth rates follow a random walk? Evidence from incubated SMEs in South Africa" confirmed Gibrat's (1931) law of proportionate effect (LPE). Analysis of a four-year panel data from 300 MSMEs for the period 2018 to 2021 revealed that firm size influenced sales growth rate of incubated firms. LPE was however rejected when employment was used as a proxy for performance. These findings provide relevant insights into firm size and growth rate in the SMEs sub-sector in South Africa implying that performance is a result of stochastic shocks.

Stochastic theories recognise that firm growth is influenced by random factors and chance events, rather than solely by predetermined factors or characteristics. This perspective acknowledges that SMEs face uncertainties and fluctuations in their business environments, and their growth trajectories can be unpredictable (Baicker et al., 2012). By examining the distribution of firm sizes and growth rates, researchers can identify patterns and characteristics that contribute to the resilience of SMEs.

3.5.3 Learning Theories of performance

Jovanovic (1982) who is the architect of the learning theory, introduced the approach to firm growth that is called ‘noisy selection’ model based on the life cycle learning theory which depart from the proportional growth (Krasniqi et al., 2018). Jovanovic (1982) posit that firms in a small, perfectly competitive industry differ in size because they learn at different rates about their real efficiency over time (Arkolakis et al., 2020). Learning theory of performance uphold that the new entrants (entrepreneurs) starting a business are more uncertain about their actual managerial abilities and the entrepreneurial activity than the incumbents. However, firms adjust their decision-making about the output level based on their true cost and capital stock once they enter the market, as they are expected to learn over time (Arkolakis et al., 2020). Firms will learn about their natural abilities by observing their performance in the real business world. Entrepreneurs who have underestimated their abilities in one period will expand production in the next period, while those who overestimate their abilities will reduce the output or fail and even exit the market.

Jovanovic (as cited in Krasniqi et al. 2018) posits that as firms learn through their operations, they can develop an “innate and immutable cost parameter.” It is worth noting that, as “firms progress, they can update their own beliefs about their managerial ability based on their previous time’s actual returns, costs and profits.” Jovanovic’s view suggests that firms are unaware of their efficiency position. They choose an efficiency level of output based on costs directed towards enhancing their profit potential (Krasniqi et al., 2017). With time, their experience in the market allows them to adjust their cost parameters since they can learn about their real abilities in the real business world. Estimation of capabilities in one period is usually improved based on real interaction with market conditions. The same is true for organisations that might have overestimated their abilities. As they operate in the market, they learn to adjust their estimate of their abilities based on actual conditions and performance. This view is supported by (Arkolakis et al., 2020) who argues that firms must learn about their unobserved demand dictated by environmental changes and subject to

transient preference stock? Jovanovic further opined that the growth of a firm is a function of the entrepreneur's learning process over time. He introduced diminishing returns to experience and decreasing the probability that an ageing firm gains more from learning and experience (Krasniqi et al., 2017). From this, one can decipher that younger firms grow faster than old firms, purposely because they are unaware of their cost-efficiency parameter. According to Audretsch and Acs (as cited in Krasniqi et al., 2017), although younger organisations grow faster than old ones, entrepreneurs will change their behaviour as they learn to separate their "inherent ability from random business changes".

Whereas learning of entrepreneurs indeed plays a significant role in building efficient systems in an organisation, the main weakness of Jovanovic's model is the failure to acknowledge that technological advancements improve an organisation's efficiency level (Ericson & Pakes, as cited in Krasniqi et al., 2017). Further, Jovanovic's model fails to acknowledge the role of learning and experience accumulated before the start-up. He argues that the only way to learn about real efficiency is to enter into business (Cressy, 2006). The model fails to explain the role of human capital evolution and the role of risk in determining a firm's efficiency position. In understanding SME performance, the external environment should be effectively managed in an organisation's pursuit of risk. In part, a firm's capacity to manage the external environment is determined by the organisation's entrepreneurial orientation and approach to risk. This view highlights the importance of risk identification, risk analysis, and management, which are critical tenets of resilience.

Despite its weaknesses, Jovanovic's model is helpful in explaining the growth pattern of small firms. There seems to be no agreement among researchers on the relationship between the independence of growth of the firm and its size. A study by Evans (as cited by Krasniqi et al. 2017) found that growth is a decreasing function of firm size and age. Dune and Hughes (as cited in Krasniqi et al. 2017) add that smaller firms in the quoted and unquoted financial and non-financial sectors in the United Kingdom grow faster than larger ones, hence dismissing Gibrat's law. In their study, they further confirmed the assumptions of the learning theory when they established that the firm's age was negatively correlated to its growth. Jovanovic's learning theory suggests that firms accumulate knowledge and experience over time, improving productivity and competitiveness. This learning process allows firms to adapt to changing environments and challenges, including disruptions and crises. Jovanovic's theory emphasises that firms learn through practical experience and repeated production. As firms gain experience, they become more efficient and capable of

dealing with various challenges. This learning process can contribute to the resilience of firms by enhancing their ability to navigate disruptions and recover quickly (Arkolakis et al., 2020; Krasniqi et al., 2018). By continuously learning, firms can enhance their resilience and ability to recover from setbacks. Having discussed typologies of SME performance models, the next section presents performance frameworks.

3.6 PERFORMANCE MEASUREMENTS (PM)

The review of performance measurements is critical in the review of literature on performance because it enhances the understanding of performance measures that have been used in studies on performance in small and medium enterprises (SMEs) as well as identifying research gaps that feed into the conceptualisation of the current study.

In today's economic environment, measuring business performance has become a critical issues for scholars in the field of business and management. Aisjah et al., (2023); Nur ' et al. (2011), satisfying the desires of stakeholder groups is a key concern for management. Ghalayini and Noble (as cited in Wu and Mgt, 2009a) established that performance measurements evolved in two phases: the first evolved in the late 1880s and ended in the 1980s. This phase focused on the use of financial measures to determine organisational success. The significant measures used were organisational productivity, profits, and return on investment. As Nur et al. (2011) points out, the use of financial measures has its own challenges. In small and medium enterprises (SMEs), managers often refuse to provide accurate performance data. In cases where such data is available, it does not fully reflect the firm's actual performance, since this is subject to manipulation to avoid personal or corporate taxes. Research that uses financial data to determine the performance of SMEs is susceptible to the difficulties of financial data obtained from SMEs (Nur et al. 2011). Richard et al., (2009) argue that trading several business units as a block of implies that measuring financial performance and risk at the business unit level will be flawed dues to failure to account for synergy that emerges when units interact with each other. It is important that attempts to measure business unit performance should fall within the strategic context of the enterprise (Alves & Lourenço, 2022). Attempts to address these challenges led to the introduction of other measures as outlined in the next paragraph. However, Richard et al.(2009) argues that the introduction of multidimensional subjective index led to a better explanation of objective and other abstract dimensions of performance.

The second phase which began in the late 1980s was brought about by changes in the corporate world. The key issues in the second phase of performance measurement were a result of the realisation that performance measurement as traditionally practiced is limited. The major weaknesses of traditional performance measurement were the historical nature of the measures and, their lack of forward-looking nature, their inability to explain future performance, lack of link between financial and non-financial measures, their inability to report functional rather than cross-functional processes, as well as their inability to consider intangible assets.

The weaknesses identified in traditional performance measures led to the design and development of new performance measures that could integrate functional and cross-functional processes as well as linking financial to non-financial measures of performance. In the 1990s, (Kaplan and Norton (1996) developed the balanced score-card which is premised on the assumption that a performance measurement system should help managers to monitor performance in all financial and non-financial organisational areas. In addition to the Balanced Scorecard, other techniques are the Activity Based Profitability Analysis (Wu, 2009), the performance prism that was developed by (Neely et al., 2001), the performance pyramid by Lynch and Cross (as cited by Wu, 2009) and the integrated performance management system (Bititci et al., as cited in Yadav et al., 2018).

It has been noted that, although the Activity Based Customer Profitability Analysis has been widely adopted, in the sector that manufactures, while there is very limited application of the same method in other sectors (Koşan et al., 2014). According to Wu, (2009), measures of performance should develop from the organisation's strategy and the key objectives that the organisation intends to accomplish. The greatest challenge in using performance measures is the gap that exists between what the organisations or its members want to measure and what can be measured. This gap is an area of debate in research (David & Joseph, 2014).Papulová et al. (2021) argues that the development of performance management system in small and medium enterprises (SMEs) has been underestimated because of their size, and failure to understand their specific needs when measuring performance. It has also been established that various performance measurement systems such the integrated performance management system, performance criteria system, and Cambridge performance design process require some form of validity, which unfortunately does not exist today. As a result, the existence of diverse performance measurements has led to various definitions of performance. Michaela et al. (as cited in David and Joseph, 2014) argue that “the gap between what organisations want to

measure and what can be measured is the main reason for performance measurement being still challenging”.

According to Vij and Bedi (2016), “actions and efforts of managers are driven by the performance measurement system of an organisation”. Waal (2021) argues that performance measurement is not an end. It is a tool for determining/measuring the effectiveness of management. The performance of an organisation has strategic implications on how the resources of the organisation are deployed. Literature has revealed that in measuring performance, the treatment of the performance construct is perhaps one of the thorniest issues that most scholars in the field of performance face (Venkatraman, 1989). To date, management literature reveals that there is no consensus among the researchers regarding the measurement of performance (Hald & Mouritsen, 2018; Neely et al., 2005; Vij & Bedi, 2016). Table 3.4 presents measures used to measure performance for selected businesses.

Table 3. 4: Measures of performance from selected businesses

Resp onde nts	Nature of business	Financial measures		Non-financial measures	
		Short-term	Long-term	Short-term	Long-term
A	Financial investment (service)	Turnover, net profit before tax	Growth in turn over and revenue	Customer satisfaction: referrals by customers	Market share; growth rate
B	Assembling computer components(manufacturing)	Turnover, net profit before tax; return on investment; profit per employee	Growth in revenue; growth in number of employees	Customer’s satisfaction; waiting time; referrals by customers	Market share; growth rate
C	Recruitment agency(services)	Turnover, profit before tax, profit per employee	Growth in revenue; growth in number of employees	Customer’s satisfaction; employee turnover	Market share; growth rate
D	Plastic packaging manufacturer(manufacturing)	Turnover, net profit before tax; return on investment	Growth in revenue; growth in number of employees	Customer’s referrals; employee turn over	Market share
E	Property reactor(service)	Turnover, net profit before tax; return on investment; turnover; profit/employee	Growth in revenue; growth in number of employees	Customer’s satisfaction; customer’s referrals	Market share; growth rate

Source: Adopted from Chong (2008. p.4-5)

In Table 3.4 performance can be measured on short-term and long-term basis. In the Table, the hybrid approach is used because of the need to address the weaknesses of both financial and non-financial measures of performance. The adoption of a hybrid measure of performance is in-line with the goal approach of measuring performance. Organisations can consider an action as short-term if it bears results or impact on the organisation's plans and overall performance in a period of 12 months or less. It has also been established that organisations consider actions to be long-term if they have an impact on the organisation in a period of at least five years or more (Chong, 2008a).

Yin (as cited in Chong, 2008), argues that firms should endeavour to categories performance measures based on relationships among categories, and strong coherence that is be due to the norms and cultures of a particular sector. Unlike organisations which are entities that are consciously coordinated with multiple social entities, culture (norms) is relatively stable. Organisations, unlike culture consist of multifunctional units, each with different targets, work systems and approaches to realising goals. This makes the goal approach lack common understanding of what organisations targets are (planned and what they pursue)(Etzioni, 1960). Table 3.5 summarises measures based on cultures, beliefs and practices.

Table 3. 5: Matrix on measuring performance

Duration	Financial measures	Non-financial measures
Short-term	• Profit	• Customer's satisfaction
	• Turnover	• Customer's referral rates
	• Profit per employee	
Long-term	• Growth in revenue	• Growth in revenue
	• Growth in the number of employees	• Growth in customer base and market

Source: adopted from (Chong, 2008.p.6)

Table 3.5 shows that in measuring performance, attention is paid to both financial (profit before tax, turnover profits per employee and revenue growth) as well as financial measures (customer satisfaction, referral rates, and growth in customer's base and revenue). Naman

and Slevin (1993) and Chong (2008) argue that these measures are in congruence with the goal approach where measures are based on pre-determined targets set by the owner/manager. Ramirez (2023) asserts that SME performance is viewed from two distinct perspectives, namely performance models and contingency models. First, performance models analyse the economic output of small businesses and have a predictive proclivity, usually focusing on either failure, survival, or success. Performance models employ covariates within their multivariate models as their fundamental indicators to determine whether the firm can fail. Most performance models are concentrated on one SMEs performance in terms of failure or survival of SMEs due to the generalised concerns of reducing failure rates as opposed to success prediction models, which are less common. In this regard, performance models have intrinsic limitations of focusing on the negative side of performance (i.e., failure) and leaving aside an ample number of elements that can influence the positive performance of SMEs. Notably, the core purpose of SME performance models is to supply reasons that explain and help predict business cessation.

The common reasons of business failure offered by performance models are working capital management, poor planning, deficient internal processes, lack of key resources, and lack of capital in the internal or resource-based facet of prediction models. The absence of financial resources and managerial skills/competences are key causal elements predicting failure. The external elements that can predict SME failure include a volatile environment, access to funding, official regulatory policies, and intense competition. Second, there are “contingency models”, which contain substantive elements of improved performance in small and medium enterprises (SMEs). Contingency models have a common denominator of focusing on positive SMEs performance, providing a more complete, integrated, and categorised set of variables that can assist SMEs managers in meliorating their outcomes. As such, the essence of contingency models is the diverse nature of their predictors or drivers and their focus on positive outcomes.

Table 3.6 presents a summary of the sections used to create an integrated literature divided by the level of analysis and the categories resulting from its analysis. Categories are helpful in classifying the domains used by researchers to classify and describe variables. Leonidou et al. (as cited as Ramirez and Lim, 2021) argues that environmental regulations (support variables) have a positive impact on SME performance. Ramirez and Lim (2021) performed the analytical procedure to attain the study’s goal and in response to various variables resulting from their study. The level of analysis(origin), the connection with the current theoretical framework (sections from performance models) and the context (the constructs

help to explain the notion of performance measures. Table 3.6 below presents the internal and external level analysis, sections and categories which are useful in understanding and examining a variety of factors which may affect SME performance.

Table 3. 6 Origins, sections and categories of SME performance measures

Origin: Internal level of analysis		Origin: Extern level of analysis	
Section	Category	Section	Category
Management	Managerial Skills	External environment	Business environment
	Competences		Environmental action
	Management action		Economic circumstances
	Strategy		Competitive conditions
Financial	Financing	Accessing finance	Readiness of financial services
	Capital		Official funding
	Financial management		Support
Resources	Human capital	Government policies and official regulations	Regulatory framework
	Knowledge		Business regulations
	Assets		Official programs
	Relations		
Internal processes	Internal conditions		
	Organizational policies		
	Internal procedures		

Source: Adopted from Ramirez and Lim (2021. p.280)

In the context of the external environment, the study by Leo Ramirez and Lim, (as cited in Ramirez and Lim, 2021) is explicit that environmental regulation is a component of the major business environment which had a positive impact on performance in small manufacturing firms in Cyprus. It is important to underscore that the “external section” includes access to financing composed by the categories of easiness to getting funding and readiness of financing services which represent the exogenous conditions that small firms face in their local situations to access finance” (Ramirez and Lim, 2021). It should be noted that, whereas access to finance is not an output of n small and medium enterprises (SMEs) performance, it represents an input performance area from an input perspective. Access to finance signifies an important external performance output since most SMEs struggle to access finance. Those who can mobilise resources define this as an important performance area. However, this does not suggest that the internal environment does not impact SMEs performance. In fact, the category of human capital, knowledge, relationships within the organisation, and international organisational conditions have a significant bearing on the nature and outcome

of SMEs performance (Ramirez & Lim, 2021). Whereas these are not outputs, having them in place enhances an SMEs's ability to perform its tasks.

Ramirez and Lim (2021), are of the view that “performance sections and categories can act as a point of reference in further studies in SMEs to classify or to propose distinct precursors of performance because they represent the very constructs, domains, or disciplines of different reputed investigation from around the world”. From the above analysis, it is quite clear that there is a lack of a common approach to determining key constructs of performance to deal with. It should be noted that although patterns exist in measuring or identifying key constructs to deal with in unpacking the concept of SME performance, there is need for further clarity on the subject. The pursuit of performance from an input, rather than output perspective is rather idealistic. An SME's performance is largely determined by the relationship between its inputs and outputs. A discussion of performance that focuses on inputs without output is rather narrow and inconclusive.

3.6.1 Subjective and objective measures of performance

In understanding SME performance measures, it is insightful to understand the distinction between subjective and objective measures. First, subjective measures during the assessment of business performance are due to challenges in obtaining financial performance data (Nur ' et al., 2011). The adoption of subject rather than objective measures of SME performance results from managers'/owner's refusal or failure to provide accurate, objective performance data to researchers. Second, it is arguable that if when “objective” data is available, it does not represent actual performance since managers manipulate it to avoid paying taxes. The complexity faced in measuring SME performance using objective data is the difficulty of interpreting some objective performance data. To some researchers and entrepreneurs, performance may be considered poor or good depending on whether the data shows losses or profit. The short-term view of performance is misleading for a firm that could have invested its initial outlay in long-term firm performance (future growth). As an example, investment in research and development or investment in product and market development may not generate quick returns in the short-run. An analysis of financial information may not provide an accurate picture performance (Ashraf & Abd Kadir, 2012). It should be noted that this phenomenon of manipulating financial performance data is not just an SME problem but also a problem that many researchers face whenever they are collecting financial performance data from large organisations (Nur ' et al., 2011). Third, there is complexity in obtaining objective financial performance data which has encouraged researchers and practitioners to

evaluate business performance through general measures that reflect some form of specific objective measures. The change in approach to subjective measures of performance is premised on the understanding that subjective measures of performance allows comparison across firms and contexts, such as, a) industry types, b) time horizons, c) economic conditions or, d) cultures (Song et al., 2005; Nur ' et al., 2011). It has been established that managers use relative industry performance as a benchmark mark whenever subjective measures are used.

It is salient to acknowledge that objective measures can vary based on industry and may, obscure the relationship between independent variables and business performance (Hald & Mouritsen, 2018). According to Neely et al. (2005), “performance measurement can be understood as the process that quantifies the efficiency and effectiveness of past actions, while performance measurement system focuses on the measures used to quantify both efficiency and effectiveness of actions.” According to Wiklund and Shepherd (2005), although both subjective and objective, measures of performance have been used, subjective measures are commonly used to measure organisational performance. The adoption of subjective measures is further supported by the fact that they are generally relative compared to objective measures which are absolute in nature. Secondly, subjective measures rely upon the positive correlation between subjective and objective performance measures. Table 3.7 presents a summary of the differences between objective and subjective measures of performance, which a researcher needs to understand in quantifying performance.

Table 3. 7: Objective and subjective measures of business performance differentiated

Differentiation aspect	Subjective measure	Objective measure
Indicators	Focused on overall performance	Focused on actual financial indicators
Measurement standard	Rating of performance relative to their competitors, and industry	Key informants should provide financial data, for example, profit per employee, return on investment etc.
Scale anchors	Scales range from “very poor” to “very good” or, “much lower” to “much higher: or to “much higher” or “worst in the industry” or “best in the industry”.	No use of scales

Source: adopted from (Nur ' et al., 2011: p.4).

It has been argued that the use of subjective measures of performance integrates the use of objective measures of performance. For example, in a study by Wall et al.(2004, the correlation (r) of the subjective and objective measures of performance to total sales give a value for r of .80, and to return on assets gives a value of 0.79. Dess and Robinson's (1984) findings give credence to the argument that in addition to being general in nature, the use of subjective measures is grounded in its broader application and depth in analysing the performance of the organisation through objective measures. Although it might be too early to argue that subjective measures of performance are a reliable measure of firm performance, Chandler and Hanks (as cited in Nur ' et al., 2011) argue that less attention has been given to evaluating the validity of subjective measures of performance. However, Chandler and Hanks state that although subjective measures are subject to bias and measurement errors, several tests exist to determine their validity: a) convergent validity, b) discriminant, c) construct. The use of these tests of validity has allowed the conclusion that subjective measures of performance are more reliable than objective measures of organisational performance. This argument has been supported by Wall et al. (2004) who state that in addition to being confounding in nature, subjective measures of performance are cost-effective if questionnaires or interviews can be used to collect performance data, which in a way, evoke a discussion on practice. Table 3.8 presents the results of different validity tests for business performance measurement.

Table 3. 8 : Validity tests to measure business performance

Validity type	Results
Convergent	Subjective performance measures are related to objective measures
Discriminant	The relationship between the two measures is systematically stronger than the relationship between different measurements using different methods
Construct	The relationship between subjective and objective measures of performance with a series of independent variables is equivalent There is a significant statistical correlation between subjective and objective measures of performance ($P < 0.01$) Subject measures show a 95% success rate as compared with objective measures.

Source: adopted from Wall et al. (as cited in Nur ' et al., 2011.p.4)

According to Aquilino et al.(2017), performance measure is defined as the numerical or quantitative indicator that shows how well each objective is being met. However, Aquilino et al. (2017) disagreea with this Sinclair and Zairi (1996) definition of performance and state that performance measurement requires an extensive use of quantitative and qualitative data, with clear definitions and specific frequency for analysis that is detected upon by the purpose of the measurement and the nature of available data. According to Wall et al. (2004), “when subjective measures are treated the same as objective measures, this glosses over the fact that there are other different measurements both within subjective and objective measures and especially between them.” It has been argued that this confounding does not constitute a serious problem for scholars. In general, objective measures are directed at the chief executive officer (CEO), directors or equivalent among others. These are more interested in the firm’s outcome from its various activities. As a result, objective measures tend to dominate their view of the company’s performance. It has also been argued that the question of convergence validity requires further investigation since the direct correlation between the two measures are not strong. This leaves noticeable variations in each measure (Wall et al.,

2004). Despite these weaknesses, objective measures encompass objective measures yet objective measures focus financial measures, especially profit.

Having discussed the variety of existing frameworks of performance relevant to SMEs such as the BSC, EFGM Model, Performance Prism and issues such as goal approach, strategic approach to performance and the subjective and objective views on performance. It is critical to discuss how performance is linked not only to strategic foresight, but also to absorptive capacity. In this section, there is also a discussion of the nexus between resilience and performance in SMES and the conceptual framework guiding this quantitative study. By reviewing performance measures, the study has been able to establish the key metrics/indicators used by SMEs to measure their performance. The next section presents the link between the variables of the integrated model with performance.

3.7 EXPLORING THE LINK BETWEEN ABSORPTIVE CAPACITY AND PERFORMANCE

The link between absorptive capacity and performance is vital in understanding how absorptive capacity is an enabler of resilience in enhancing performance. In a highly competitive environment, firms require high levels of knowledge resources (Sancho-Zamora et al., 2021b). Absorptive capacity (AC) as defined by Cohen and Levinthal (1990) is “the ability to acquire, assimilate and exploit external information for commercial ends,” is central for organisations to enhance their performance. Sancho-Zamora et al. (2021) argue that in addition to improving an organisation’s existing knowledge base, AC also encourages the creation of new knowledge creation activities that are key to entrepreneurial success. Entrepreneurial success requires a firm to renew its products and strategic technologies so that the organisation can run more efficiently by driving down costs (Sancho-Zamora et al., 2021b).

Studies show that although plenty of literature exists to explain AC, studies that link AC with organisational performance are new. Most have attempted to examine the relationship between AC, organisational learning, innovation, and the creation of organisational knowledge (Bradford & Saad, 2014; Cuervo-Cazurra & Rui, 2017; Muscio, 2007; Zahra & George, 2002). Further, although theoretical models explain the nature, antecedents, and consequences of AC, there is limited empirical evidence that explains the role of absorptive capacity (AC) on performance (Kostopoulos et al., 2011). This view is supported by Liu et al. (2018) who argue that few studies have examined the practical operations and the end goal of adopting AC to enhance organisational performance.

It should be noted that, although the concept was divided into four dimensions (Zahra & George, 2002); acquisition, assimilation, transformation, and exploitation, Cohen and Levinthal's (1990) three dimensions (recognise, assimilate, and apply) are generally applicable and acceptable in research (Liu et al., 2018). Nevertheless, Zahra and George's (2002) classification of absorptive capacity into two components: Potential absorptive Capacity (PACAP) and realised absorptive capacity (RACAP). Acquisition and assimilation represent PACAP while transformation and exploitation are components of RECAP (Sancho-Zamora et al., 2021). PACAP focuses on the primary role of acquiring knowledge (valuing knowledge as per Cohen and Levinthal, 1990). RACAP deals with the application of acquired and assimilated knowledge. Knowledge acquisition focuses on a firm's ability to identify and acquire external knowledge to improve operations such as supplier operations, technological developments, and offering customer preferences. The assimilation of knowledge refers to a firm's routines for analysing and interpreting external information for use in internal operations. The concept of application focuses on what the firm can do with acquired and analysed knowledge. The ultimate purpose for acquiring and assimilating knowledge is to use it for commercial purposes, thus, to produce something that is valuable to both the customer and the organisations (Kostopoulos et al., 2011; X. Liu et al., 2018; Sancho-Zamora et al., 2021b). The application of acquired knowledge is more practical than theoretical. Firms can bring together their resources (people and other resources) to work together to consider how to improve existing designs for production operation.

Using a capabilities stance, it has been established that AC significantly affects performance. The findings by Tzokas et al. (2015) show the interaction between AC antecedents and how these antecedents relate to a firm's performance (Liu et al., 2018). Conventional wisdom dictates that absorptive capacity (AC) enables a company to gain external knowledge, and that learning from external sources enhances an organisation's ability to make necessary changes to its strategy, develop products or services that meet customers' needs and in return, satisfying the needs of internal stakeholders. In a collaborative net-worked business environment, firms must be able to engage in external knowledge acquisition if they are to create an advantage over their rivals. A firm's ability to acquire and assimilate new knowledge enhances its strategy formation processes, thus resulting in the creation of new product designs, business processes as well as better ways to engage external suppliers with an ultimate purpose of improving organisational performance (Liu et al., 2018). A firm's ability to assimilate knowledge enables its employees/staff to improve their understanding of

the external environment. Sharing external knowledge imbues organisational systems, create applications which result in creative in innovative results (Cohen & Levinthal, 1990). Scholars have argued that absorptive capacity facilitates a company's learning about external opportunities such as the emergence of new technology. New knowledge obtained from external sources stimulates other internal ideas which facilitate innovation in the organisation (Zahra & George, 2002).

A study entitled; "Role of absorptive capacity (AC), Digital Capability, agility, and Resilience in supply chain innovation performance in Saudi-Arabia", that was conducted by Abourokbah et al. (2023) aimed at examining the mediating role of digital capability, supply chain resilience, supply chain agility and digital innovation in the relationship between absorptive capacity and innovation performance. 116 firms were selected to test the hypothesised relationship using Partial Least Squares of the Structural Equation Modeling (PLS-SEM). The analysis and discussion of results followed a deductive methodology, arguing that concepts are built upon a theoretical foundation gleaned from existing literature. A questionnaire was designed and administered to collect data. Eleven hypotheses were tested to determine their significance and mediating effect on the relationship between the independent and dependent variables. "Absorptive capacity is a predictor of digital capability have a positive effect on digital innovation, dynamic capabilities mediates the relation between absorptive capacity and digital innovation, digital innovation positively affects supply chain innovation performance, digital innovation mediates the relationship between dynamic capabilities and supply chain innovation performance, absorptive capacity has a positive effect on supply chain agility, supply chain agility has a positive effect on supply chain innovation performance, supply chain agility mediates the relationship between absorptive capacity and supply chain innovation performance. Absorptive capacity has a positive effect on supply chain resilience; supply chain resilience positively affects SCIP, and supply chain resilience medicates the relationship between absorptive capacity and supply chain innovation performance" (Abourokbah et al., 2023).

Abourokbah et al.'s (2023) study revealed that all the hypothesised paths were supported, thus enabling the conclusion that absorptive capacity positively and significantly impacts dynamic capabilities, supply chain agility, and supply chain resilience. However, supply chain agility and supply chain resilience partially mediated the relationship between absorptive capacity and supply chain innovation performance. From the study, it is evident that assumptions advanced by the Resource View and dynamic capabilities theories are

supported (Teece et al., 1997). It is also noted that testing the significance and mediating effect of multiple variables is plausible since using a multidimensional rather than a unidimensional approach to studying resilience provides a rich, yet integrated examination of resilience and other mediating variables in understanding organisational performance. Although the study provides a rich, yet integrated approach to examining resilience and its effect on performance, several weaknesses are noted. First, using a small sample of 116 Saudi Arabian organisations could have affected the results (generalisation). Secondly, although the study adopted standard scales for each variable (Abourokbah et al., 2023), it is unclear how each variable (independent, mediating and dependent) was operationalised. Regardless of the weaknesses identified, the study provided relevant and useful information on methodology, tools, and techniques for analysing data. The results also confirm the need to measure resilience using a multi-dimensional rather than a unidimensional approach (Gb, 2013).

Liu et al.(2018) argue that there is a positive relationship between innovation and organisational performance. Innovation, a key construct of the realised absorptive capacity is considered an appropriate factor to create and acquire a competitive advantage. Gong et al. (2012, as cited in Liu et al., 2018), established in their study that when riskiness orientation is high, the creativity of core knowledge employees tends to be negatively related to organisational performance. However, Yang (2012, as cited by Liu et al., 2018) posits that there is a positive relationship between innovation and business performance. For Kostopoulos et al. (2011), absorptive capacity is a conduit for transferring knowledge to internal processes/units and as such, the transfer of knowledge leads to innovative activities. This is possible because absorptive capacity may contribute to a firm's innovation performance since it acts as a tool for enhancing new external knowledge and transferring the necessary knowledge for cross-organisational innovation activities. Although multiple debates exist on the role of innovation orientation and financial performance (Geroski et al. 1993, as cited in Kostopoulos et al., 2011) concludes in their study that manufacturing firms in the United Kingdom that introduced innovation orientation from 1945 to 183 reported a significant positive effect of innovation on profitability. Thus, absorptive capacity permits firms to identify the flow of relevant knowledge and assimilate and exploit it to create something of a commercial end.

3.8 THE NEXUS BETWEEN RESILIENCE AND PERFORMANCE IN SMES

The vulnerability of organisations increases due to the large spectrum of events which disrupt organisational operations (Peters, 2022). The complexity and dynamic nature of the environment requires organisations to be aware of their inner vulnerabilities, threats, and the need to develop organisational capabilities to manage disruptive situations.

To remain competitive, managers in organisations need to ensure that they constantly align their strategies and goals with environment changes (Alshebami & Murad, 2022). Adjusting internal processes to ensure external consonance requires a high level of resilience that implies an organisation's capacity to respond and overcome disturbances. Alshebami and Murad, 2022) agree with the view that resilience is an essential component of organisational success. It should also be noted that, past studies on resilience and its effect on business performance have produced mixed results, hence the need to integrate multiple dimensions and perspectives to the study of the effect of resilience on organisational performance (Alshebami & Murad, 2022).

According to Alshebami and Murad (2022) resilience is significantly associated with business success. Organisational success requires managers who are on the lookout for events/factors that may disrupt the organisation's operations/success, assimilate (evaluate the effect of such events) and, develop appropriate mechanisms to with-stand disruptions. Resilience addresses both exceptional and devastating events. Such events that are different from what the system was designed for create disruptions to the smooth operations of the organisation (Peters, 2022). Peters(2022), differentiates between foreseen (anticipation) from those that are unknown (not anticipated). This differentiation calls for an organisation to be resilient, thus prepare for both foreseen and unknown occurrences.

Alshebami and Murad (2022) argues that when people face disruptive events for some time, they can cope and adjust with stressful events. Adjusting in a stressful environment result into four outcomes. Alshebami and Murad (2022) proposes that understanding the effect of resilience on organisational performance requires a multi-dimensional integration of mechanisms, which they call protective mechanisms that enable organisations to respond to disturbances. Another form of outcome is that during a disruptive event, some people or organisations tend to remain in their familiar environment. During a disruption, there is a loss of integration. This is a result of the negative effect of the disruption which destroys the protective element. The last outcome is twofold: reintegration with the goal of improving the

situation. This results in growth, knowledge, self-understanding, and increased strength of resilient qualities. The other is what Richardson (2002) called dysfunctional integration with loss (destructive behaviour resulting from a disruption).

To explain the concept of resilience, Richardson presented a linear model that shows the stages of biopsychospiritual homeostasis an individual or group goes through, interactions with life prompts, disruption, readiness for reintegration and choice to reintegrate resiliently, back to homeostasis, or with loss. The resilience model presented in Figure 3.8 show the mechanisms where people, through planned disruptions or reacting to life events, make conscious or unconscious choices the outcomes of disruptions (Richardson, 2011). Although Richardson (2011) model has received modest empirical verification, thus still falls short of being generalised (Taylor et al., 2006). In evaluating the meta-theory of resilience, it is prudent to keep in mind that the model adopts a simplistic linear model which reflects one event as it pertains to a particular role, experience or relationship. However, there are multiple simultaneous disruptive and re-integrative opportunities with no specific time frame when such are expected to occur (Taylor et al., 2006).

According to Richardson (2002), the description of resilience is manifested when a person has adapted to her/his situation in life. Homeostasis refers to an adapted state of mind, body, and spirit. For an organisation, this would imply a holistic adaptation of resilience in the entire functioning of the organisation. Thus, the organisation can adapt to a set of circumstances that may cause either positive or negative consequences. Richardson further argues that individuals cultivate resilient qualities that prevent disruptions from causing negative effects. The interaction between life stressors and protective factors determines the possibility of the occurrence of a disruption. For an organisation, protective factors may include factors such as planning, organisational evaluation, training, and development among others. From the model, Richardson (2002) defines unprotected life prompts as thoughts, feelings, or experiences that have not occurred/experienced before. Disruptions create a paradigm shift in an organisation's intact environment. Resilience integration is to experience some insights or growth through disruptions. This involves some retrospective experience that involves analysing the resilience qualities that enable an organisation to remain. Through a reintegration mechanism, organisations are able to identify and strengthen their resilient qualities. Reintegration to seek homeostasis may occur with loss or cause dysfunctionality to reintegrate. The ultimate purpose of reintegration back to homeostasis is to recover and move

past a disruptive event. It should be noted that there are cases where recovery may not be possible, especially in cases where there was permanent loss (Richardson, 2002).

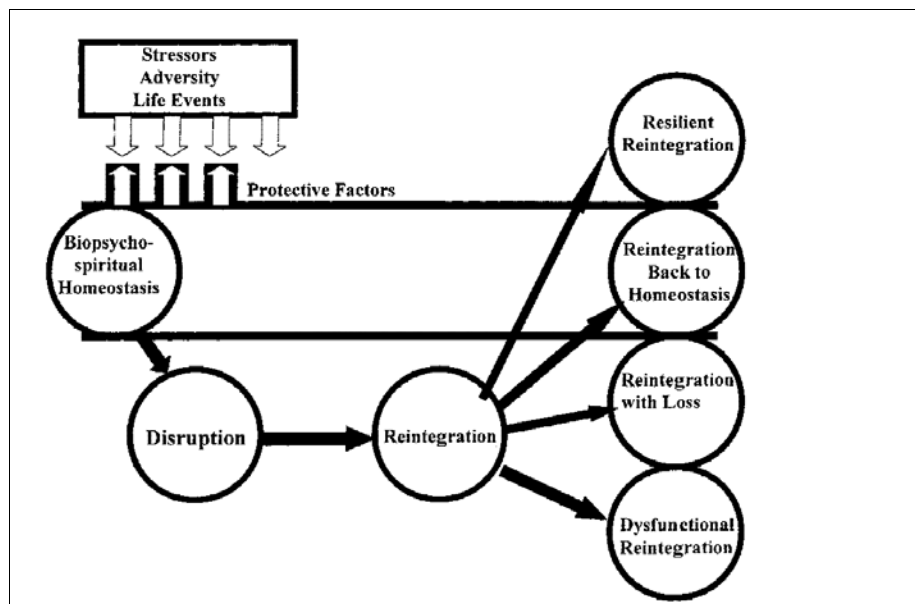


Figure 3. 6 The resiliency model

Source: Richardson (2002. p.311)

In an empirical study by Alshebami and Murad (2022), results from the Structural Equation Model analysis revealed that entrepreneurial resilience and financial literacy affect an organisation's sustainable performance. The study further revealed that entrepreneurial resilience positively influences financial literacy. Studies by (Sezen-Gültekin et al., 2020) have established that resilience is the strength of an organisation that enables it to withstand disruptive events. When used properly, organisational elements of resilience such as material resources, knowledge management, internal governance processes, leadership of the organisation, organisational culture, and social and organisational networks enhance an organisation's likelihood to benefit from opportunities that result from disruptive events (Barasa et al., 2018). Kantur and İşeri-Say (2015, as cited in Sezen-Gültekin et al., 2020), argue that resilience enables an organisation to maintain its current position, and the capacity to protect its current situation in the face of negative situations. Robb (2000, as cited in Sezen-Gültekin et al., 2020), for organisations to develop a clear journey for their success and sustain their operations, organisational resilience has been found to be the premise in achieving organisational sustainability. The intrinsic ability of an organisation to continue operating after a disruption implies the resiliency of an organisation (Hollnagel, 2022). Peters(2022) states that organisational resilience as a deliberate effort enhances an organisation's coping ability when faced with surprises. To cope with surprises, an

organisation should be able to make positive adjustments with the ultimate purpose of emerging from disruptions resourceful, and strengthened.

Bullough et al. (2013, as cited in Fatoki, 2018) in their study established that resilience enhances an entrepreneur's ability to manage business failure. Their study further established that there is a positive relationship between innovation and resilience. In Markman et al.'s (2005) study, results show a significant positive relationship between innovation as measured by idea management capability, strategic management and knowledge management, and resilience. These results are supported by Reinmoeller et al. (as cited in Fatoki, 2018) whose study revealed that there is a positive relationship between an entrepreneur's resilience and business success. The conceptual study by Limphaibool and Mai (2020) on "enhancement of organisational resilient in SMEs through multilevel mindfulness: a conceptual model" state that psychological capital (PsyCap) and high reliability organisations (HRO) enhance organisational resilience to understand how business especially SMEs overcome difficult times effectively and ensuring sustainable business. With collective mindfulness (organisational mindfulness) organisations such as SMEs can ensure environmental sensitivity, openness to experience and, as well as building problem solving mechanisms to deal with disruptions (Limphaibool & Mai, 2020).

For Fatoki (2018), the results of his study on "the impact of entrepreneurial resilience on the success of small and medium enterprises (SMEs) in South Africa" established an insignificant relationship between resilience and business success as measured by employee numbers, profitability, and sales growth. From the review of literature on the nexus between resilience and performance, it is deduced that resilience is dynamic and allows SMEs to anticipate, withstand and adapt to changing business environments. The ability to anticipate, cope and adapt to changes in the environment equips owners/managers with the relevant skills and abilities to bounce back better when they experience disruptive events.

3.9 CONCEPTUALISING A NEW INTEGRATIVE MODEL OF RESILIENCE FOR SMES

Having discussed the fundamental concepts of organisational resilience and performance management in chapter two and the current chapter, it is timely to present the concepts and their interrelationships, which are at the centre of this quantitative study. In any study, it is very important for a researcher to have a guiding foundation which provides a clear and overall structure that shapes and visualises the relationship between key concepts. In this

regard, quantitative researchers are required to develop a conceptual framework which provides detailed components or concepts that identify the inter-relationships in and across the research components. A conceptual framework constitutes a series of interrelated concepts. In nutshell, a concept is an idea that has been formally developed and organised. Conceptual frameworks clarify concepts, organise ideas, and identify relationships with which to frame a study. Concepts are logically developed and organised to support an overall framework, which can be displayed graphically with arrows. Quantitative research serves to depict cause-effect and other forms of quantifiable relationship. Adopting a quantitative approach for this study allows for the collection of numerical data that can be statistically analyzed, providing objective insights into the relationships between resilience, absorptive capacity, and performance optimisation in SMEs. This method facilitates the identification of patterns and correlations across a larger sample size, enhancing the generalisability of the findings. Additionally, quantitative research can effectively measure the impact of specific variables, enabling a clearer understanding of how absorptive capacity mediates the relationship between resilience and performance outcomes. This structured approach supports hypothesis testing and can yield robust, replicable results that contribute to the broader body of knowledge in the field.

In this way, conceptual framework provides an illustration of the interrelated ideas presented in research. Ideally, the researcher would revisit the conceptual framework in their final section of the literature review. In short, a conceptual framework is like a roadmap for the study, helping the researcher visualise the interrelationships between concepts of interest and in which the study can be put into action.

It is salient to underscore that the dimensions of resilience as indicated in the model by Ducheck (2020) are relevant to this study. To ensure robustness of the resilience, dimensions of resilience were integrated into other variables to form an integrated conceptual framework of resilience. The dimensions are resilience (detectability/preparation, coping and adaptation), strategic foresight/transformational resilience (discovery and planning), absorptive capacity (knowledge recognition, assimilation and knowledge application) and strategic orientation (prospector, defender, analyser, and reactor as discussed earlier in section 2.5 of chapter 2. These are key in this study because an integrated conceptual framework of resilience encompasses these dimensions to effectively understand resilience and its effect on performance of SMEs. By linking these elements into a comprehensive framework, the research believes that SMEs can establish internal linkages, manage performance at strategic

level and process levels, anticipate future trends, and build adaptive capacity. By including dimensions of absorptive capacity, SMEs can recognise and apply new information, while strategic orientation and foresight (transformative resilience) enable them to make informed decisions and maintain resilience over a long term. This enhances an organisation's ability to navigate uncertainty and fostering long-term performance.

However, the dimensions in Ducheck's model need to be integrated into a model with other variables (dimensions) that seek to ensure organisation learning, knowledge acquisition and foresight. Since Jorge et al. (2020) define resilience as the system's capacity to manage disruptive events. Tukamuhabwe et al. (2015), Jorge et al. (2020) have undertaken research on resilience its meaning, use application, components, drivers and retarders. As a result, Jorge et al. (2020) proposes resilience models should enable an organisation to make a diagnosis of its operations, give a road map to improve and compare its performance.

Pertheban et al. (2023) argue that to survive in the current dynamic environment, resilience strategies and ambidexterity capabilities of small and medium enterprises (SMEs) are central to their performance. Perhaps an integrated model is further justified by Kanyangale (2017), whose study on exploring the strategic leadership of SMEs in Malawi revealed that entrepreneurs display four key characteristics: opportunity-seeking wisdom, building appropriate social capital, entrepreneurial resilience, curiosity, and practice-led learning. These results gave birth to the design of an integrated local leadership framework. Ian et al. (2009) advances the view that in dealing with the concept of resilience, many questions arise some of which include: what is resilience? How can resilience be achieved? Can resilience be achieved? Should resilience be built before or after a disaster, or during both times? Should the development of resilience be tackled at an individual level or a wider community level? Whose responsibility is it to build resilience?

The analysis by Holling (1973) on resilience, an ecological system approach is focuses on resilience that arises from interactions between important systems (people and the environment). Ian et al. (2009) states that, previous studies on resilience have focused on individual resilience, with little focus on how individuals interact with a wider society, and how these interactions influence resilience. The identified shortcomings qualify the need to develop an integrated model of resilience, which draws from multiple approaches to resilience, and to understand resilience as a multidimensional concept. This is supported by Khin Khin Oo and Rakthin (2022), who proposed that an organisation is a knowledge-bearing

entity that administers resources that deploys different dynamic capabilities to generate, transfer and transform knowledge into competitive advantage.

According to Khin Khin Oo and Rakthin (2022), knowledge acquisition, especially from external sources, is key in predicting potential surprises; knowledge gained during crises helps in strategy development for coping and adapting during and after a crisis. Conceptual similarities exist between absorptive capacity and organisational resilience (Hillman, 2021; Richtner & Loftsten, 2014; Lengnick-Hall et al., 2011, all as cited in Khin Khin Oo & Rakthin, 2022). The definition of resilience by Lengnick-Hall et al. (2011), as *a firm's ability to effectively absorb, develop situation-specific responses to, and ultimately engage in transformative activities to capitalise on disruptive surprises that potentially threaten organisational survival* considers OR as a collective construct embedded in a set of individual-level factors that include knowledge, abilities, and organisational routines that enhance an organisation's ability to withstand disruptive events.

In answering the question “what is resilience”, Barasa et al. (2018) and Khin Khin Oo and Rakthin (2022), opine that resilience concerns an organisation's ability to anticipate, absorb external disruptions, learn from them, and adapt to future challenges. Knowledge acquisition enables an organisation to predict potential surprises, while knowledge gained during crisis supports an organisation in its strategy development, coping and adapting during and after crises. Therefore, an integrated model of resilience, absorptive capacity and strategic foresight would contribute to managing knowledge sources efficiently and achieving resiliency in a changing environment.

As depicted in Figure 3.7, an integrated model of resilience is designed based on the works of ten authors Ducheck (2020); Lengnick-Hall et al.(2011); Limnios & Mazzarol (2011); Rohrbeck (2010) whose studies focused on resilience, Almujaiani et al.(2021); Dadkhah et al.(2018); Minkkinen et al., (2019) on strategic foresight, (Allen et al., 2014b; Cohen & Levinthal, 1990; Kostopoulos et al., 2011) on absorptive capacity and Fatima, (2017); Gnjidić (2014); Gurkov (2012); Zahra & Pearce (1990) on strategic orientation to suggest 4 main variables (independent) of the integrated resilience model (resilience, strategic foresight-transformative resilience, strategic orientation and absorptive capacity), and twelve dimensions of the variables; organisational resilience 3, strategic foresight 2, absorptive capacity 3 and strategic orientation 4 to conceptualise characteristics/dimensions of resilience, strategic orientation, and absorptive capacity.

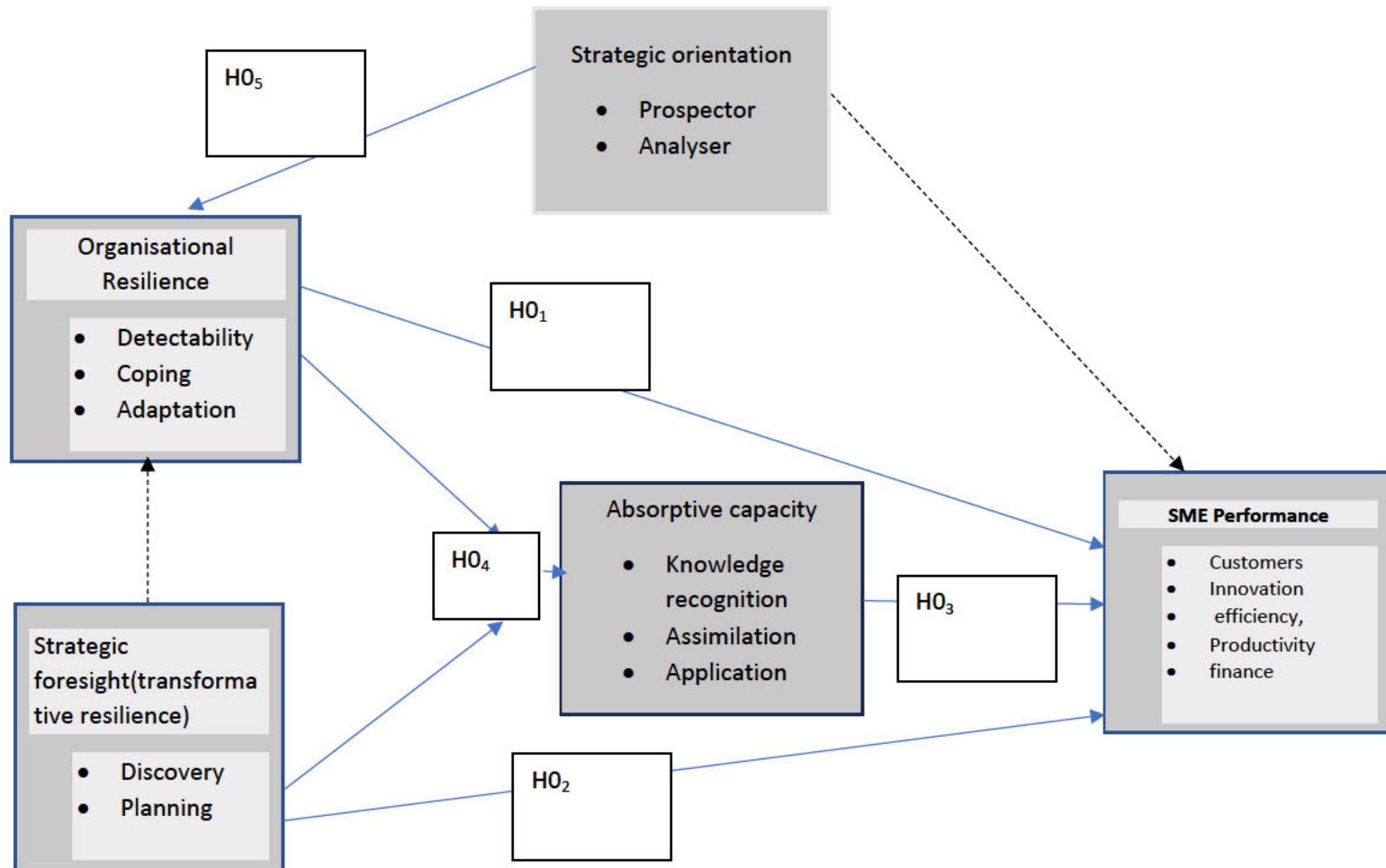


Figure 3. 7: Integrated Resilience Model

Source: Researcher's own conceptualisation

Below is a brief discussion of each of the critical concepts focusing on the definition, clarity of where each concept is drawn from and why it is critical in this study. In discussing each concept, the nature of relationships between the concepts is also provided to aid the understanding of how the impact of resilience on SME performance is studied in this quantitative study.

3.9.1 Organisational resilience

According to Saad et al.(2021), resilience is a combination of a portfolio of capabilities with diverse managerial constructs. Biggs (2011) refers to resilience as the firm's ability to survive, minimising vulnerability, and bouncing back better. For the purpose of this study, organisational resilience is *the organisation's ability to rebound back from adversity, disagreement, and failure, and to effectively absorb, develop situation-specific responses* (Branicki et al. 2018 as cited in Pathak et al. 2023; Kanyangale & Pearse, 2012; Lengnick-Hall et al., 2011b). The exclusion of other definitions of resilience is based on Saad et al. (2021) who established through their study on “conceptualising of SMEs’ business resilience: a systematic literature review”, that majority of publications centring on discrete/event driven disruptions such as the financial crisis and natural disasters which might be temporary.

This definition is used because it underscores the importance of withstanding disruptions and leveraging them as opportunities for transformative change. It highlights the dynamic nature of resilience and the need for organisations to adapt and respond to unexpected challenges. By emphasising the ability to absorb and develop situation-specific responses, the definition acknowledges that disruptions can come in various forms and require tailored actions. This suggests that organisations need to be agile and flexible in their response strategies, as a one-size-fits-all approach may not be effective. This aspect aligns with the notion that resilience involves a proactive and adaptive mindset. Furthermore, the definition's focus on engaging in transformative activities highlights the potential for organisations to turn disruptive surprises into opportunities for growth and innovation. It suggests that resilience goes beyond mere survival and includes the ability to thrive in the face of challenges. This aspect of resilience is particularly relevant in the study of small and medium-sized enterprises (SMEs), as they often operate in resource-constrained environments where the ability to capitalize on disruptions can be a significant competitive advantage (Saad et al., 2021b; Zhai et al., 2018b).

From the definition, detectability, coping and adaptation were adopted as the dimensions of organisational resilience (Duchek, 2020b). Detectability involves recognising and identifying potential disruptions or threats. Coping refers to the strategies and mechanisms used to manage and deal with stress or adversity. Adaptation involves adjusting, modifying, or transforming in response to changing circumstances. By studying these variables, researchers gain insights into how individuals and organisations navigate challenges, recover from setbacks, and build resilience. Understanding detectability, coping, and adaptation informs interventions and practices aimed at enhancing resilience in various contexts (Abubakar et al., 2019; Ian et al., 2009).

3.9.2 Strategic Foresight (Transformative resilience)

In literature, Strategic Foresight (SF) refers to “the organisation’s ability to anticipate changes to better understand them and minimise uncertainties” (Fathi et al. (2021a), while Paliokaitè et al. (2014) define strategic foresight (transformative resilience) as a firm’s structural and cultural capabilities to detect changes, interpret the consequences, and generate effective responses. Teixeira and Werther, (2013) argue that if an organisation engages in swift anticipation of changes and faster adaptation, these actions may lead to competitive advantage and market success. On his part, Rohrbeck (2008) defines *ability to look forward and to use the insights in strategic foresight as... the organisationally useful ways, such as shaping the strategy or defining new markets, products, and services*. This definition is in line with what Blackman and Henderson (as cited in Fathi et al., 2021) opined arguing that transformative resilience(foresight) allows an organisation to identify future developments, before these become trends. Foresight involves gathering, assessing, and interpreting relevant information to support decision making. This does not imply forecasting the future, instead, enhances an organisation’s ability to prepare to meet future requirements and opportunities by anticipating a series of options to arrive at a desired future (Anderson et al., 2004). Using a transformation lens, foresight a construct of resilience is a systematic effort to attain a long-term future that aims to identify high economic and social profitability for investment (Forouzandeh et al., 2016). As such, two dimensions; discovery and planning were integrated in the conceptual model of resilience (integrated). Using discovery as one of the dimensions of strategic foresight allowed the researcher to examine how SMEs sense, shape and adapt acquired information to aid planning. With information from the discovery dimension, SMEs can initiate actions and implement them to shape and achieve a desired future.

3.9.3 Strategic orientation

Strategic orientation refers to the substantive beliefs that guide the actions of organisations (Mankgele & Fatoki, 2020). In this study, strategic orientation means the proactive and forward-thinking approach that organisations adopt to anticipate, prepare for, and respond to disruptions and uncertainties (Chen, Liu, et al., 2021; Nguyen et al., 2022; Ogbari & Amaihian, 2018). This definition is useful to this study because understanding an organisation's strategic orientation can provide insights into how it approaches challenges and adapts to changing circumstances. An organisation with a strategic orientation that emphasizes flexibility, innovation, and agility may be better equipped to exhibit resilience in the face of disruptions. The Miles and Snow typology/orientation suggests that organisations develop internal consistencies in their pursuit of their strategy, which result into behaviour associated with the strategy (Alnawas & Abu Farha, 2020; David et al., 2019; Nguyen et al., 2022; Ogbari & Amaihian, 2018). Gnjidić (2014) identified orientations: prospector, defender, analyser and reactor. Desarbo et al. (2005) re-echo Miles and Snow's (1978) typology by indicating that a firm's strategic orientation takes the form of a prospector (PROS), analyser (AN), defender (DEF), and reactor (REA).

Companies that pursue a prospector orientation tend to be successful in their current market by maintaining internal focus by concentrating on a narrowly defined product-market domain with a corresponding loss of adaptability to changes in the external environment (Gnjidić, 2014). Prospectors are organisations/managers that pursue this orientation, are proactive, and pursue an aggressive approach to their environment. Analysers combine characteristics of defender and prospector orientations. Lastly, reactor firms that pursue this orientation lack a clear and concise connection between structure and strategy. Reactor firms score low on exploration and exploitation (Gurkov, 2012). Reactors respond passively to environmental pressures (Tan et al., 2019).

3.9.4 Absorptive capacity

Absorption capacity is a firm's ability to recognise new knowledge, and its value and assimilate it into its systems to create commercial value (Cohen & Levinthal, 1990). Although the concept has been widely adopted, research results on its application in SMEs is unknown. For the purpose of this study, absorption capacity means the ability of small and medium-sized enterprises to acquire, assimilate, and utilise external knowledge, information, and resources effectively. This definition asserts that "absorptive capacity is the organisation's ability to recognise the value of external knowledge, diffuse it and use it for

commercial purposes (Cohen & Levinthal, 1990).” It involves the organisation's capability to identify, understand, and integrate new knowledge and technologies into its operations and decision-making processes (Abubakar et al., 2019; Freeman, 2007; Kostopoulos et al., 2011). This definition helps to recognise that SMEs may not have all the necessary resources and capabilities internally. Therefore, they must rely on external sources to enhance their competitiveness and adapt to changing market conditions. By developing a strong absorption capacity, SMEs can leverage external knowledge, technologies, and best practices to improve their products, processes, and overall performance. This can include conducting market research, collaborating with external partners, participating in industry networks, and adopting new technologies. For this study, three dimensions of absorptive capacity were used to develop an integrated resilience model: knowledge recognition, knowledge assimilation and knowledge application (for commercial ends). Knowledge recognition refers to a measure of how firms acquire knowledge for internal use, assimilation refers to a firm's capacity to integrate new external knowledge into the existing body of knowledge, while knowledge application means a firm's capacity to deal with causal or relational challenges (Cohen & Levinthal, 1990).

Knowledge recognition, assimilation, and application are integral to the study of resilience as they facilitate the adaptive capacity of individuals and organisations in the face of challenges. Knowledge recognition involves identifying relevant information and resources, enabling an understanding of potential risks and available solutions (Kostopoulos et al., 2011; Muscio, 2007; Zahra & George, 2002). Assimilation of knowledge allows for integrating new insights and strategies into existing knowledge frameworks, fostering the ability to adapt thinking and behaviours. Application of knowledge translates theoretical understanding into practical action, empowering individuals and organisations to navigate complex situations and enhance their resilience effectively. Recognising, assimilating, and applying knowledge strengthens resilience, enabling individuals and organisations to respond, recover, and thrive amid adversity.

3.10 SME performance

Organisational performance refers to an evaluation of its achievement according to its objectives (Purwanti & Hapsari, 2022). According to Chong (2008) performance should be measured using a combination of measures, objective and subjective. Combining measures helps to reduce the weaknesses of using objective measures that are historical in nature. This allows for measuring a firm on other qualitative characteristics such as the effectiveness of operations as well as how internal processes are aligned to deliver value. This study used economic indicators of SME performance which are; innovation (new methods of doing things to produce a new product), number of customers (those who buy a firm's product/service), efficiency (the extent to which resources are economically used), financial (statement of profit and loss, financial position and Return on Asset) and productivity (a measure of the efficiency of an SME's production process). Apart from computing and assessing available firm-level data, the key determinant of the extent to which performance will be measured is the goal that firms intend to achieve. In sum, to determine the dimensionality of the constructs (independent and mediating), factor analysis was conducted using Varimax rotation. Items with a factor loading of more than 0.50 were included to determine the key constructs that determine a firm's resilience, absorptive capacity or strategic orientation. The adoption of these variables aimed at ensuring comprehensive understanding of the relationship between variables.

For the purpose of this study, SME performance means “a set of organisational effectiveness that covers operational and financial outcomes” (Ramirez & Lim, 2021).

This definition draws from the work of Ion & Criveanu, (2016); Lebas (1995); Okun et al., (2010); Rodríguez-Serrano & Martín-Armario (2019); Wall (2021). The definition used in this study provide insights to the study of organisational resilience and its impact of performance optimisation because it provides a comprehensive understanding of an organisation's overall effectiveness and success. Performance management programs typically include elements such as setting and measuring goals, defining effective individual performance, and developing processes to measure it.

3.11 CHAPTER SUMMARY

The aim of Chapter three was to critically discuss the phenomenon of performance management as a comprehensive method of tracking employees' work performances and developing their skills to contribute to organisational objectives and resilience in small and medium enterprises (SMEs).

The chapter presented the evolution and phases of performance, its antecedents, typology of SME performance, theories of performance, measures of performance, relationship between resilience and performance, performance and absorptive capacity. The chapter concludes by presenting a discussion on resilience models and frameworks and a presentation of the integrated model of resilience. Firstly, understanding the historical context and trends in organisational performance allows the researcher to identify the factors that have influenced performance over time. Secondly, examining the antecedents of performance helped to identify the key drivers of success, such as resilience, absorptive capacity, strategic foresight and strategic management practices. Lastly, exploring performance measures enables researchers to select appropriate metrics for evaluating and assessing organisational performance. Having discussed the key concepts of resilience, performance and developed a conceptual framework to guide this study, the next chapter discusses the research methodology used in the study, focusing on the strategic impact of resilience on performance optimisation of SMEs in the Manzini region, Eswatini.

CHAPTER 4: RESEARCH METHODOLOGY

“Most researchers design a piece of research to answer a question or address a problem. Like positivism, realism is a philosophical position associated with scientific enquiry. Our values can impact the research we decide to pursue and how we pursue it. This may not lead to any form of discord, but it may mean that some observers accuse us of untoward bias” ...

Mark Saunders and Paul Tosey

4.1. INTRODUCTION

This chapter discusses the research methodology adopted to investigate the strategic impact of resilience on the performance optimisation of small and medium enterprises in Manzini, Eswatini. The chapter gleans literature from (Saunders, 2011; Saunders et al., 2007), “research onion” for developing the research framework. Specifically, the chapter presents the research philosophy, research design, study environment, population and sampling, procedures and methods for collecting data, analysis of data, and ethical considerations. This chapter, therefore, acts as the blueprint of the study, providing a systematic method to resolve the research problem.

4.2. RESEARCH PARADIGMS

The philosophical foundations of research are crucial as they shape the study's approach, methodology, and interpretation of findings. This section discusses the research paradigm guiding this study, focusing on the ontological, epistemological, and methodological assumptions that inform the research design. By clarifying these foundational principles, the discussion aims to establish a coherent approach to inquiry.

Understanding research paradigms is essential for guiding scientific discoveries through underlying assumptions (Park et al., 2020). Wooi Keong and Md Husin (2021) highlight various dichotomies in social sciences, such as positivism versus interpretivism and quantitative versus qualitative approaches. Thomas Kuhn introduced the term “paradigm” in 1962, defining it as a cluster of concepts, variables, and problems linked to specific methodologies (Hussain et al., 2013). He further notes that a paradigm serves as an "object for further articulation" under new conditions.

Wooi Keong and Md Husin (2021) describe a paradigm as a set of assumptions providing a conceptual framework for understanding the world. Earlier definitions focused on data types rather than the associated epistemologies and methodologies (Wooi Keong & Md Husin, 2021). Grix (2010, as cited in Hussain et al., 2013) identifies three uses of the term in human

sciences: institutionalization of intellectual activities, broad groupings of approaches, and descriptions of research approaches. Kuhn (as cited in Kalman, 2016), asserts that paradigms are vital for scientific inquiry, as they provide the theoretical and methodological beliefs necessary for evaluation and criticism. A paradigm is defined as "a set of basic and taken-for-granted assumptions" that guide a group's theoretical framework and practices (Saunders et al., 2016, p. 723).

Abdul Rehman & Alharthi, 2016) describe it as a belief system encompassing ontology, epistemology, methodology, and methods. Saunders et al. (2007) further define a research paradigm as a worldview guiding investigation in fundamental ways. A paradigm consists of five elements: (1) a theory or theories; (2) ontology; (3) methods or techniques (epistemology); (4) examples or applications linked to a theory; and (5) a value orientation regarding significant problems and acceptable solutions (Kuhn, 1962). Deshpande (1983) outlines several roles of a paradigm for researchers: guiding the identification of key issues, establishing developments for models and theories, and determining the necessary research tools. Each researcher's worldview is shaped by their knowledge and beliefs. Abdul-Rehman and Alharthi(2016) notes that disagreements about research paradigms can lead to "paradigm wars." However, Guba and Lincoln (as cited in Abdul-Rehman & Alharthi, 2016) argue that these disagreements reflect method choices rather than confrontational conflicts. Richards (p. 40, as cited in Abdul-Rehman & Alharthi, 2016) emphasises that quality research considers political, cultural, ethnic, and gender factors, and that researchers should not conform to a philosophical tradition to avert the threat or accusation of intellectual ex-communication (Abdul-Rehman & Alharthi, 2016).

In light of these discussions, this study adopts the research onion model by Saunders (2011). This model outlines the decisions a researcher makes when developing a methodology, progressing from high-level philosophical considerations to practical applications. The research onion consists of six layers: research philosophy, research approach, research strategy, research choice, time horizon, and research procedures, which are vital for guiding research. These six *layers* are illustrated in Figure 4.1 below.

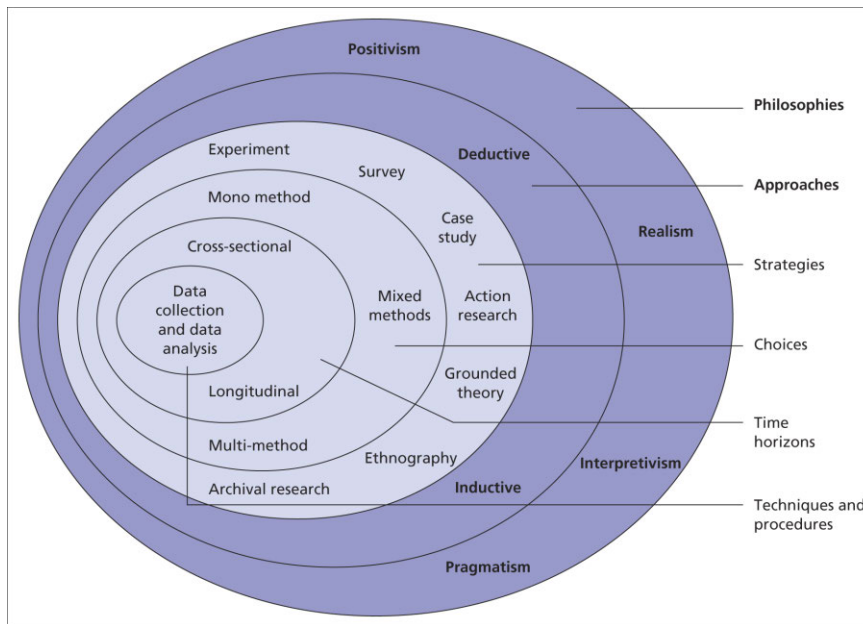


Figure 4. 1 Research onion

Source: (Saunders, 2011; M. Saunders et al., 2007)

The section below presents the parts of the research onion as identified in the section above.

4.3 RESEARCH PHILOSOPHY

According to Pacewicz (2019), Plato was one of the founding fathers of philosophy. He introduced many innovations and views in the field of philosophy. Plato significantly contributed to developing a system of rationalist theory of cognition. Through philosophical reasoning, “he argued that the world we live in is only one of the appearances and the world of forms is the world of reality, although we cannot see it yet”. According to Plato, the world of appearances is constantly changing and decaying with many imperfections, while the world of forms is immutable, eternal and perfect. What we see is a reflection of form in a world of forms. Patel (2012) believed that ideas do not exist separately from visible things. However, the essential nature of anything is the idea in it.

The nature of philosophy a study adopts contains essential assumptions about how the world is viewed. This world-view forms and underpins the research strategy and methods to be adopted when conducting research. For Saunders et al. (2019), the notion of paradigm is considered the ontological, epistemological, and axiological assumptions guiding the option of methodology and methods. Creswell (2014) identifies four paradigm components: *ontology*, *epistemology*, *axiology*, and *methodology*. These assumptions stand for beliefs that researchers bring into research. There are three ways of thinking about research philosophy:

epistemology, ontology, methodology and axiology (Denzini, 2003; Saunders et al., 2007). Each of the ways of thinking about research influences the way in which we think and the methods we adopt during research.

According to Kivunja and Kuyini (2017), in locating a study in a particular paradigm, the understanding is that the study will uphold and be guided by the assumptions, beliefs, norms and values of the chosen paradigm. As mentioned earlier, a paradigm is a primary system and theoretical framework with assumptions about 1) ontology, 2) epistemology, 3) methodology and 4) methods (Abdul Rehman & Alharthi, 2016). The sections below present the specific aspects that constitute a paradigm.

4.3.1 Ontology in a Research Paradigm

“Ontology and epistemology are to research what footings are to a house; they form the foundations of the whole edifice” (Abdul Rehman & Alharthi, 2016).

Ontology refers to the “nature of our beliefs about reality” (Abdul Rehman & Alharthi, 2016). Researchers develop assumptions about reality, how that reality exists, and what can be known about it. In the famous myth of the cave in the Republics, Plato (as cited in Sfetcu, 2022) argues that the sensitive world is presented as an imperfect image of the world of ideas, understood instead as the “real world”. Ontology deals with whether reality is considered objective and external to actors or whether reality is a social construct from the viewpoint of social actors. Ontology in research is regarded as the study of being, which deals with the nature of reality (Saunders et al., 2019). Two forms of ontology are distinguishable in research, and these are objective and subjective ontology. Objectivism is an ontological stance which holds that reality and its meaning exist independently of all actors. In this regard, reality is external to the researcher (Saunders et al., 2019).

In a slightly different vein, subjectivism is considered the direct opposite of objectivism, and contends that phenomena are socially constructed from actors' lived experiences (Saunders et al., 2007). In a similar vein, Denzin and Lincoln (1994: 13) posit that “ontology is concerned with what is the nature of reality and what can be known about that reality”. Kim (2003) suggests that reality can be separated into parts and examined individually such that the knower or researcher can be distanced from whom or what is being studied. Alternatively, Babbie (2011) conceive that reality can also be perceived as being socially constructed by actors acting together in a context such that the researcher cannot be separated from what is known. In adopting the notion of reality as socially constructed, a researcher is committed to

understanding reality or seeing the world through the participants' eyes. The current quantitative study focuses on organisational resilience and its impact on SME performance as an objective reality. Because of the above, this study adopted realism as its epistemological stance. Majorly, reality is independent of the mind. Studying the phenomenon with a realistic perspective enables the researcher to understand how the phenomenon functions.

4.3.2 Epistemology in a Research Paradigm

The theory of knowledge (epistemology) has been one of the most essential filed of philosophy. Daily, new arguments are constantly to bear on old views, new variants are marshalled to revive ancient stands, and new concepts and distinctions increase the sophistication of epistemological theories. According to Hiller (2016), epistemology is a theory of knowledge concerning beliefs about "how phenomena" come to be known, that is, how knowledge is produced. For Hiller (2016), epistemology is concerned with the "nature, sources, and limits of knowledge" with a focus on producing "justification for the scientific production of knowledge".

Saunders et al. (2007) assert that epistemology refers to what constitutes acceptable knowledge. This definition implies that epistemology deals with the question of how valid and reliable the nature of knowledge is (Saunders, 2011). Epistemology answers questions on how we gain knowledge regarding reality or being. The research approach which one adopts should be consistent with its epistemology, epistemological assumptions, or what is considered knowledge in a discipline. Burrell and Morgan (1993) state that epistemology deals with assumptions about the grounds of knowledge. This specifically focuses on how research begins to understand the world about what is true and what is not and how the researcher's understanding of the world can be communicated to fellow humans. According to Guba and Lincoln (1994, p. 108), "epistemology is concerned with the relationship between the knower, the would-be knower and what can be known". Epistemology relates to the question: "What is the relationship between the researcher and knower?"

The epistemological stance adopted in a study depends on the nature of reality being investigated in research. Subjective reality requires a close and interactive relationship between the researcher and participants to get an in-depth understanding of multiple perspectives of reality. The epistemological assumptions under the constructivist paradigm hold that reality is not known at arm's length, but rather through close interactions among researchers and research participants. Subsequently, subjectivism comes to the fore as the

epistemological assumption, because of the joint creation of meaning and knowledge by the researcher and the knower (Hiller, 2016). This view resonates well with an argument which asserts that meaning is made but not discovered through the interrelations between consciousness and the world independently of our knowledge of it. In other words, the epistemological assumption of a constructivist researcher contends that knowledge is subjective because it is socially constructed, and not independent. In this context, participants are regarded as active knowers who understand and reflect on the social phenomenon. Researchers can mutually understand the phenomenon under investigation by interpreting the intentions of the knowers (Hiller, 2016). Thus, the action of conducting a qualitative study entails that researchers should strive to get as close as possible to the participants being studied. With this epistemological assumption, the emphasis is to understand a particular phenomenon in a given natural context, through first-hand subjective experiences of participants (Saunders, 2011). Alternatively, in investigating objective reality, the researcher adopts a distant or arm's length relationship as reality is external and objective. Below is figure 4.2 which depict the two different types of ontology and the key assumptions to enrich our understanding of ontology.

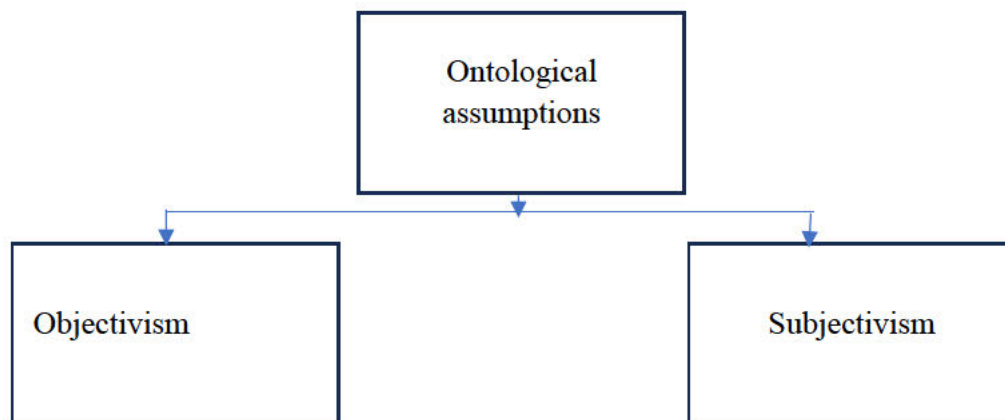


Figure 4. 2 Ontological assumptions

Adopted from Al-Saadi (2014)

Objectivism advances that social entities exist in reality separate and external to social actors that are concerned with its existence. On the other hand, subjectivism advances that social phenomena are created from perceptions and consequential actions of social actors. For the purpose of this quantitative study, the researcher formulate and test hypotheses with a view to confirming or refuting theory. As the current study focuses on objective reality, the researchers adopted an arms-length relationship with research participants in a way which enhances objectivity and reduces bias. In adopting this epistemological stance, researchers believe that they are simply external observers of reality which exist independently (Saunders et al., 2007).

Sandelowski and Barros (as cited in Porter, 2007) argue that epistemic arguments should be replaced by aesthetic criteria, which raises three interlinking premises: that the only site for the reader to evaluate research is the research report. Secondly, the research report is a dynamic “vehicle” that mediates between the reader and the writer. The last premise is that the form and shape of a research report are inseparable, with form shaping content. Porter, (2007) concludes that research reports/studies should be evaluated based on aesthetics, instead of heavy reliance on epistemology. This view advances that quantitative studies should migrate from the use of epistemology to the use of aesthetic premises. Although Adler(2022) suggests that quantitative research should be based on aesthetic considerations and developing robust quantitative methods, he advises that aesthetic premises alone are not enough to generate robust and valid research results. Porter (2007) argues that Rolfe’s use of aesthetics in research is unscientific. Adler (2022) agrees with this view by stating that:

“when quantitative researchers conduct their studies, it is assumed that they are adopting the ontological and epistemological principles of science. The researcher’s conceptual tool kit implies it. The systematic methods that they use also add credibility, because the process is more important, and easier to evaluate, than the personal characteristics of the researcher.”

Regardless of the approach taken, the trustworthiness of the research is largely determined by a clear specification of the epistemological and theoretical bases of the study. This has to be accompanied by a clear overarching perspective that guides the research question(s), including, stating the theoretical base of research builds trust and may be a place where researchers are self-aware with regard to how their research work/findings are presented (Adler, 2022).

4.3.3 Methodology in a research paradigm

Methodology is one of the key components of a research paradigm, as it reflects the overall approach of how the researcher collects and generates data, to produce valid knowledge. Hill (2016) states that methodology may also be referred to as a framework “of logically related means and end to guide research design”. It provides the supporting rationale for decisions made in designing methods for data collection and analysis, whereas methods are the hands-on procedures or actions used to gather and analyse data (Hill, 2016). It is the methodology that informs one’s choice of research methods. In a nutshell, methods are the means and tools for gathering and analysing data, while methodology is the abstract theoretical assumptions and principles that are foundational to a method. Saunders et al. (2007) argue that “the question of research methodology is equally important to the questions of which paradigm is applicable to a research study.”

Axiology as a component of paradigm refers to values and how these are handled to produce credible research. The concept of axiology owes its origin from two Greek roots: “axios” and “logos”, with “axios” meaning “worth” or “value” while “logos” means “logic” or “theory”(Biedenbach & Jacobsson, 2016). Axiology is a branch of philosophy(epistemology) that deals with the nature of values (Saunders et al., 2007). This definition highlights the importance of the researcher’s values in the study of phenomenon. Values play a central role in determining the credibility of research findings. Biedenbach and Jacobsson(2016) identify three types of values: intrinsic value which is defined as the pure value of an object (thing), extrinsic value is the value of an object for the sake of something, value that is not intrinsic, or value that is derived as a result of something. The last type of value is what Rescher (1969) calls systemic value. This value transcends boundaries beyond intrinsic and extrinsic values. Saunders et al.(2007) believes that human values are the guiding reason for human action. Researchers deploy their axiological capabilities when they can clearly articulate their values regarding the nature of the research that they are undertaking and the methods they intend to deploy in conducting the study. Studies in management are influenced by the research paradigm used. Although values are key in determining the research outcomes of a study, this not being a study on value, the use of a positivist epistemological stance suffice to ensure that objectivity is ensure in analysing and reporting research findings.

In understanding the research paradigm, it is important to understand the two key criticisms. First, the research paradigm is criticised for encouraging paradigm allegiance. Paradigm allegiance describes scientists’ dogmatic, uncritical, and unquestioning attitudes towards

accepted paradigms in the period of normal scientific research (Abdul Rehman & Alharthi, 2016). Scientific paradigms are neither qualitatively different, nor in some cases contradictory, in the way that they can neither be merged nor interact with each other in a meaningful way. Second, a paradigm is criticised based on ‘paradigm incommensurability’. The idea of the incommensurability thesis asserts that research methods are entirely glued to a special paradigm, which implies that they cannot be applied to another paradigm. The language of successive theories in the same context may differ with respect to the meaning and reference of their terms. It may not be possible to translate the terms and expressions of another theory into the language of the other (Howard, 1994).

4.3.4 Research paradigm

Drawing from the general discussion on research paradigm and its constitutive elements, several paradigms that guide research, which include positivist, constructivist, and critical paradigms (Abdul Rehman & Alharthi, 2016). The researcher subscribes to the positivistic paradigm, which involves the search for objective reality of the strategic impact of resilience on SME performance from the viewpoint of research participants who are the owners of SMEs in Mbabane, Eswatini.

According to Al-Saadi (2014), positivism, an epistemological position, supports the view that phenomena should be studied in an objective manner. Al-Saadi(2014) aptly argue that with positivism, facts, and values are distinct, thus ensuring that research can be conducted in an objective-free enquiry. This view ensures that the researcher and the research findings are distinct. The meaning and meaningfulness of reality exist in reality, to be discovered before the “arrival” of the researcher. On their part, Saunders et al. (2007) argue that what researchers can observe is likely to produce credible data. To collect “credible” data, the researcher should be able to identify an effective strategy and identify an existing theory to develop hypotheses. The formulation of hypotheses will require the identification of relevant tools and techniques to test them hence enhance further development of the theory that is subject to further testing by other researchers. From a positivism realist perspective, the testing of hypotheses is based on facts(objectivism) and not impressions (subjective views). This view is supported by Saunders et al. (2007) who opine that the collection of facts is in line with the concept of observable reality similar to that employed by the physical and natural scientists. Thus, the view by Al-Saadi (2014) that recognising objects around us involves “the discovery of meaning which has been lying in them all along.” Therefore, truth is static and always objective. This research resonates with this view because the use of

proper methods may lead to the discovery of truth. This involves a careful observation of the phenomenon being studied rather than deducing from abstract propositions. Drawing from Saunders et al. (2007), each research philosophy has its own shortcomings, and as such, there is nothing like the best research philosophy. Saunders et al. (2007) state that: “every research philosophy is better at doing different things.” and achieving better results is primarily influenced by the nature of research questions being answered. As noted, different research paradigms have different ontological and epistemological assumptions. Realists argue that theoretical fragmentation has become a key characteristic of the contemporary social sciences (Dean et al., 2006) . Different research approaches have emerged over time, each claiming theoretical underpinning over the other. It has been argued that, the roots of this theoretical fragmentation originated in the 1960s when researchers felt that existing research philosophies were not providing concrete justification for the stance taken. Dean et al. (2006) argue that dissatisfaction with social theories led to the search for alternatives to positivism. Although the search for alternatives to positivism resulted in the discovery of new forms of epistemology, different philosophical viewpoints still exist, rendering the use of research philosophies as a subjective concept (Al-Saadi, 2014). Interestingly, present debates focus on opposing theories as a means of defending a particular approach. Therefore, the resulting effect of cross-theoretical debates is the emergence of new ways of thinking or an attempt to qualify certain views as correct over others, hence affecting the quality of philosophical thinking (Al-Saadi, 2014; Dean et al., 2006). According to Saunders et al. (2007), realism relates to scientific enquiry. Realism opines that objects have an existence which is independent of the human mind, an opposite of idealism. As a branch of epistemology, realism assumes a scientific approach to the development of knowledge through data collection and a careful understanding of what the data is and its meaning. It is important to appreciate that, business management research is better understood if two forms of realism are discussed:

- a) Direct realism: This form of realism argues that reality is based on what we see at first sight (what you see is what you get).
- b) Critical realism: Saunders et al. (2007) opine that, “what we experience are sensations, images of the things in the real world, not the things directly.” Zhang, (2023) argues “that observable events are the actualisation of the unobservable real, manipulatable, and internal mechanisms. The empirical study of the observed world should be accompanied by sufficient ontological studies of the hidden real generative

structures. Thus, reality can only be understood if people understand the structures that generate events.” Two of the insights of critical realism that resonate with positivism are a complex reality that exists independently of our ideas about it, and that this reality is knowable, although this might be imperfect. The second insight that resonates well with the positivist stance is the concept of causality which is best understood in terms of causal processes that may or may not be directly observable or generalisable. This study adopted critical realism with a view of understanding reality based on empirical evidence. This is supported by Brunson et al. (2023).

It is however important to note that, although our senses cannot tell a complete story of what reality is, senses have a tendency to deceive us. Thus, what researchers see are sensations of presentation of the real world, not the world itself (Adler, 2022; Al-Saadi, 2014; Burrell & Morgan, 1993; Porter, 2007). On the other hand, direct realists argue that the mismatch between our sensations and reality results from insufficient information. Aware of the challenges of the realist explanation of the growth of knowledge and a lack of reliable methodology to analyse knowledge, the use of epistemologically relevant causal interactions becomes plausible (Boyd, 1988). The combination of scientific methodology with theories provided a rationale for using realism and positivism. This is because the selected theories appear to have been accepted by researchers, thus being able to provide a correct explanation of the nature of knowledge. On the other hand, **interpretivism** research involves researchers interpreting elements of the study by integrating elements of human interest (idealism) into the study. According to Ryan (2018) interpretivism is a belief in philosophy which advances that truth and knowledge are subjective. From a research perspective, truth in research emerges at the end of the research study. Access to reality is only through social constructions using such approaches/medium as language, consciousness, shared meanings and instruments. The main philosophical underpinning of interpretivist perspective is hermeneutics, which is the philosophy of interpretation and understanding. Unfortunately, hermeneutic analysis tends to be of great relevance to the interpretation of the biblical text, than business studies.

According to Saunders et al. (2007), interpretivism originates from two intellectual strands: phenomenological and symbolic interactionism. Phenomenology refers to the way in which humans sense the world around them (sensation), while symbolic interactionism is an ongoing process of interpreting the social world. The continual interaction between elements of the social system leads to adjustments in the interpretation and meaning of the social

world. Studies have indicated that interpretive perspective is suitable for fields such as organisational behaviour, human resource management, and marketing. Two noticeable challenges affect the adoption of the interpretivist view in business research: the inability to interpret accurately the views and ideas of the social element and, the failure to generalise findings (Saunders et al., 2007). Since the major contribution of this study was to develop a generalisable resilience model for SME performance optimisation, the use of interpretivism was not required.

The quantitative study adopted a positivist paradigm with realism as its ontological stance. Like the natural world, the positivism paradigm assumes that to study reality, social entities should be studied in an objective way. Positivists view the world as free from the researcher's interference, and available for study to understand its objective reality (Abdul-Rehman & Alharthi, 2016). Denzin and Lincoln (1994, p. 13) aptly posit "that ontology addresses the abstract principles of "what is the nature of reality". Positivistic researchers believe reality can be separated into parts and examined individually such that the researcher or knower can stand apart from whom or what is being studied". Although the positivist tradition has been used in multiple research studies, its assumptions that if rules and laws are the only aspects derived from observations, researchers argue that such a view anchors the view that it is possible that future observations may prove an exception to such rules (Al-Saadi, 2014).

For positivism, the formulation and testing of hypotheses to determine relationships; in the study, hypotheses are proposed, and are tested for confirmation or rejection of the relationship. According to Abdul Rehman and Alharthi (2016) positivists adopt an objective ontology to study reality and test hypotheses to gain an objective understanding of reality or phenomena. With this ontological stance, this study tested hypotheses with the aim of measuring, predicting, and generating a model that explains the relationship between resilience, and performance optimisation with Miles and Snow's typology predicting a firm's resilience capacity while absorptive capacity mediated the relationship between the variables. On the other hand, epistemology deals with the relationship between the knower, the would-be knower, and what can be known. In this regard, the quantitative study satisfies the requirement put forward by positivists which emphasises that, to make sure that no other variable caused the effect, an attempt is made to control for extraneous variables by subjecting other variables to the same condition. Therefore, absorptive capacity was tested for its mediating effect on the relationship between resilience and the performance of SMEs. The use of quantitative data and methods of analysis in understanding social reality (SME

resilience and performance) is consistent with positivist epistemology, since social reality has a constancy across time and settings as such, can be conceptualised as a variable (Abdul Rehman & Alharthi, 2016). Table 4.1 below presents the fundamental differences between pragmatism, positivism, realism and interpretivism.

Table 4. 1: Differences between the pragmatism, positivism, realism and interpretivism

Focus	Pragmatism	Positivism	Realism	Interpretivism
	Reality is ambiguous, but based on the language, history, and cultural respect.	Argues that the nature of truth exists out there in the physical and social environments.	Part of reality is ontologically independent of the human mind	Researcher and reality are inseparable
	Focuses on empirical research and with a kind of hands-on attitude toward doing social science.	Reality is objective and perceived	Focuses on understanding what entities exist, how they are grouped and how they are related.	Focuses on human actions and participants' understanding and meaning.
Ontology (nature of reality)	Complex, rich, external 'reality' is the practical consequences of ideas Flux of processes, experiences and practices	Assumes that both physical and social realities are governed by "causal laws" which are there waiting to be unveiled or explored.	Things of nature are seen by us in terms of a conceptual apparatus that is always - and substantially influenced by mind-involving elements.	Three separate ways within which the interpretive paradigm unveils direct human actions and meaning-making processes (transformation of processes of human processes of experience to create reality, making meaning from printed or written documents, and use of language to in constructing symbolic meaning

Epistemology	Action consequence	Truth and reality are independent of the viewer and observer		
	The key question is what do we want to know?			
	Justify action that leads to the attainment of research goals.			
	Understanding reality requires different explanatory tools and theoretical perspectives for different research questions	Truth as the aim of science		
	The researcher restores subjectively assigned and “objective” meaning of other actions	Acquisition of knowledge is not based on values and moral content	Combines goals of truth and information	Exploration of how social realities are constructed in the human mind
			Conception of reality depends upon factors that are not totally describable by science.	Social realities are constructed through meaningful interactions.
				Participant’s interpretation is based on lived experiences
Methodology (How can reality be established?)	Qualitative			Recorded text of human experience
	Quantitative	Although this paradigm can use a qualitative method, usually quantitative methods dominate.	Metaphysical questions should be kept separate from epistemological issues	Intentional social interaction
	Mixed			Use of signs and symbols to communicate
Methods tools	(What and	Interviews,	Experiments	Combines positivism and interpretivism
				In-depth investigations(-Interviews)

techniques can be used to acquire knowledge?)	Observations, Testing and, Experimentation.	Half experiments Tests Scales Surveys Check-lists Mathematical calculations Presentations are usually made in numbers, tables and graphs.	Qualitative with focus on small sample. Observation Document study Image data analysis

Source: Modified from (Joseph, 2019,pp. 26-32; Saunders et al., 2019,pp. 144-145)

4.4 RESEARCH APPROACH

According to Saunders et al. (2007), “it would be easy to fall into the trap of thinking that one research approach is *better* than another. Each research approach is *better* at doing different things”. What is “better” depends on the research question(s) to be answered. It is not possible that research falls neatly into one philosophical domain, as suggested in the research onion. Research in business management is often a mixture between positivist and interpretivist paradigms, thus, reflecting the stance of realism (Saunders, 2011). Two important issues emerge from the extent to which an attempt to answer the key research question involves theory testing or building a theory. In an attempt to answer the research question, two contrasting approaches to reasoning emerge: deductive or inductive (Saunders, 2023). Taherdoost (2022), argues that different types of research are classified based on a range of criteria including the application of the study, the objectives of the research and the nature of the information sought. In the pursuit of research endeavours, differences in approaches adopted are caused by the degree of understanding and explanation of the phenomenon as the aim of inquiry, the differences between impersonal and personal roles of the researcher in the process and, the differences between the constructed and discovered knowledge.

Saunders (2023) argue that a researcher’s extent of clarity about the theory to be adopted at the beginning of the study, leads to a fundamental difference in the design of the study. Thus, a deductive approach should be adopted, with the aim of developing a theory and a hypothesis and design a research strategy to test hypothesis. On the other hand, inductive approach allows the researcher to collect data and develop a theory.

According to Sauce and Matzel (2017, p.1), “deductive reasoning is a logical process in which multiple premises, all believed to be true or found true most of the time, are combined to obtain a specific conclusion or to supply evidence for truth of conclusion”. Deductive reasoning owes more to positivism while inductive reasoning is a view that Saunders advances, but later disputes. This position seems to align with Knox (2004) who argues that the misalignment between methodological pluralism and philosophical pluralism is an important issue for debate. The misalignment between method and philosophical stances can create confusion throughout the study. Knox(2014.p.121) notes that, “within the research arena, there are varying views on how to carryout research.”

4.4.1 Deductive Reasoning

Locke (2007), McAbee et al. (2017) aptly advance the view that deductive reasoning is the dominant research model in the organisational sciences. According to Ketokivi and Mantere (2010, as cited in Saunder et al, 2007; Saunders et al., 2023) deductive reasoning occurs when the conclusion is derived logically from a set of premises that are theory-driven, thus the conclusion being true when all the premises are true. Hyde (2000) argues that deductive reasoning is a theory testing process which commences with an established theory or generalisation. It seeks to establish if the theory applies to specific instances or not.

In deductive reasoning, hypotheses are stated a priori, data are collected and analysed to establish the extent to which the stated hypotheses (a priori) are confirmed or not. McAbee et al. (2017) advance the view that the hypothetico-deductive strategy is not intended for researchers who seek to identify possible alternatives for trends and patterns that result from the analysed data. This view is supported by Saunders (2023) who argues that deductive reasoning occurs when the conclusion is derived logically from premises that were advanced by a priori. Casula et al. (2021) add that the formulation of hypotheses in studies that adopt a deductive approach helps to provide a frame for explanatory research, thus connecting the research purpose to other parts of the research process.

Soiferman (2010) state that deductive research adopts a top down format, moving from theory to hypotheses and to data with the aim of adding to or contradicting an existing theory. Over the years, the traditional view has been that quantitative researchers subscribe to the “positivist” research paradigm (Hyde, 2000). Hyde (2000) argue that the choice of research paradigm rather than the choice of the research method should be the overriding focus for a study. This is because the view advanced by quantitative theorists that reality can be measured reliably and validly using scientific principles has its own limitations (Soiferman, 2010). Reliance on assumptions and premises is misleading since these change overtime (Soiferman, 2010).

4.4.2 Inductive Reasoning

According to Sauce and Matzel, 2017) inductive reasoning is “a logical” process in which multiple premises are believed to be true, or found to be truth most of the time, are combined to obtain a specific conclusion or to supply evidence for the truth of a conclusion.”

Indicative reasoning helps to generate predictions or make forecasts about phenomena. Inductive reasoning differs from deductive reasoning because it premises the view that

inference in inductive reasoning is only probable, where the degree of certainty is based upon the strength of the evidence, the opposite of what deductive theorists advance. There is no logical certainty about conclusions of inductive inference. Its probabilistic nature calls for the adoption of a general principle where categories are formed based on specific observations. Creswell and Plano, 2010; Soiferman, 2010 state that the inductive researcher works from the “bottom-up, using participant’s views to build broader themes and generate a theory interconnecting the themes.”

In advancing the strength of inductive reasoning, McAbee et al. (2017) explored feedback interactions in the context of creative projects. Their key task was to elaborate a method of iteration between theory and data as a critical aspect of the theory-building process, where induction occurs prior to theory framing. Their findings revealed that theory does not necessarily precede data or vice versa. Instead, inductive methods contribute to theory development that is accurate, interesting and testable (Eisenhardt and Graebner, 2007, as cited in McAbee et al., 2017). This finding therefore calls for organisational scientist to consider inductive strategies as complementary with, rather than in contrast to deductive methods. Testing of a theory built inductively can be tested deductively.

In organisational research, two main types of analysis are used quantitative (deduction) and qualitative (induction). Believers of this view suggest that social reality is “constructed” and therefore “subjective” (Soiferman, 2010). In qualitative research, the researcher understands that, research is influenced by the axiological stance of the researcher (Soiferman, 2010). Although researchers seem to disagree on the best method to use in research activities, deductive and inductive methods are not mutually exclusive and often address the same question using different methods.

To show that the two approaches are complementary, rather than competing, Onwuegbuzie and Leech (2005) propose replacing *quantitative* and *qualitative* with, *explanatory* and *exploratory*. With quantitative analysis, it is possible to get a visual representation of the data using plots, graphs, charts and tables. Soiferman (2010) argues that in quantitative research, conclusions and inferences are logical and evidence-based. Soiferman (2010) states that, “it is up to the research to gather the words of the participants, and describe a process using both expressive and persuasive language.” Creswell (2005), agree with the earlier assertion that both qualitative research and quantitative research address the same elements in the research process. Since the purpose of this study was to test hypotheses and determine whether these

confirm the assumption of an existing theory, a deductive research approach was adopted. Fundamental differences between deduction, induction and abduction are presented in Table 4.2

Table 4. 2: Differences between deduction, indication and abduction

	Deduction	Induction	Abduction
Logic	If premises are true, the conclusion must also be true	Known premises are used to generate untested conclusions	Known premises are used to generate testable conclusions
Generalisability	General to specific	Specific to the general	Generalisation based on interaction between the specific and the general
Use of data	Data is collected to evaluate proposition that are related to an existing theory	Data collection is used to explore a phenomenon, identify and develop themes	Collection of data is used to explore phenomenon, develop themes and establish patterns. These are further tested through further data collection and analysis.
Theory	Theory falsification or verification	Generation of theory	Theory generation/modification
Philosophical underpinning	Positivism	Interpretivism	Interpretivism (pragmatism, critical realism)

Source: Adopted from (Saunders, 2023.p.155)

4.5 RESEARCH STRATEGY

A research strategy refers to an overall for conducting a research study (Johannesson & Perjons, 2014). Malhotra (2017) states that a research strategy is a plan or scheme by which the activity of searching and assessing information is carried out. Saunders (2023) and Saunders et al.(2007) advises that each research strategy can be used for exploratory, descriptive and explanatory research. There is no one way of conducting research. The strategy adopted depends on the nature of the research topic, philosophy, time and other resources that are available to conduct the study (Greener, 2008). Saunders (2023) agrees with this view that the choice of research strategy will be guided by key research questions, objectives as well as the extent of existing knowledge, amount of time required to conduct the study and importantly, the philosophical underpinning of the researcher. With these in mind, a research strategy guides a researcher in ensuring a “smooth” execution and monitoring of

the components of the study. Johannesson & Perjons (2014) advances the view that whereas the research strategy provides useful support on a high level, it should be complemented with research methods which provide the finer details required in the implementation of a research study. Methods tell the researcher to answer the what of data, the what and how of tools of analysis and the techniques that may be appropriate for making inferences. In selecting the choice of research strategy, Johannesson and Perjons (2014) proposes that a researcher answers the following questions:

- Is it suitable with respect to the research question?
- Is it feasible, bearing in mind the resources needed to conduct the study?
- Is it ethical?

A research strategy usually involves a series of steps: first, the analysis of the key concepts of the study topic. Secondly, defining the keyword and their synonyms. Thirdly, searching appropriate information and lastly, assessing the quantity and quality of the information found (Malhotra, 2017). For the purpose of the study, the following research strategies are discussed:

4.5.1 Experimental Design

An experimental design is an empirical study that investigates cause and effect relationships (Johannesson & Perjons, 2014). It owes much to the natural sciences as it features strongly in many studies that are social science in nature, especially psychology (Saunders et al., 2007). The purpose of an experiment is to prove or disapprove a causal relationship between a factor and an observed outcome. To do this, a hypothesis(es) has to be tested to prove or disapprove a theory. A hypothesis can be expressed more precisely using the notions of *dependent* (effect) and *independent* (cause) variables. As such, a researcher who is carrying out an experiment for testing a hypothesis will manipulate the values of the independent variables to establish whether these create changes in the dependent variable. This is done by introducing, removing or changing the value of an independent variable (Johannesson & Perjons, 2014).

According to Saunders et al. (2007) experiments tend to be used in exploratory and explanatory research to answer the questions: “how” and “why”. Saunders et al. (2007) agrees with Johannesson and Perjons (2014) by indicating that in a classic experiment, two groups are established, and members assigned at random to each. All critical aspects of the two groups are similar instead of whether they are exposed to the planned intervention or

manipulation. The first group the *experimental group*, where some planned intervention or manipulation is made (Johannesson & Perjons, 2014; Saunders et al., 2007). In the *control group*, no form of manipulation takes place. Overall, this means that the use of a before and after can be applied. Thus, any difference between the experimental and control groups for the dependent variable is attributed to the intervention. By randomly assigning members to the experimental and control groups, the researcher is able to remove the possibility of an alternative explanation to the planned intervention since the control is subjected to exactly the same external conditions as the experimental group (Johannesson & Perjons, 2014; Saunders et al., 2007).

Experimental research is the most powerful method for inferring causal relationships between variables. This is premised on the account that in theory, all possible factors that could account for a change (external) in one or more outcome variables other than the influence of the independent variable have been eliminated. However, it is not possible to meet all the requirements to conduct an experimental design. Such experiments are then called quasi-experiments (Silcocks, 2009). Since this research strategy involved the use of “laboratory work” why an intervention is applied, this current study did not adopt it because phenomenon was studied in its natural setting without any form of manipulation.

4.5.2 Quasi Experimental Strategy

Campbell et al. (1963) argue that there are many natural social settings where a researcher can introduce experimental design into the scheduling of data collection procedures although the researcher may lack full control over the scheduling of experimental stimuli that make a true experiment possible. This is what may be regarded as a quasi-experiment. Quasi experimental methods explore the causal effects of an intervention, treatment or stimulus on a unit of study. Although such methods have many characteristics of scientific experiments, the major shortfall is the lack of random assignment of treatment across a population which is a requirement for generalisability (Simon et al., 2017). Although quasi experiments have their own flows, the use of purposive sampling has its own benefits, especially when assessing small sub-groups that random sampling can miss. The use of quasi experiments conduct tests over time (pre-test, post tests) or over space (one-time comparison) by establishing near equivalence in factors that influence outcomes across treatment and control groups (Simon et.al., 2017). A key question remains; do quasi experiments have a higher or lower internal validity than a true experiment? Silcocks (2009) believes that true experiment produces an unreal situation because of the strict control over the conditions within which the experiment

must be carried out. Unfortunately, such a situation really occurs in everyday life, hence, results from experiments are not generalisable to a wider population. This view is in line with (Campbell et al. 1963) who aptly argue that “from the standing of the final interpretation of an experiment and the attempt to fit it into the developing science, every experiment is imperfect. What a check-list of validity criteria can do is to make an experiment more aware of the residual imperfections in his design so that on the relevant points he can be aware of the competing interpretations of his data.” Campbell et al. (1963, p. 34) advises that a researcher should deliberately seek out artificial laboratories which provide the best opportunities for control. This therefore implies that the pursuit of quasi experiments leads to equivocal interpretation of results. Due to the weaknesses of the quasi-experimental design, the researcher did not consider it.

4.5.3 Survey Research Design

This type of design is defined as the “collection of information from a sample of individuals through their responses to questions” (Ponto, 2015). Ponto (2015) add that surveys “answer questions that have been raised, to solve problems that been posed or observed, to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyse trends across time, and generally, to describe what exists, in what amount, and in what context.” On their part, Pinsonneault and Kraemer (p.77, as cited in Glasow, 2005) refer to a survey as a “means for gathering information about the characteristics, actions, or opinions of a large group of people. Salant and Dillman (p.2, as cited in Glasow, 2005) argue that surveys are used to assess, evaluate demand and examine impact. Kraemer (1991, as cited in Glasow, 2005) identified three key distinguishing features of survey research. First, survey research is used to quantitatively describe key aspects of a given population (examining the relationship among variables). Second, data collection involves people, thus pose a high likelihood of being subjective. Third, a sample is drawn from a population from which findings can later be generalised to the population.

With a survey, different methods are employed to recruit participants, collect data, and utilise various methods of instrumentation. Surveys can use questionnaires with numerically rated items, thus making them quantitative or can adopt qualitative research strategies by using open-ended questions and sometimes may be mixed. According to Nigel et al. (2009), surveys are a traditional way of conducting research. They have been found to be useful for conducting non-experimental descriptive designs that seek to describe reality. The collection

of attributes and behaviours have been attributed to the use of surveys that cannot be collected by classical experimental designs where participants are randomised to either an intervention group or a control group. Nigel et al. (2009) further suggests that there are fundamental reasons why participants cannot be randomly assigned to a defined intervention. They further argue that it may also not be possible to identify a control group, hence a great challenge to control over the randomisation process.

According to Glasow (2005), in survey research, independent and dependent variables are used to define the scope of the study, although these cannot be explicitly controlled by the investigator. In conducting a survey study, the researcher usually predicts a model that identifies the expected relationships among the variables under study. Thus, the study is then constructed to test the model against the observations of the phenomenon.

Needham and Vaske (2008), advance the view that, a fundamental principle of survey research is using it in a scientific way at a reasonable cost for realising the benefits of interviewing a sample instead of the entire population. Surveys are useful in describing the characteristics of a population. This view appears to have equally been highlighted by Glasow (2005). Glasow advances the view that surveys can collect data from large samples of the population. However, Salant and Dillman (p.13, as cited in Glasow, 2005) presents a different view. They argue that surveys only provide estimates for the true population, not exact measurements. Ponto (2015) enumerates the biases associated with survey research and how biases are a major drawback in conducting survey research. Despite these challenges, (Needham and Vaske, 2008) provide a case for using survey research. They argue that survey research can allow for large sample size that can be obtained in a short time. Further, since surveys involve the design of multiple questions that can be asked in a single survey. Asking several questions allow the researcher to understand concepts under investigation and improve reliability and validity of the measuring instrument.

The research design for the quantitative study was cross-sectional, with correlational features. According to Easterby-Smith et al. (2002, as cited in Saunders et al., 2007), it has been established that cross-sectional studies often employ the survey strategy. Studies that use surveys or cross-sectional designs seek to understand by describing or explaining the nature of relationships that exist between variables/phenomena. Saunders et al. (2007) argue that the use of cross-sectional designs enables researchers to use quantitative approaches with the possibility of adopting qualitative approaches if they wish. The use of a cross-sectional

design enabled the researcher to study the use of theory, test hypotheses, and conceptualise them to produce a general view of results (Zangirolami-Raimundo et al., 2018). The adoption of cross-sectional design is based on its philosophical base which is linked to the positivism paradigm that requires studying phenomena without manipulating/influencing them (Abdul-Rehman & Alharthi, 2016). The quantitative study used a one-off questionnaire to collect data, with a 5-point Likert scale. Questions on owner/manager's perceptions, beliefs, and attitudes on past, present and future organisational resilience, strategic foresight, strategic orientation, absorptive capacity, and performance were asked to determine SMEs' resilience, absorptive capacity and performance.

4.4.4 Case study

Woodside and Wilson (2003) defines case study research as an inquiry that focuses on describing, understanding, predicting, and/or controlling the individual (processes, animal, person, household, organisation, group, industry, culture, or nationality).” This definition is an improvement to what that was advanced by Yin (as cited in Woodside & Wilson, 2003). He proposes that;

a case study is an empirical inquiry that investigates a contemporary phenomenon within its real context, especially when the boundaries between phenomenon and context are not clearly evident.

Earlier, Skinner (p.21, as cited in Woodside & Wilson, 2003) argues that focusing the research issues, theory, and /or empirical inquiry on the individual ($n=1$) is the central feature of case study research. Skinner notes;

instead of studying a thousand rats for one hour each, or a hundred rats for ten hours each, the investigator is likely to study one rat for a thousand hours.

It should be noted that, case study research is not necessarily intended to focus on $n=1$. Several case studies in one inquiry are possible, especially if the inquiry is to eliminate the size of an effect (strength of the relationship between two variables) rather than to generalise to a population(Woodside & Wilson, 2003). This view partly contradicts Hoon(2013) who advocates for a synthesis of knowledge, follows the assumption that the foundation of science is the accumulation of knowledge from the research evidence of many studies. The key question is: how then does the investigator accumulate knowledge from a case study? Or is this accumulated through conducting many studies of case study in nature or many cases in one inquiry? Hoon (2013) argues that case study research enhances the study of

contemporary organisational phenomena in a real life-setting with an in-depth, yet holistic study of a few or single cases. Its rich history and broad application enhance the production of novel theoretical insight stemming from case-specific contextualised findings (Hoon, 2013).

Yin (2003) notes that there are three categories of case study research, namely: exploratory, descriptive and explanatory. Some studies have fundamental reasons for not having propositions. Every “exploration” should have a purpose. Instead of propositions, the design for an exploratory study should state this purpose as well as the criteria by which an exploration will be judged successful. Exploratory studies examine any occurrence in the data which acts as a point of interest to the researcher. In an exploratory study, the use of questions generate deeper insights into the nature of phenomenon.

Priya (2021) argues that the purpose of descriptive case study, the purpose is to “describe” a phenomenon in detail in its real-world context. This type of case study is popular in fields such as sociology and psychology. Yin (2003) warns that a major flaw of this method is that the researcher/investigator must start with a descriptive theory to generate a description of the occurrence. Further, descriptive case study research design is its limited ability to establish causal relationships or determine cause and effect. Descriptive case studies are primarily focused on describing the distribution of variables without considering any causal or other hypotheses. While they provide detailed insights into a particular phenomenon, they do not aim to establish causation or test specific relationships between variables.

The third type of case study research is the explanatory research design. This type of study design looks for causal factors to explain the occurrence of behaviour of a particular phenomenon (Priya, 2021). The explanatory case study design seeks to explain, “why” and “how” certain conditions come into being. It also explains why certain sequence of events happen or do not happen. Zainal (2007) advances the view that explanatory cases are also deployed for causal studies where pattern-matching can be used to investigate certain phenomenon in very complex multivariate cases. Three rival theories: a knowledge-driven theory, a problem-solving theory, and a social interaction theory explain the complex and multivariate cases in explanatory case study design (Zainal, 2007). The knowledge-driven theory stipulates that the eventual “commercial products” are the results of ideas and discoveries from basic research. With the problem-solving theory, “products” are derived from external sources rather than from research. On the other hand, the social interaction

theory boundary spanning professional network causes researchers and uses to communicate frequently with each other. Zainal (2007) explain that there are other categories of case study. These include interpretivist and evaluative case studies. Through interpretive case studies, the researcher aims to interpret the data by developing conceptual categories, supporting or challenging the assumptions made regarding them. On the other hand, evaluative case studies allow the research to add his/her judgement to the phenomenon established in the data. Over and above, the use of theory in conducting case study research enables the investigator to define appropriate research design and data collection. It is noted that the same theoretical orientation also becomes the main vehicle for generalising the results of the case study research. Zainal (2007) advises against an attempt to conceive the different categories of case studies as a hierarchy. To Yin, a common misconception is that various research strategies should be arrayed hierarchically. Yin (1984) states;

we were once taught to believe that case studies were appropriate for the exploratory phase of an investigation that surveys and histories were appropriate for the descriptive phase, and that experiments were the only way of doing exploratory or causal inquiries.

The hierarchical view is incorrect. Experiments with exploratory motive have existed. The development of causal explanations has long been a serious concern of historians, reflected by the subfield known as historiography. It is also important to note that case studies are far from being only an exploratory strategy (Zainal, 2007).

It should be noted that this study did not adopt a case study research design. The present study adopted a survey design with to gather information from a large group of people using questionnaires to obtain a broad understanding of a population or phenomenon. Further, the study collected quantitative data and adopted quantitative data analysis. There was no intention of comparing results across cases to generalise findings.

4.5.4.1 Action Research

Action research is used to resolve issues and problems in the academic or work environment with a strategy to interpret, explain and gather on a particular question of interest (Quayson, 2019). Hine (2013), defines action research as, “a process of systematic inquiry that seeks to social issues affecting the lives of everyday people”. Saunders et al. (2007) define action research as a strategy concerned with managing a change and involving close collaboration between practitioners and researchers. Saunders et al, (2007) notes that results flowing from action research should also inform other contexts. Indeed, the definition by Elliot (p. 69 as

cited in Nasrollahi, 2015), “that action research is the study of a social situation with a view to improve the quality of action within it” supports Saunder’s submission. Within the definition, the intention (action) is stated. Action research has been long associated with Kurt Lewin “who viewed this research methodology as cyclical, dynamic, and collaborative in nature”. Hine (2013) defines action research as a collaborative process carried out by those with shared concerns. Moreover, these authors suggest that action “research is implying a form of collective reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out.” Noffke (1997) and Hine (2013), agree with the idea of the collaborative nature of action research. Noffke (1997) opines that the methodology adopted by this type of research lends itself effectively to a broad range of beliefs and relations that are analogous to family, while Reason and Bradbury (2011) advance that collaborative efforts help to develop practical ideas to assist with the pursuit of worthwhile human purposes.

Mills (2013, as cited in Quayson, 2019) recommends using seminal knowledge to implement the collection and analysis of data in every phase of the action research. Scholars should conduct action research through the lens of qualitative, quantitative, or mixed methods if they can explore answers to questions of interest. According to Ernest (2007) action research may not conform to conventional criteria of research rigor. This is because rigour is less the important factor that takes a more democratic, empowering and humanising approach which tends to assist locals in extending their own understanding of their situation and at the same time, helps them to resolve the problems they view as important.

According to Hine (2013), guidelines and models of action research are available to researchers who wish to engage in action research methodology. Lewin (1952) and Hine, (2013) describe action research as “spiralling”, a cyclical process. To understand action research, the study presents a brief discussion of the action research “helix” (Stringer, 2004, p.4, as cited in Hine, 2013) commonly referred to as the, “Look, Act, Think model as presented in Figure 4.3.

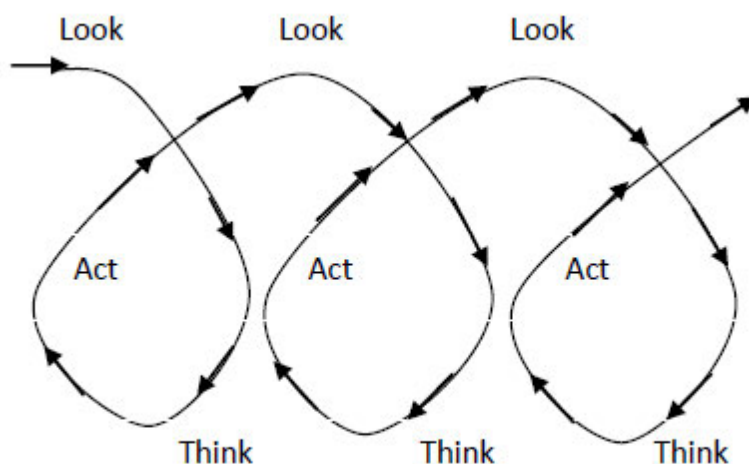


Figure 4. 3: Action Research Hilex

Source: Adopted from (Stringer, 2004, p.4).

Stringer (2004) argues that in the ‘look’ stage, an investigator gathers information through careful observation of phenomenon through looking, listening and recording. In the ‘think’ stage, researchers analyse the collected information to identify significant features and elements of the phenomenon being studied as well as theorising. The newly formulated information is then used to find solutions to the problems being investigated during the ‘act’ stage (report, evaluate)(Ernest, 2007).

In a bid to broaden the understanding of action research methodology, Hine (2013) expands the Research “Hilex” by Stringer. Instead of three stages, he broadens the Hilex into five steps: designing the study, collecting data, analysing the data, communicating outcomes and, taking action. Ernest (2007) appears to be in agreement with extension. The author argues that, “this cycle is a common process of action research inquiry. When designing the study, the first area of focus for a researcher is to carefully refine the issue to be investigated, plan systematic processes of inquiry, and check the ethics and validity of the work.” The second stage of the cycle involves the collection of information from different sources on an issue of interest. The third stage involves the analysis of information sets to identify key features emerging from the data. In the communication stage, the outcomes of the study are made known to relevant audiences through relevant communication channels. The final stage involves using information generated from the study to take action. The study outcomes are used to provide solutions to the issue under investigation.

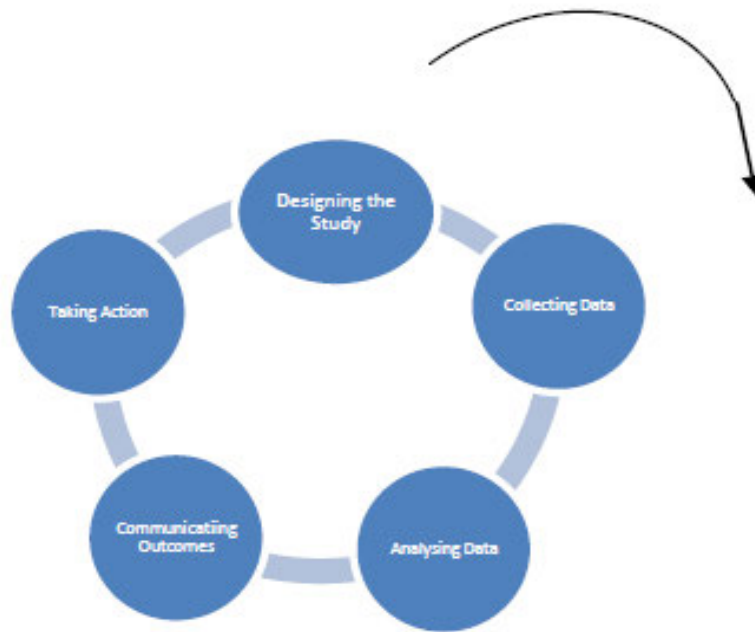


Figure 4. 4: Action Research Cycle

Adopted from Stringer (P.5 as cited in (Hine, 2013).

A noticeable weakness of action research is the fact that, it is riddled with a lot of bias, especially if the investigator is part of the community/social setting in which a solution is being sought for a problem. There is a presumption of knowledge of the problem and the likely intervention to remedy it. Since this study did not seek to take action to remedy a social problem but to test hypotheses and validate a theory(ies), an action research strategy was not adopted.

4.5.4.2 Grounded Theory

Grounded theory is a research paradigm that involves the systematic collection and analysis of data to generate theory. It was introduced by Glaser and Strauss in 1967 to legitimise qualitative research and challenge the traditional deductive approach to theory development. Before their publication entitled “The Discovery of Grounded Theory” (Mahajan & Mahajan, 2023), global research, deductive thinking, and quantitative approaches were dominant.

Saunders et al. (2007), argue that it is better to conceptualise “theory building” as a combination of induction and deduction. The purpose is to predict and explain behaviour and develop theory to explain such behaviour. Mohajan and Mohajan(2023) defines Grounded

Theory (GT) as the generation of theory. It focuses on social behaviour grounded in data collected through a systematic process of social research. Grounded theory is inductive and represents participants' views relative to an area of interest. Saunders (2023) states that, “in grounded theory, data collection starts without the formation of an initial theoretical framework. Theory is developed from data generated by multiple observations.” The data collected and analysed, leads to the generation of predictions which require further testing through new observations. The result is to confirm the developed theory, or otherwise. For Saunders et al. (2007), grounded theory is an indicative/deductive approach where theory is grounded in continual reference to data. Mohajan and Mohajan (2023) agrees with this view and suggest that, grounded theory is a systematic flexible method that emphasises simultaneous data collection and analysis.

Although grounded theory has been adopted especially for qualitative research, the original proponents of the theory have developed methodological disagreements in some aspects, and departed in their research procedures. It has been noted that, the path taken by versions of their original methodology are labelled by “Glaserian” and “Straussian” respectively. Glaser has consistently shown faith in the methodology in its original one. This is referred to as, Classic Grounded Theory”(Barneny, 2004; Mohajan & Mohajan, 2023). Barneny (2004) warns that mixing qualitative data analysis and grounded theory methodology has the impact of downgrading and eroding the goal of grounded theory of conceptual theory. This results in a default remodelling of classic grounded theory into just another qualitative data analysis method with all sorts of descriptive analysis. According to Barneny (2004), classic grounded theory (CGT) is simply “a set of integrated conceptual hypotheses systematically generated to produce an inductive theory about a substantive are.” It is a structured, yet flexible methodology. Data collection is simultaneous, sequential, subsequent, scheduled and serendipitous, thus forming an integrated methodological “whole” which enables the emergence of conceptual theory that differentiates it from qualitative data analysis research. Barneny(2004) agree with this view and suggests that CGT exposes latent forms of human behaviour, since it tends to use all kinds of data. For example, Barneny (2004) recognises the flaws in Creswell’s 1998 book “Qualitative Inquiry and Design.” Barney (2004) argues that Creswell (1998) lumps grounded theory into comparisons with phenomenology, ethnography, case study and biographical life history. This produces a faulty remodelling of grounded theory.

On the other hand, Mohajan and Mohajan (2023) has accepted and pursued the view that, like any other theory, grounded theory had to evolve to comprise several different variants. The theory has been adapted and modified in various disciplines to fit specific knowledge areas and interest (Mohajan & Mohajan, 2023). Khan (2014) moved the method towards verification rather than focused on the earlier version of grounded theory. Despite much criticism, Straus's version of grounded theory is more famous than the earlier version of grounded theory. Since this study did not seek to develop a theory and verify or confirm the same through further data collection and analysis, the present study did not use grounded theory.

4.5.4.3 Ethnographic study

According to Adhikari and Scholar (2023) ethnography originates from the 19th century when anthropologists began to study non-western cultures. Bronislaw Malinowski is considered the father of modern anthropology and is believed to have conducted extensive research in the Trobriand Islands of Melanesia. Malinowski (1922) and Adhikari and Scholar (2023) established ethnography as a rigorous and systematic method of research. Sometimes known as cultural anthropology or naturalistic enquiry, ethnography originates in anthropology. Ethnography deals with the discovery and description of culture of a group of individuals (Lata Sharma & Sarkar, 2019). This definition bears common characteristics as in the definition by Adhikari and Scholar (2023) who state that, “it is a qualitative research method that involves the researcher immersing themselves in a particular culture or group to understand their way of life”.

According to Adhikari and Scholar (2023,p.3) the term “ethnography” comes from Greek words “ethos” (people) and “graphia”(writing). Fetterman (as cited in Adhikari and Scholar, 2023) argues that in its original etymological sense, the term referred to the description of non-Western cultures written by European explorers and missionaries. This view has however been disputed by arguing that it is a severe discipline, demanding the utmost power of observation, interpretation, and theoretical construction (Malinowski, 1922).

Creswell (2018, as cited in Adhikari and Scholar, 2023) argues that ethnography is a design of inquiry with anthropology and sociology roots in which the research studies shared patterns of behaviours, language, and actions of an intact cultural group in a natural setting over a long period of time. Fetterman's (as cited in Del Rio-Roberts, 2010) definition appears to provide a more detailed process of the ethnographer's work of immersing the local context

and bringing the “unheard voices” to understand phenomenon by observing the community (Adhikari & Scholar, 2023).

Banfield (2003) draws attention to what he sees as the conceptual and methodological confusion arising from two competing strands of practice, naïve realism (positivism) and relativism (constructionism and post-structuralism). Hamersley (1992) identifies two particular issues that ethnographers must confront: the problems of validity and practical relevance. Banfield (2003) argues that Hamersley’s criticism of ethnography has its weaknesses. While on the surface of things, this may appear self-evidently correct in determining the validity and practical relevance of ethnographical studies, Hamersley offers very little help to understand why certain descriptions and explanations come to be taken as valid or invalid. It is possible that relevance might be a structural phenomenon. Hamersley makes reference to the issue of structure and practice. (Banfield, 2003) argues that it is one thing to declare cautiously that reality is not structureless, but it is quite another matter to directly assert that reality is structured. This raises the question, what is structure? How does it relate to human action? Since the present study devolved into testing hypotheses of resilience and not a description of the culture of a certain group of people, ethnography research was not adopted.

4.5.4.4 Archival Research

According to Ventresca and Mohr (2017, p.2), “archival research methods include a broad range of activities applied to facilitate the investigation of documents and textual materials produced by and about organisations”. This type of research strategy involves the study of historical documents created in the distant past, providing access that readers/users of information may otherwise not have to the organisations, individuals, and events of the past. Saunders et al. (2007) states that, archival research makes use of administrative records and documents as the main sources of data. Saunders et al. (2007) are of the view that although the term archival has historical connotations, it may also refer to recent and historical documents. Weber (1968) and Ventresca and Mohr, (2017) argue that the management of the “modern office” is based on written documents, preserved in their original form.

According to Ventresca and Mohr (2017), three approaches to archival study can be distinguished. The first one is the historiographical approach and two streams exist in this approach. The first sub-approach was the work of the original institutional school, where historical materials were employed in the conduct of research. The second sub-approach was

the work of business historians such as Chandler (1962;1977) who studies modern business by using archival materials. The second main approach was the ecological analysis which ushered in a new era of archival research in which small amounts of information gleaned from life histories of many organisations was marshalled to create and tell a story about the dynamics of organisational environments. The third, approach, institutionalism emerged during the 1970s (Ventresca & Mohr, 2017). Institutional studies coded and analysed small amounts of information on many organisations sampled over time.

Ventresca and Mohr (2017) warn that the use of archival materials has its own challenges of transparency. The conditions of their production and persistence mean that materials often offer partial or contradictory evidence for an interpretation. This becomes a methodological concern around decisions of design and analysis. These concerns are shared by Vogt et al. (2012) who argue that there is no such a thing as neutral collection. The researcher's interpretation is built into the collection. Therefore, what was sought as valuable and kept or useless may mean something else to another researcher.

However Das et al.,(2018) argue that archival research has a place in contemporary theory generating research. Archival research plays three roles in contemporary research: it can be used to add empirical path to a project, thus generating new data and enabling verification of existing data from other sources; generating developmental data explanations and challenging existing theories and building new theoretical models. Since the present study tested hypotheses by first collecting primary data and analysing it, an archival research strategy was not adopted. The study did not intend to analyse data from historical records or documents to generate results.

4.6 RESEARCH CHOICES

According to Saunders (2023), research choices refer to the way in which a researcher chooses to combine quantitative and qualitative techniques and procedures. Saunders et al.(2007) use the more generic term, research design when referring to multiple methods. According to (Goundar, 2012), *research methodology is away to systematically solve the research problem (or the science of conducting research scientifically)*, while *research methods refer to techniques investigators use in performing research operations*.

Saunders (2023) argues that in choosing the research methods to be adopted, the researcher may either use a single data collection technique and corresponding analysis (*mono-method*) or adopt more than one data collection techniques and procedures for analysis to understand a

phenomenon (multiple methods). In a descriptive study of the latest published articles in the International Journal of Project Management on mono, mixed or multiple strategy approach, results suggest that most researchers stick to mono methods, predominantly with qualitative techniques (Vizcarguenaga-Aguirre & López-Robles, 2020). The different research choices are presented below;

4.6.1 Mono Method

It has been noted that although mono-method research is often weak in providing “comprehensive solutions to social problems, scholars-policy disengagement disconnects the research focus urgent real-life issue”(Ojebode et al., 2018, p.369). Vizcarguenaga-Aguirre and López-Robles (2020) argue that depending on the nature of the study, mono-strategy is applied when one strategy is used.

4.6.2 Multiple methods

Multiple methods design use more than one data collection technique and procedure for analysis (Saunders 2023; Saunders et al., 2019). For Creswell (2003, as cited in Gil-Garcia and Pardo (2006), multi-method approaches refer to the use of multiple methods (typically quantitative and qualitative in conducting research. Brewer and Hunter (1989, p.28 as cited in Gil-Garcia and Pardo, 2006), add that ;

actual multiple-method studies are either single studies or more complex programmes of continuing research, which systematically employ various combinations of field, survey, experimental, and non-reactive methods to address their research questions.

According to Vivek and Nanthagopan (2021), investigators should follow two rules when using different methods. The first, they say is to honour the main theoretical impetus or narrative of the undertaking and its principal methodological assumptions. The main theoretical motivation which may be quantitative or qualitative forms the key analytical centre of the study.

According to Vivek and Nanthagopan (2021), the second premise for using multiple-methods is to identify the secondary function of the component. The secondary component elicits a viewpoint or dimension that the first method cannot improve or allow additional investigation of a developing hypotheses(es). Therefore, the secondary data and analysis are informed by the data produced by the supplementary data. The secondary data function is usually denoted by lower-case letters denoted by “quan” or “qual.” Saunder et al.(2007) identifies four multiple methods as discussed below.

4.6.2.1 Multiple methods quantitative studies

Vivek and Nanthagopan (2021) argues that if a study's major theoretical motivation is quantitative (QUAN) with qualitative (QUAL) as its secondary element, the sample must be drawn from the main research population. Creswell (1999, as cited in Vivek and Nanthagopan, 2021) argues that there are four quantitative theoretical drive combinations: QUAN+quan, QUANquan, QUAN+qual, QUANqual. The sign(+) shows that the secondary or supplementary technique was applied concurrently or simultaneously during the period of data collection.

Dawadi et al. (2021) argue that quantitative researchers are guided by positivism, and they use quantitative tools to get "objective" findings by using tools such as survey. The quantitative approach enables the researcher to collect data from many participants, thereby increasing the possibility to generalise the findings to a wider population. The ability to generalise findings is premised on the strength that quantitative approach of data collection can bring breadth to the study by supporting the researcher with accumulating data about the different aspects of the issue. In an attempt to maximise objectivity, replicability and generalisability, the researcher sets aside her/her biases, experience and perceptions to ensure objectivity in the conduct of the study and the conclusions that are to be drawn from the study. Quantitative research studies are characterised by using instruments such as tests or surveys to collect data and reliance on probability theory to test statistical hypotheses that correspond to research questions of interest. The concept of generalisability is supported by Martin and Bridgmon (as cited in Queirós et al. 2017) who argue that results of quantitative studies are taken as if they constituted the general view of the entire population.

4.6.2.2 Multiple methods qualitative studies

Vivek and Nanthagopan (2021) opines that if the investigator's main theoretical motivation is qualitative (QUAL), the sample size to be selected is usually modest and selected purposely. Where the secondary element is quantitative, external normative values should be provided for quantitative data interpretation due to sampling breaches. Four combinations emerge from the qualitative theoretical drive QUAL+qual, QUALqual, QUAL+quan, QUALquan (Vivek & Nanthagopan, 2021). Mik-Meyer (2020) argues that conducting multimethod qualitative research covers a broad range of methodologies. For example, individual interviews, focused group interviews or online interviews and observations cover a wide range of issues that a single method might omit.

According to Gil-Garcia and Pardo (2006) multi-method research fails to recognise that it is more demanding in terms of time, money and researcher's abilities than a single method approach. Gil-Garcia and Pardo (2006) agree with this view. McKendrick argues that multi-method research approach become less feasible for small-scale research, such as at undergraduate dissertations. Also, the demand for triangulation for a congruence makes dealing with some discrepancy across datasets challenging. It is also important to note that the attempt to capitalise on complementary strength of various methods than would otherwise be the case creates a risk. The adoption of multi-method requires a priori understanding of its specific strengths (Gil-Garcia & Pardo, 2006). The present study did not adopt this research choice because of the complexity of its application.

4.6.2.3. Mixed Methods

Liu (2022) state that, "mixed methods research was initially defined as a research design that involved at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collected words)." Tashakkori and Teddlie (p.x, as cited in Liu, 2022) argue that promoters of mixed method advanced the view that this method had changed during the 1990s, and evolved to a point where it had a separate methodological orientation, vocabulary and world view. Johnson and Onwuegbuzie (p.17, as cited in Liu, 2022) add voice to the argument that mixed methods had evolved. They argue that it represents a third research paradigm, which moved past the paradigm "wars", since it offered a logical and practical method and system of philosophy. According to Creswell and Plano (2011, as cited in Dawadi et al., 2021), the mixed-methods approach has its own philosophical assumptions which provide direction for the collection and analysis of data from multiple sources within a single study. Bryman (2006) and Tashakorri and Teddlies (as cited in Hafsa, 2019) identify various expressions that refer to mixed-methods research such as integrating, synthesis, multimethod, qualitative methods and mixed methodology.

Hafsa (2019) provides a more rigid and operational definition of mixed method research. The authors define mixed method research as, "the collection, analysis and integration of quantitative and qualitative data in a single or multiphase study". Hafsa (2019) adds that mixed methods research design implies merging qualitative and quantitative research and data analysis in a single study. The major difference between qualitative and quantitative research is the view that qualitative data is derived from open-ended sources usually without predesigned replies, while quantitative date comes from close-ended data sources like tests,

questionnaires or psychological instruments. Dawadi et al.(2021) argue that mixed method allows the research to answer questions with sufficient depth and breadth and helps to generalise findings and implications of the study to the entire population.

Despite its merits, Dawadi et al. (2021) argues that using qualitative and quantitative methods in a single study may cause challenges in terms of the method of analysis and the philosophical orientation to pursue. Liu (2022) argues that mixed methods research is nothing more than triangulation without a clear understanding of the underlying paradigm since the qualitative approach emphasises a relatively open-ended approach to the research process, that frequently produces surprises, changes of direction and new insights while the quantitative approach is labelled as a mechanical application of neutral tools that result in no insights. Three types of mixed methods research are presented.

Sequential mixed methods

There are over forty mixed-method research designs reported in literature (Tashakkori and Teddlie, 2003, as cited in Ivankova et al., 2006). Creswell et al. (as cited in Creswell, 2009) identify the six most often used designs (three concurrent and three sequential). The mixed design sequential explanatory design is popular among researchers and implies collecting and analysing quantitative data first, and the qualitative data later in two consecutive phases within the same study (Ivankova et al., 2006).

Ivankova et al. (2006) advances the view that the mixed methods sequential design consists of two distinct phases: first, quantitative and second, qualitative. In this design, a researcher first collects and analyses quantitative data. Qualitative texts are then collected and analysed in the sequence. Qualitative analysis helps to explain quantitative results. The two phases are then connected in the intermediate phase. The reason behind the sequential approach is to provide a general understanding of the research problem (Tashakkori and Teddlie 1998 and Ivankova et al.(2006). Bell et al. (2022) argue that sequential mixed method allows time for the first set of data to be analysed and can therefore, inform later stages.

Although this method has been identified as popular among researchers, this mixed method design is complex to implement. One such factor that creates complexity is that there is a need to consider certain methodological issues, such as the priority given to quantitative and qualitative data collection and analysis in the study, the sequence of the data collection and analysis, and the stages in the research process at which the quantitative and qualitative phases are connected and the results are integrated (Morgan, 1998; Ivankova et al., 2006).

Ivankova et al.(2006) argues that although concerns about the methodology for sequential explanatory research design have been discussed and outlined, some methodological aspects of the design, such as how researchers decide on which method to assign priority in the design, how to consider implementation issue, how and when to connect quantitative and qualitative phases during the research process and how to integrate results of both phases to answer the key research question still require clarification. Onwuegbuzie and Collins (2007) note that sequential designs are not effective for triangulating data as the findings from the first stage might have an influence on the second stage. Further, a lot might change in terms of context between the first and second stage of the data collection process.

The present study collected once-off data through a survey instrument. Data was not collected at different phases for the same study. As such, this design was not adopted by the present study.

Concurrent mixed methods

According to Bell et al. (2022), the debate on the value of mixed methods research designs is still on-going with proponents of mixed methods arguing that using both quantitative and qualitative data increases the validity and generalisation of results to the population. For Bell et al.(2022) argue that those who have doubt with mixed methods suggest that there are contradictions between the underpinning philosophy and methods regularly arise with mixed methods research designs. Adopting a mixed methods approach blurs the much-needed clarity and focus that should guide every research process.

Bell et al. (2022) argues that concurrent research methods design involves collecting both quantitative and qualitative data at almost the same time. In this regard, the collection of quantitative and qualitative data is mutually inclusive but independent from each other. The collection of both types of data saves time, thus allowing the researcher to complete the process of collecting data simultaneously. Typical of this method is the collection of quantitative data using a Likert scale and qualitative data using open-ended questions within the same data collection tool. Bell et al.(2022) opines that concurrent designs are effective when seeking to triangulate data to determine and demonstrate congruence between both quantitative and qualitative findings. To achieve the objectives of triangulation, the researcher should be able to first determine whether the same type of data could help to achieve the same results and conclusions. Data triangulation helps reduce the risk of “chance associations”, and bias that studies that use one method are prone to. Bell et al. (2022) argue

that mixed methods designs are efficacious for research focused on evaluation, where multiple data points and streams can be reviewed to come to an overall result and conclusion. A noticeable weakness of concurrent mixed methods research designs is they do not allow for the evolution of the topic and understanding through the research process. This limits the potential for knowledge and theory to develop during the research process.

In terms of implications for methodology, positivism does not support mixed methods, since it fails to recognise the value of qualitative data (Bell et al., 2022; Onwuegbuzie & Collins, 2007). Bell et al.(2022) agree with this view, arguing that interpretivism asserts that natural science assumptions and methods are not appropriate for social science studies. The present study fails to adopt a concurrent mixed method design because the study collected data using Likert scale, thus adopting quantitative analysis tools. There were no open-ended questions to verify and explain quantitative outcomes in the single questionnaire.

Transformative mixed methods

Mertens(2012) defines transformative mixed methods research as a meta-physical framework that “directly engages the complexity encountered by researchers and evaluators in culturally diverse communities when their work is focused on increasing social justice.” For Greene (2008, as cited in Mertens, 2012), transformative mixed methods design attempts to “focus on the tensions that emerge when unequal power relationships permeate a research context that addresses intransigent social problems.” This type of method also focuses on the strengths that arise from disadvantaged groups due to cultural values and experiences (Mertens, 2012). Guba. and Lincoln (2015) advanced the view that a transformative paradigm is inclusive of four sets of assumptions:

- Axiology refers to beliefs about the meaning of ethics and moral behaviour.
- Ontology focuses on the beliefs about the nature of reality.
- Epistemology refers to the nature of knowledge and the relationship between the knower and that which would be known.
- Methodology refers to beliefs about the how of inquiry.

In order to provide a basis for social change, the investigator need to be cognizant of the pervasiveness of discrimination and oppression and to understand communities. Thus, understanding the meaning of cultures and view of ethics become important pointers for conducting research in the affected communities (Mertens, 2012). Since this study did not

seek to understand communities, and their cultures, as well as discrimination and oppression to provide inputs into an intervention strategy, this method was not adopted. The present study seeks to test hypotheses to confirm or not confirm existing theories of resilience.

4.6.2.4 Mixed model research

According to Saunders et. al. (2007, p.145), “mixed mode research combines quantitative and qualitative data collection techniques and analysis procedures as well as combining quantitative and qualitative approaches at other phases of the research such as the generation of research question.” Saunders (2007) argues that quantitative data can be “qualitised” and qualitative data can be “quantitised”. Saunders et al. (2007) argue that the adoption of such methods is useful if it provides better opportunities to answer the key research question and where there is a need to evaluate the extent to which research findings can be trusted to cause inference from them. Figure 4.5 presents the various research choices as presented above.

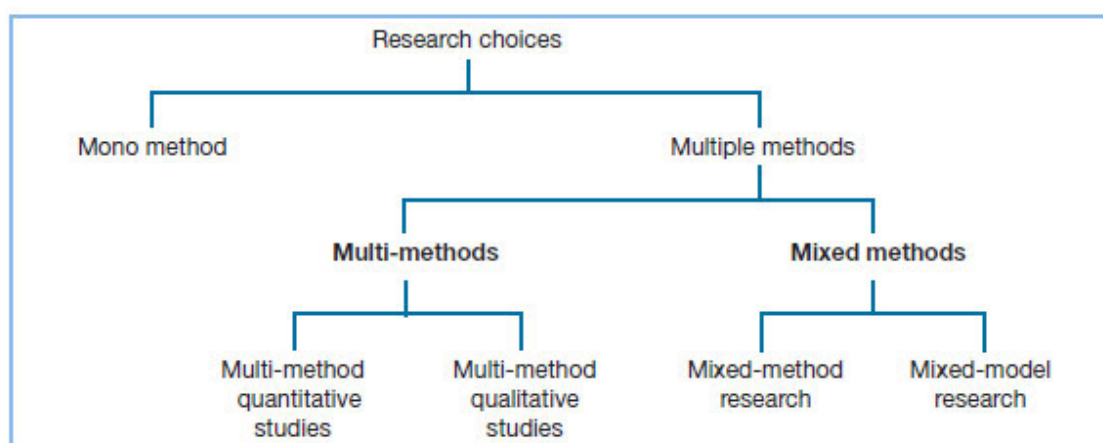


Figure 4. 5 : Research choices

Source: Saunders et al. (2007)

4.7 TIME HORIZON

Tengli (2020) state that research studies can be grouped into two types based on time; cross-sectional and longitudinal. A cross-sectional study is a “snap-shot” study, meaning a phenomenon or a cross-section of the population is being studied for one time (Tengli, 2020). Tengli (2020) argues that longitudinal studies refer to the study of a phenomenon or a population over a certain period of time. This view is supported by Saunders et al. (2007) who argue that longitudinal studies provide a “diary” perspective of the study. Saunders et al. (2007) argue that time horizons to research design are independent of which research strategy a researcher is pursuing. Wang and Cheng (2020) define cross-sectional studies as

observational studies of a population at a single point in time. According to Saunders , 2012) cross-sectional studies often employ the survey strategy with focus on either seeking to describe the incidence of a phenomenon or to explain how certain factors relate in different organisations. Saunders et al. (2012), advises that studies that use cross-sectional designs may also use qualitative or multiple research strategies during the course of the study. (Wang and Cheng, 2020) argues that cross-sectional studies are less expensive since data can be collected on all variables at the same time. On the other hand, these studies are susceptible to bias, such as nonresponse bias and recall bias. Easterby et al. (2012) argue that survey studies are widely used in cross-sectional studies. Cross-sectional studies can analyse some relationships using complex models such as structural equation modelling. This is because such studies involve collecting data from different organisations as well as investigating how other factors, measured at the same time, may vary across organisations. Since the study collected data from multiple SMEs to determine the strategic impact of resilience on performance optimisation and to test the complex relationship(s) between variables, using a structural equation model, the use of a survey (cross-sectional) research was adopted

Longitudinal studies, on the other hand, have the capacity to study change and development (Saunders Mark, 2012). Longitudinal studies can provide a measure of control over the variables being studied. According to Saunders et al. (2007) a researcher is able to exercise a measure of control over variables being studied, provided that these are not affected by the research process itself. Zikmund (2003, as cited in Okesina, 2020) agrees with this view. Zikmund states that “this type of study aims to track the continuity of response and to detect changes that appear over time.” One of the noticeable weaknesses of this design is the span of observations for a longitudinal study with related questions like measurement error and attrition of individuals from its rate of change. The observation span largely depends on the issue of investigation and its rate of change. For most, the resumption and end of longitudinal studies depends on availability of funds (Rajulton, 2001). The present study did not adopt a longitudinal design since data was collected once to measure the strategic impact of resilience on the performance optimisation of SMEs in the Manzini region of Eswatini.

4.8 RESEARCH TECHNIQUES AND PROCEDURES

Saunders (2012) defines research techniques and procedures as the methods used to obtain and analyse data. These methods may include questionnaires, observations, interviews, and statistical and non-statistical analysis. The present study examined the strategic impact of resilience on performance optimisation of SMEs in the Manzini region, Eswatini. Figure 4.6

presents a schema for purposes of elaborating the techniques and procedures for conducting the study.

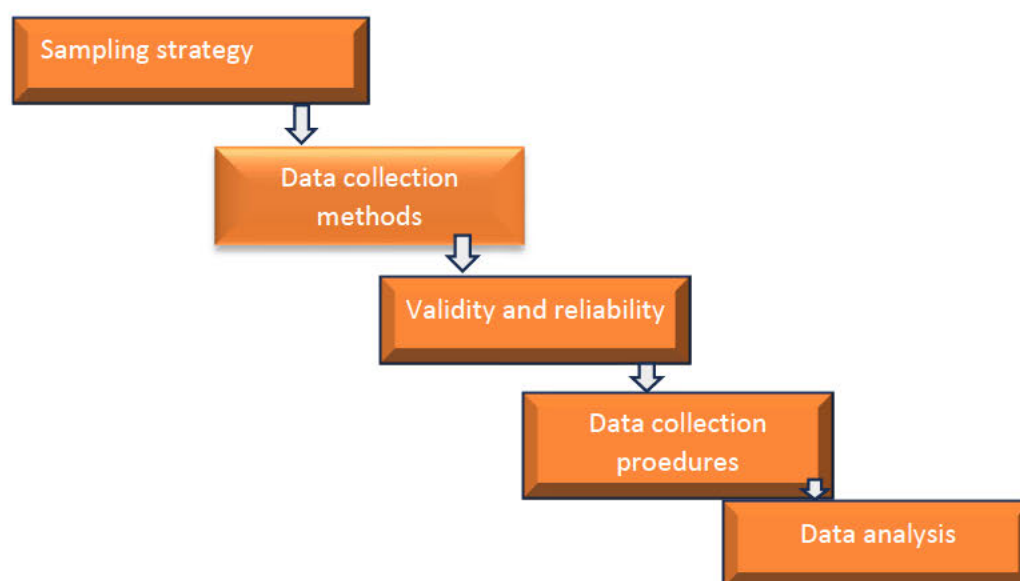


Figure 4. 6 Research techniques and procedures

Source: Author's own conceptualisation

Figure 4.6 presents the sequence of the research procedure. This is the researcher's conceptualisation of the research techniques and procedures and not, the way issues are presented in this chapter. As a result, the next section presents population and sampling, data collection techniques and sources. Validity and reliability of the instruments and analysis of data are also presented.

4.9: POPULATION AND SAMPLE DETERMINATION

This section presents a discussion on the population of the study and how a sample from which data was collected was determined.

4.9.1 Population size

According to Easterby et al. (2012), the term population refers to the whole set of entities that decisions relate to. On his part, Saunders (2012) argues that a population is "a full set of cases from which a sample is extracted." Khan (2014) states that a population is the abstract idea of

a large group of many cases from which a researcher draws a sample and to which results from a sample are generalised.

In this study, the target population was all owner-managers of Small and Medium Enterprises whose enterprises are receiving support from Small Enterprises Development Company (SEDCO) and SMEs and, Youth enterprise Fund (YERF) in Manzini region, Eswatini. This study focused on SMEs which have existed for three years or more. SMEs are often hit harder by disasters and take longer to recover compared to larger businesses. A 3-year period could provide sufficient time to observe the impact of adversity on SMEs and their subsequent recovery process. This could include studying the effectiveness of resilience practices and the role of external support in SMEs' survival and performance. The criteria on inclusion and exclusion were also based on what Small Enterprises Company (SEDCO) and YERF have adopted to support SMEs. YERF and SEDCO use a three-year window to determine an SME's survival and ability to transition to another category of business.

Secondly, as highlighted in chapter 1, an operational definition of SMEs was presented where: 1) they are enterprises that are independently owned and, 2) employ up to 60 people (Eswatini SME policy of 2018). The total population size of the study was 294.

Appendix I shows the location of the region where the study was conducted, while Table 4.3 presents the population of owner-managers of SMEs under the support of Small Enterprises Company (SEDCO) and Youth enterprise Fund (YERF) in the Manzini region, Eswatini.

Table 4. 3 Population of the study (owner-managers of SMEs)

SN	Name of the Tinkhundla	Owner-manager
1	Ekukhanyeni	12
2	Lobamba	42
3	Kwaluseni	59
4	Ludzeludze	28
5	Mafutseni	23
6	Manzini South	10
7	Manzini North	46
8	Nhlambanyatsi	6
9	Mkhiweni	10
10	Mtfongwaneni	7
11	Ngwamphisi	9
12	Nkomiyahlaba	4
13	Mahlangatsha	1
14	Lamgabhi	20
15	Mangcongga	1
16	Phondo	4
17	Nlhambeni	6
18	Ntondozi	6
		294

Source:Customer Charter: Ministry of Tinkhundla Administration and Development(2018. p. 41)

4.9.2 Sampling: Procedure and size

Sampling is done in circumstances where it is possible to generalise findings. The purpose of sampling is to pursue theoretical lines of enquiry rather than to achieve representativeness (Saunders, 2012). A sample might be a proportion of employees in an organisation, a selection of companies operating in a specific market, or a number of specific periods for assessing the quality of customer responses in a call centre among others (Easterby et al., (2012). Sampling techniques are methods that the researcher uses to reduce the amount of data that needs to be collected by considering only data from a subgroup rather than possible cases (elements). Saunders et al. (2012) argue that, “for some research questions, it is possible to collect data from an entire population as it is of a manageable size. Saunders also warns that it should not be assumed that a census would provide more useful results than what would be collected from a sample which represents the entire population. It should be noted that without determining a sample, it would be impractical for the researcher to

investigate the entire population. A plethora of sampling techniques exist, including probability sampling procedures, which apply randomisation to select a sample. These include techniques such as; simple random sampling, stratified random sampling, cluster sampling, systematic sampling and multi-stage sampling. The second type of sampling is non-probability sampling procedures. Such procedures do not use randomisation when selecting participants. These procedures include; snowball sampling, accidental sampling, quota and purposive.

According to Adhikari (2021), selecting a sample involves selecting the number of observations to include in the statistical sample. Adhikari (2021) argue that the sample is an important characteristic of any empirical study since it aids in making inferences about a population. Adhikari (2021) advises that a small sample size fails to produce conclusive and reliable results. As such, since the population of the study was 294, census sampling was adopted. According to Mann et al. (2010); Sutanapong and Louangrath (2023) census refers to the complete enumeration of the universe. Census sampling provides accuracy since each, and every unit of the population is studied before drawing any conclusions of the research. Besides, data collected through census provides an opportunity for intensive study and analysis due to the enormity of the data collected. Further, the use of census is based on methodological differences and the condition of the data (Leslie, 1986). It is also important to note that since the quantitative study was to examine the strategic impact of resilience on performance optimisation in SMEs in the Manzini, region by testing hypotheses, the use of a complex model to examine the relationship was essential. As such, Structural Equation Modeling (SEM) was adopted. This model requires a large sample to ensure accuracy of results and stability of parameters (Kline, 2022; Zumbo, 2005).

The quantitative study was conducted on SMEs in the Manzini region of Eswatini. The region is located in the centre-west of Eswatini, with an area of 4,093.59 KM², a population of 356,396(32.6%) of the national population and, a dependency ratio of 70.85% as per the 2017 census (Eswatini Central Statistical Office, 2017). The region's administrative centre is Manzini. It borders Hhohho in the north, Lubombo in the east and, Shiselweni in the South. To its west, is Mpumalanga province of South Africa. There are 18 Tinkhundla in the Manzini region of Eswatini, namely: Kukhanyeni, Lobamba, Kwaluseni, Ludzeludze, Mafusteni, Manzini South, Manzini North, Mhlambanyatsi, Mkhiweni, Mtfongwaneni, Ngwamphisi, Nhlabeni, Nkomiyahlaba, Ntandozi, Mahlangatsha, Lamgabhi, Mangcongco and Phondo (Ministry of Tinkhundla Administration and Development, 2018).

Although SMEs operate in: Agriculture, ICT, Construction, Design and Printing, Events Management, Manufacturing, Medical, Property (real estate), Retail, and Service, it was not possible to focus on a particular sector because of few SMEs in the specific sector as reflected in Table 4.4.

Table 4. 4: Respondents per sector

S/N	Sector	Number of SMEs
1	Agriculture	87
2	ICT	4
3	Construction	26
4	Design and Printing	15
5	Events Management	2
6	Manufacturing	60
7	Medical	3
8	Property (real estate)	2
9	Retail	30
10	Service	65
		294

Source: SEDCO and Youth Fund, Eswatini 2021.

4.10 DATA COLLECTION TECHNIQUES AND SOURCES

4.10.1 Data collection techniques

This study, as mentioned in previous subsections adopted a survey design. Survey research approach is usually associated with a deductive approach (Saunders, 2023; M. N. K. Saunders et al., 2019; Saunders M, 2012). The use of a questionnaire is a common practice. The use of survey allows for the collection of large amounts of data within a short period. The use of surveys allows the researcher to collect quantitative or qualitative data with the objective of establishing the relationship between two or more variables (Saunders et al., 2019). Since this study sought to examine the strategic impact of resilience on performance optimisation of SMEs in the Manzini region, the use of a questionnaire was adopted. This would help to collect responses from a large sample and as such, ensure that the results can be generalised. Using a survey, the data for the study was collected from mid-May 2023 to July 2023, thus a period of 2.5 months.

4.10.2 Sources and types of data

Ajayi (2023) states that data collection is central in statistical analysis. Ajay (2023) argues that there are different types of data collection methods, all of which fall into two broad categories, primary and secondary data sources. This view is shared by Saunders et al. (2019), who equally advances the view that there are two major sources of data, primary and secondary. As a concept, data refers to the fact that some existing information or knowledge is represented or coded in some form suitable for better usage. If data is processed to be used as a decision input, then it becomes information. A major difference between primary and secondary data sources is the fact that, primary data is factual and original while secondary data is just the analysis and interpretation of primary data. Primary data is real-time data, while secondary data relates to the past (Ajayi, 2023). This study adopted primary data sources, where a self- questionnaire was administered to owners-managers of SMEs in the Manzini region. With a self-administered questionnaire, respondents can freely express their feelings regarding the issues being investigated, without disclosing their identity. This view resonates with what Ajayi (2023), suggests, a questionnaire is one of the primary sources of data which comprises series of items presented to a respondent in written form, thereby, allowing the respondent to respond in writing by ticking a set of items or questions asked or presented. For this quantitative study, a structured questionnaire with a set of statements was issued to respondents to tick their preferred choice.

4.10.3 Questionnaire design

According to Roopa and Rani (2012) careful consideration should be taken in the design of a questionnaire if useful and relevant information is to be gathered. Thought, and effort are key ingredients of a well-designed questionnaire. In view of this statement, two independent variables (resilience and strategic foresight), one variable to predict resilience (strategic orientation), one mediating variable (absorptive capacity) and performance as the dependent variable were operationalised. Using absorptive capacity as a mediating variable was justified because it plays a crucial role in enabling SMEs to effectively recognise, assimilate, and apply external knowledge (Cohen & Levinthal, 1990), which enhances their innovative capabilities and overall performance. By mediating the relationship between resilience and performance optimisation, absorptive capacity elucidates how SMEs can transform their adaptive strategies into competitive advantages, promoting organisational learning and responsiveness to environmental changes.

Although the study focuses on resilience, the other independent variable, strategic orientation, strategic foresight and strategic orientation were included in the model to speak to the multi-

dimensional nature of the concept and to develop a resilience model with multiple variables. In terms of the variables, the following were the constructs: resilience was measured by three major constructs/dimensions; detectability, likelihood, and impact; absorptive capacity by, recognition, assimilation, transformation, and applying while, firm performance was measured using (economic measures); innovation, customers, productivity, finance, and efficiency). Prospector, defender, analyser and reactor were used to predict the nature (adaptive or planned) of resilience of SMEs. According to Roopa and Rani (2012) a questionnaire must meet at least the following requisites: use simple and specific language, demand one answer on one dimension, yield a truthful and accurate answer, ensure that all possible contingencies of a response are accommodated, have mutually exclusive response options, produce variability in response and minimise social desirability. Following these requisites, the study ensured that the questionnaire bears: general form (structured/unstructured), question sequence (consistence) and follows a clear format for question formulation and wording (clear and impartial). With regard to the current study, a total of 84 items was designed to operationalise the dimensions (12) of the integrated resilience model were used in the study (see Appendix II). The questionnaire used in this study was divided into 2 sections, A and B. Section: A, focused on collecting respondent's demographic information on owner-managers as the respondents. A total of 12 statements on gender, age, highest level of education, role in the SME, number of years in role, how long the business has been in existence, and whether the SME engages in planning were presented for respondents to tick the most preferred response. The 7 statements were important in understanding the resilience behaviour of respondents. Section B contained 84 statements to collect information on variables of the resilience model (resilience, strategic orientation, strategic foresight and absorptive capacity). The design of the questionnaire was guided by a literature review that specifically addressed the variables in the study. In addition, 35 statements were used to measure the dimensions of the dependent variable, performance optimisation (Appendix II). Priya & Carlo (2023) advise that designing a questionnaire requires a scoping review of the published literature to identify common themes. Further, the variables were operationalised, and clear measures were defined for each. A 5-point Likert scale (5 strongly agree, 4 agree, 3 neutral, 2 disagree and 1 strongly disagree) was used to measure respondents' perceptions, values, and beliefs on constructs for each variable. 7 statements (items) were designed for each dimension to ensure validity and consistency when using structural equation modelling. The Likert scale has been found to be an appropriate measure of people's attitudes towards a particular phenomenon. The use of a Likert scale is

supported by Roopa and Rani (2012), who argued that Likert scale is a psychometric scale commonly used in research that employ questionnaires to measure “social attitude.” The use of the Likert scale was in line with the use of statements, followed by a set of options representing different levels of agreement or disagreement with the statement. This approach is in line with Holmes (2023), who suggested that when a Likert scale is used, respondents are asked to indicate their level of agreement or disagreement with a statement or question.

4.10.3 Pilot-testing in quantitative survey

According to Roopa (2023), pilot testing is the preliminary part of research conducted before a complete survey to test the effectiveness of the research methodology. Holmes (2023) agrees with this view. They suggest that “before using any research questionnaire, one, preferably two, pilots should be conducted with a small sample of people who form a test pilot group.” The objective of pilot-testing is to identify any potential problems with the questionnaire and make the necessary changes, if any. Two pilots were conducted on May 11, 2023 on 10 owners/managers of SMEs in the Manzini region. The 10 were drawn from 3 sectors; service (3), agriculture (3), and construction (4). These were not part of the population under study but had received support from SEDCO. The 10 respondents had similar characteristics as with the main population of the study. Respondents (pilot) were asked to review the questionnaire for clarity and completeness. Comments from the pilot study were used to improve the clarity of statements. The second pilot was conducted on May 12, 2023. The questionnaire was given to the two experts (lecturer) in statistics at the University of Eswatini to review the tool in terms of the general structure of the questionnaire, measures used and number of statements. From the second pilot, the number of statements increased from 4 to 7. This was to prevent the occurrence of missing data, that is a key characteristic of data collected from a few statements (Kline, 2022). The comment on time was also noted by the two pilots. Questions were shortened and redundancies were removed. The revised version of the questionnaire was sent to the supervisor for review and no objection was given to start collecting data.

4.10.3.2 Strength of the instrument used

- Anonymity: Participants' anonymity was observed and this encouraged more honest and unbiased responses.
- As a requirement from the Humanities and Social Sciences Research Ethics Committee, a section on respondents' consent was included in the design of the questionnaire. This is a standard ethical practice in research.
- Statements/questions were formulated in simple and clear language.

4.10.3.3 Weaknesses of the research instrument

Since some questions touched on issues that sought to establish whether owners-managers have established resiliency in their operations. This appeared to be sensitive information to the respondent.

Also, some respondents felt that since they owe money to the agencies that support them (Youth Fund and SEDCO), providing information was basically an attempt to trace their whereabouts. To address these challenges, the investigator explained to the respondents the fact that this was a research study and not a tool to track defaulters. Secondly, the benefits of the study were explained to the respondents. Explaining to the respondents the benefits and purpose of the study increased the acceptability of the study.

4.10.3.4 Administration of the instrument

There are several questionnaire administration methods, each with its advantages and considerations. First, self-administered questionnaires: they are commonly used because they are easy to implement and cost-effective. They can be distributed in various ways, such as through mail, email, online platforms, or handouts. Respondents complete the questionnaire on their own, at their own pace. This method allows for anonymity and flexibility in terms of location and timing. Second, researcher-administered questionnaires: in this case the researcher administers the questionnaire and may provide additional instructions or clarifications if needed. This method allows for deeper insights as the researcher can observe the respondents' reactions and ask follow-up questions. It is commonly used in face-to-face interviews or focus group settings. Third, phone surveys: phone surveys involve administering the questionnaire over the phone. The caller may use a toll-free number and ask questions using a touch-tone phone, or the company may call participants to ask them

questions. Phone surveys can be helpful when a more personal touch is desired, but they may have limitations regarding response rates and potential biases.

Fourth, group administration: Group administration involves convening all concerned respondents together at one time and administering the questionnaire collectively. This method can be efficient when dealing with many respondents in a specific setting, such as a classroom or a workplace. Fifth, electronic administration: questionnaires can also be administered electronically, either via email or on the web. This method allows for easy distribution and data collection, and it can be particularly useful when targeting a tech-savvy population. However, it is important to consider data security and accessibility for all respondents. Sixth, postal administration: questionnaires can be sent to the respondents via post a postal system. Unfortunately, this system is slow, and this would require more time. Secondly, from the source lists provided by Youth Fund and SEDCO, postal addresses were not provided because the SMEs in question do not have them. In administering the question, the investigator was cognisant of the Boynton (2004) who warns that, research that systematically excludes hard to reach groups is increasingly seen as unethical, and there is a need to build additional strategies to reach them. The study used a combination of techniques, face-to-face, self-administered and telephone calls to administer the questionnaire. This was no take care of two issues: phone call administration was taking care of respondents who had moved their business to a new location, while the self-administered took care of busy respondents who asked research assistants to leave the questionnaire and pick it up at an agreed upon time or fill and hand it to the research assistant. With regard to face-to-face, this was possible if respondents allowed research assistants to read statements and fill in their choices (respondent's).

In order to collect data and reach-out to the respondents in time, five research assistants were recruited. These were final year under-graduate students at the University of Eswatini. They were oriented on the questionnaire, and the process of data collection. During the training, focus was paid to the objective of the study, the contents of the study and the process of data collection. To ensure confidentiality of the data, the five research assistants signed a Non-Disclosure Agreement. The training took place on May 14, 2023, 11.00a.m -2.00p.m.

It should be noted that, before the administration of the questionnaires, the researcher had to apply for approval (ethical clearance) from the Humanities and Social Sciences Research Ethics Committee of the University of Kwazul Natal. This was granted on May 8, 2023, with

protocol reference number HSSREC/00005562/2023(Appendix XVIII). Further, the supervisor gave authorised the commencement of the data collection exercise on May 10, 2023.

4.11 DATA QUALITY FOR QUANTITATIVE STUDY

According to Hassenstein and Vanella (2022), the word, “quality” has multiple origins, especially from Latini noun “qualitas” (meaning verbatim characteristics, nature). ISO standard 9000:2015 defines quality as the degree to which a set of inherent characteristics of an objective fulfils requirements”(International Standard-ISO 9000:2015, 2015). Boynton (2004) argues that questionnaires tend to fail because participants do not understand them, cannot complete them or get bored/offended by them. This calls for the design of an instrument that can be depended on, thus calling for clear measurement reliability and validity of the instrument. “Political scientists are concerned about the quality of the measures they use, yet few scholars rigorously evaluate a chosen measure’s quality prior to incorporating it in substantive research” (Seim et al., 2021). The tendency to focus on quality of measures to be used instead of evaluating a measure’s quality prior to using it stems from a lack of tools, social scientists are replete with methods for evaluating validity and the reliability of the data collection instrument (Seim et al., 2021). Whereas determining the quality of measures is problematic, lack of accepted, comprehensive and practical standards for assessing a measure’s quality complicates matters. Further, there is no broadly adopted strategy for scholars to incorporate information from such assessment in substantive research. As proposed by Seim et al. (2021), this study delineates a three component approach to assessing the quality of the questionnaire that was used by this study; 1) content validity, 2) validity and reliability of the data process and, 3) convergent validity. Table 4.5 presents a summary of the meaning and definition for each.

Table 4. 5: Data quality assessment approach

Category	Guiding questions	Tool
Content validity assessment	To what extent does the measure capture the higher-level theoretical construct it is intended to capture and exclude irrelevant elements? How does it compare in content to alternative measures?	Evaluate the inclusion of relevant meanings and exclusion of irrelevant meanings using qualitative assessment and quantitative factor analysis.
Data Generation Process Assessment	Does the data generation process introduce any biases, reliability problems, or analytic issues? How does it compare to the data generation process of alternative measures? Where multiple respondents exist, to what extent do they generate consistent and converging information?	Evaluate dataset management structure, data sources, coding procedures, aggregation procedures and geographic and temporal coverage of the measure. Evaluate extent of disagreement among respondents, and whether respondent and case characteristics predict disagreement and patterns of responses
Convergent validity Assessment	Does the measure accurately capture actual cases? To what extent does the measure correlate with alternative measures of the construct, and are areas of low correlation thoroughly understood?	Evaluate measure against original or pre-existing case studies. Evaluate predictors of difference, any outliers, and the implications of differences across measures.

Source: Hassenstein and Vanella (2022, p.6)

4.11.1 Reliability of the instrument

Hassenstein and Vanella (2022) define reliability as the extent to which an initial data value is on par with a subsequent data value. According to Seim et al. (2021), reliability is the absence of unsystematic (random) measurement error. According to Taber (2018) alpha is an indicator of reliability, interrater reliability, reliability of separation, internal reliability, internal consistency, congruence and coherence. For this study, Cronbach's alpha was used to check the reliability of the questionnaire. According to H. Mohajan and Mohajan (2017), reliability of 0.6 or more implies that the instrument shows consistency in measuring the dimensions under study and thus, is accepted. It was observed that all scales of Cronbach's Alpha had an agreeable number that was greater than 0.6 save for strategic orientation ($\alpha = 0.576$). According to De Souza and Dick (2009:260), validity of 80% is considered good, 60% to 80% acceptable and below 60% as unacceptable. Although Cronbach's alpha for Strategic Orientation was low at 0.576%, rounding it off to the nearest one brings it closer to

the acceptable criterion. With regard validity, attention was paid to content validity and construct validity. Construct validity was achieved by ensuring that the key constructs of the variables were captured in the data collection tool. Specifically, the formulation of questions ensured that dimensions and items measuring dimensions were linked to the theoretical constructs. Effort was made to align questions in the tool with the objectives of the study. In a summary of articles Taber (2018), reviewed 64 articles that cited values for alpha. Findings of values of alpha are presented in Table 4.6.

Table 4. 6 : Characteristic values of Cronbach’s alpha from different studies

S/N	Measures of descriptions	Outcome
1	0.93-0.94	Excellent
	0.91-0.93	Strong
2	0.84-0.90	Reliable
3	0.81	Robust
4	0.75-0.95	Fairly high
5	0.73-0.95	High
6	0.71-0.91	Good
7	0.70-0.77	Relatively high
8	0.68	Slightly low
9	0.67-0.87	Reasonable
10	0.64-0.85	Adequate
11	0.61-0.65	Moderate
12	0.58-0.97	Satisfactory
13	0.45-0.98	Acceptable
14	0.45-0.96	Sufficient
15	0.4-0.55	Not satisfactory
16	0.11	Low

Source: (Taber, 2018 p. 1278)

Drawing from the above Table (Taber, 2018 and De Souza and Dick, 2009), the alpha values for the instrument were within an acceptable range, thus the instrument was reliable.

4.11.2 Validity of instrument

In research, validity plays a significant role in ensuring the quality of the tool and the data to be collected. When an instrument is ready for administering, respondents can judge its quality (Taber, 2018). Validity ensures that the phrasing of questions and the scoring of responses is considered to reflect what was acceptable. H. Mohajan and Mohajan (2017) states that validity

concerns what an instrument measures, and how well it does so. This study recognises the significance of two types of internal validity: content and construct. According to Seim et al. (2021), content validity is the alignment between higher-level theoretical concept under study, with its measurement being assessing the extent to which that concept is captured by the measure. Content validity was realised by aligning the contents of the questionnaire with the objectives of the study. Seeking views from experts and supervisor on the tool and its contents improved the face-validity of the instrument. Construct validity is important for testing hypotheses for the construction of theories, understand and predict behaviour. Construct syntactically involves establishing hypothesised relationships between the construct of interest and other related behaviours (Thatcher, 2020; Croker and Algina, 1986; Mohajan & Mohajan, 2017). To ensure construct validity, statements on theoretically derived hypotheses concerning the nature of underlying variables were formulated.

4.12 METHOD OF DATA ANALYSIS

As mentioned earlier, primary data was collected using a questionnaire with two sections, A and B. The analysis of data took two forms, descriptive and inferential. Descriptive statistics presents the features of a sample or population. Descriptive statistics presents data in a factual manner, in tables, charts, graphs etc. In this study, descriptive statistics were mean, percentages, frequency counts, and standard deviation. Mean and standard deviation were used in section B. Further, to ensure inference, items in Section B of the questionnaire were analysed through inferential statistics guided by Jeffrey's Amazing Statistical Package (JASP 0.18.2).

JASP offers a range of standard analysis procedures, both in classical and Bayesian forms, which can be applied to explore and understand complex relationships in data. JASP provides a user-friendly graphical interface that allows researchers to specify and run various statistical models easily. It also generates APA-style results tables and plots, making it convenient for publication purposes (Mark, 2018). This software was used to calculate descriptive and inferential statistics. Inferential statistics were: Pearson's correlation coefficient, and Structural Equation Modeling. SEM is appropriate because it allows for the description of conditions as well as the analysis of cause-effect relationships. SEM combines factor and regression analysis (Zumbo, 2005). The use of SEM is anchored in the ability to develop a path analysis, which was developed mainly to quantify relationships between multiple variables (Fan et al., 2016). It should be noted that, objectives 1-5 were all analysed using Structural Modeling (SEM). However, sub-hypotheses for each main hypothesis were

analysed using Pearson's correlation coefficient. Multiple regression was used to determine the overall (purpose of the study), impact of the variables of the resilience model on performance optimisation in small and medium enterprises (SMEs). For clarity, the statistical tools used for the study are presented below;

4.12.1 Descriptive statistics

Sutanapong and Louangrath (2023) define a statistic as an abstraction, "a description of events beyond our personal experience, and so hard to visualise. Descriptive statistics convey to the audience/readers what happened, the nature of things, their colour, their location among others. Descriptive statistics are numbers that are used to summarise and describe data. They give a picture of the data; they do not involve generalising beyond the data. Descriptive statistics give a useful statistic point for analysing data, by summarising the data as well as indicating the type of statistical tool to be used for analysis. Kaur et al. (2018) advise that computing descriptive statistics should always occur before making inferential statistical comparisons. In this study, descriptive statistics were computed for sections A and B. For section B, interest in descriptive statistics was in computing the standard deviation to determine the nature of the spread of the data. This was the first step in preparing for inferential statistics for section B. Chapter 6 presents results of descriptive statistics.

4.12.2 Inferential statistics

According to Ballinger (2012) inferential statistics are based on taking a random sample from a large population and use it the sample to draw conclusions about the larger population. To draw conclusions, an investigator should be able to conduct statistical tests aimed at establishing the relationship/causation. Testing hypotheses is one of the many tests that researchers conduct to establish the relationship. There are two major tests in hypotheses include: parametric and no-parametric tests(Saunders, 2023; Saunders et al., 2019; Saunders, 2012). Parametric tests are useful for testing the significance of the computed sample statistics. Parametric tests operate under certain assumptions some of which include; the samples have equal variances. This condition is called equality of variance. The second assumption which this study met is the assumption that the selection of one case in the sample is not dependent upon the selection of any other case. On the other hand, non-parametric test is a statistical procedure whereby the data does not match normal distribution. Data that is used in running non-parametric tests is ordinal, therefore, not dependent on arithmetic properties.

To test the five hypotheses of the present study, parametric tests were employed. Such tests initially focused on preliminary investigation of the data before testing hypotheses. Data collected from responses to statements in section B was screened using JASP 0.18.2. Conducting preliminary data investigation aimed at ensuring that the assumption of homoscedasticity, linearity, normality, and multicollinearity (Pallant, 2016). Parametric tests used in the study are presented in the sub-sections that follow.

4.12.2.1 Pearson's Correlation

Pearson's correlation coefficient is used to explore the strength of the relationship between two variables (Pallant, 2016). Pearson's correlation coefficient must be conducted before the introduction of latent variables in the structural equation model as presented in Chapter 5. The relationship between variables was established through a bi-variate analysis with the help of a correlation matrix that was presented in Tabular form in Chapter 5 for each of the sub-hypotheses of each hypothesis. Pearson's correlation coefficient (r) ranges from -1 to +1, implying a negative or positive correlation (Pallant, 2016). In sum, Pearson's correlation coefficient measures the relationship between exogenous and endogenous variable(s). In this study, the performance optimisation of SMEs in Manzini Eswatini while exogenous variables were variables in the reliance model (resilience, strategic foresight, strategic orientation and performance optimisation).

4.12.2.2 Multiple regression analysis

Multiple regression is a more complex form of analysis than correlation, used when the researcher wants to explore the predictive ability of a set of independent variables on a dependent variable. Saunders (2012), states that multiple regression focuses on calculating a coefficient of multiple determination. Such calculations are usually complicated, thus requiring the use of software. For this study, JASP version 0.18.2 was used. Chapter 5 presents results of multiple regression analysis.

4.12.2.3 Analysis of Variance(ANOVA)

Saunders et al. (2012), states that ANOVA analyses the variance of data values, within and between groups of data by specifically comparing mean. ANOVA helps in identifying the effects of different factors on the same measure. It also allows researchers to determine the influence of independent variables on the dependent variable in a regression study. ANOVA tests hypotheses about the equality of means across different groups or conditions. In this

study, AVOVA was used to examine whether there are significant variations in the relationships between variables across different groups. Chapter 5 presents results of ANOVA analysis.

4.12.2.4 Structural equation modelling

The concept, structural equation modelling (SEM) does not imply a single statistical technique but instead refers to a family of related procedures. In some instances, terms such as covariance structural analysis, covariance structural modelling or analysis of covariance have been used (Kline, 2022). Kline (2022) argues that most applications of SEM are in non-experimental designs, while Pearl (as cited in Kline, 2022) advances the view that a set of qualitative causal hypotheses based on theory or results of empirical studies act as inputs into structural equation model. Kline (2022), elaborates on the outputs of SEM. He argues that the key outputs of SEM are; 1) numeric estimates of model parameters for the hypothesised effects, 2) a set of logical implications of the model that may not directly correspond to a specific parameter but still can be tested in the data, 3) the degree to which the testable implication of the model are supported by the data.

Collier (2020) puts forward several assumptions of SEM, some of which include:

- Multivariate Normal Distribution of indicators (an assumption that the data has a normal distribution).
- Although the dependent variables need to be continuous, the independent variable does not.
- SEM assumes linear relationships between variables.
- Maximum likelihood estimation is the default method that provides accurate and stable results (Collier, 2020).
- Assumes a complete data set
- Multicollinearity is not present, since this makes it difficult to determine the influence of a concept if it is highly correlated with another variable in the model.

Collier (2020) argues that the main advantage of structural equation modelling (SEM) is its ability to analyse the influence of predictor variables on numerous dependent variables in predicting relationships, and it can test an entire model instead of just focusing on individual relationships. This is in sharp contrast compared to other techniques, such as, regression that can only test one dependent variable at a time and does not test for measurement error.

Testing an SEM model usually takes a confirmatory approach. The conceptual model is usually developed *a priori*, and data is collected, and analysed to test how well the model fits the data, thus trying to confirm the hypotheses formulated prior to data collection. Testing the model tries to establish whether the variables in question influence one another (Collier, 2020). Joreskog (as cited in Collier, 2020), explain approaches in confirmatory model testing;

Strictly Confirmatory Approach. In this, the investigator has a single model that is acceptable or rejected based on its correspondence to the data. This approach is usually considered an “all or nothing” approach where either all of the model is accepted or is fully rejected. According to Zumbo (2005), in the framework of modern statistical theory, test validation involves the analysis of covariance matrices among the observed empirical data that arise from a validation study using covariance structure models. Two models are known for validation: Confirmatory Factor Analysis (CFA) and Multi Indicators Multiple Causes (MIMIC). CFA is reputable for validation while MIMIC is new and represents a merger of the structural equation and item response theory traditions (generalised linear structural equation models) (Zumbo, 2005). Fan et al.(2016) states that the use of a confirmatory factor analysis to estimate latent constructs makes SEM an appropriate technique for analysing complex variables.

Alternative Models Approach. Collier (2020) opines that this approach suggests more than one theoretical model that allows the researcher to test which one has a superior fit. This study adopted the strictly confirmatory approach because it allows researchers to assess and modify theoretical models. Further, the adoption of this approach allows for furthering of theoretical models. Kline, 2022; Yang-Wallentin et al., 2010 opine that a *priori* specification reflect the researcher’s hypotheses and, in totality, make up the model to be analysed. SEM is therefore seen as a confirmatory process that involves abandoning or modifying the hypotheses on which it is based.

According to Kline (2022), SEM provides an explicit distinction between observed (manifest) and latent variables. In this study, observed variables represent the data that was collected through the questionnaire. Latent variables correspond to hypotheses constructs or explanatory entities presumed to reflect a continuum that is not directly observed. When an observed variable is used as an indirect measure of a construct, it becomes an indicator. The

statistical realisation of a construct based on analysing scores from its indicators is a factor (Kline, 2022).

In the study, the constructs used to measure the dimensions of the variables were the latent variables. The distinction between indicators and factors in SEM allows one to test a wide variety of hypotheses about measurement. This study adopted symbols from McArdle McDonald Reticular Action Model (RAM)(Kline, 2022). The RAM symbolism explicitly presents every type of model parameter with its own graphical symbol. Observed variables were represented by rectangles while latent variables with circles. The hypothesised causal effects or direct effects on endogenous variables was represented by a single arrowhead line. In the path model/diagram, covariances or correlations between exogenous variables are represented by a curved line with two arrowheads. In RAM symbolism, two-headed curved arrows that exit and re-enter the same variable represent the variance of an exogenous variable. This is because the causes of the exogenous variables are not represented in the model diagrams. The assumption is that exogenous variables are free to vary and covary. The test of hypotheses and the path diagrams are presented in Chapter 5. According to Yang-Wallentin et al. 2010) SEM helps in the analysis of different relationships in the model. For this study, lavaan package syntax from R studio in JASP was used to conduct Confirmatory Factor Analysis (CFA).

Before proceeding to running SEM, Exploratory Factor Analysis (EFA) was also conducted to determine sampling adequacy by assessing the suitability of the data for factor analysis. This is done by evaluating common variance among variables and determining the relationships among variables. In this study, Kaiser-Meyer-Olkin (KMO) was 0.723(72.3%). This was adequate SEM analysis for this study on the strategic impact of resilience on performance optimisation of SMEs in Manzini region, Eswatini. This is in line with Ul Hadia et al.(2016), who suggest that sampling is adequate if the value of the KMO is 0.6 and above. SEM scholars distinguished two classes of fit indices, a) *“those that reflect absolute fit”* and b) *“those that reflect the fit of one model relative to another”* (Iacobucci, 2010). To complete the assessment of data in terms of correlation within the data set, the guidelines for determining model fit as set out by Hooper et al. (2008) were followed. These guidelines following the classification of fit indices are presented below;

- a) **Absolute indices:** Absolute fit indices measure the extent to which the researcher's model (a priori) model explains the data (Kline, 2022). For the current study, presented below are the absolute fit indices that were computed:
- **The model chi-square:** the chi-square value is used for evaluating overall model fit and assessing the magnitude of discrepancy between the sample and fitted covariance matrix (Hu & Bentler, p.2 as cited in Hooper et al., 2008). In this study, chi-square was used to compare the predicted model with observed data to assess whether they are equal. The chi-square value and degrees of freedom of the model were used to calculate the p-value, which is a measure of goodness of fit. Ul Hadia et al. (2016) suggest that the significant value of less than 0.05 indicates that the data do not produce identity matrix and are therefore multivariate and acceptable for further analysis with structural equation modelling (SEM). The results of chi-square are presented in Chapter 5 (results).
 - **Root Mean Square Approximation (RMSEA).** RMSEA is an absolute fit index scaled as badness of fit index which measures how well the model fits the data, where a value of zero indicates the best fit (Kline, 2022). RMSEA values range 0.05-0.1, where values <0.05 imply good fit (Kline, 2022).
 - **Goodness of Fit Index (GFI).** GFI was created by Joreskog and Sorbom as an alternative to chi-square test (Yang-Wallentin et al., 2010). The Goodness of fit index is another fit index that is used to evaluate model fit. Goodness of fit indices range between 0 to 1.0, where 1.0 shows good fit (Kline, 2022). Results for GFI assessment are presented in Chapter 5.
 - **Root Mean Square Residual (RMR) and Standardised Root Mean Square Residual (SRMR):** The standardised mean root square residual (SRMR) is a fit index used to assess the discrepancy between the observed covariance matrix and the model(null). Kline (2022) argues that SRMR assesses the badness of fit. It is the standardised version of the root mean square residual (RMR). In this regard, a perfect model fit is indicated by RMR of 0, with values higher than this indicating worse fit. It should be noted that there are variations in this index because it is computed with unstandardised variables (Schermelleh-Engel et al., 2003a).
- b) **Incremental Fit Indices:** these indices, also known as relative fit indices (McDonald & Ho, 2002) and they are a group of indices that do not use chi-square in their raw

form. They, however, compare the chi-square value to baseline model. In this study, the major incremental indices used are presented below and their results in Chapter 5.

- **Normed Fit Index (NFI):** Assesses the goodness of fit between the hypothesised model and the null model(discrepancy)(Hooper et al., 2008; Kline, 2022; Mark, 2018). The NFI ranges from 0 to 1, where a value that is closer to 1 shows a better fit. 0.95 or greater is used as a cut-off point in NFI. Hooper et al. (2008) warn that the use of values less than 0.95 have been used. In some instances, NNFI with values above 1.0 (Hooper et al., 2008) have been used. Nevertheless, NFI is a reliable index since it is not affected by sample size (Hooper et al. 2008). In this study, the NFI indices are presented in Chapter 5.
- **The Comparative Fit Index (CFI):** the Bentler CFI is an incremental fit index that is also a goodness of fit statistic. This index compares the amount of departure from close fit for the researcher's model against that of the null model. Its values range from 0 to 1.0, where 1.0 gives the best result(fit). Hu and Bentler (as cited in Savalei, 2021) argue that although determining the best fit (CFI) remains controversial, a CFI that is ≥ 0.95 reflects a good fit. Results of CFI are presented in the results chapter.
- **Parsimony Fit Index (PFI):** This fit index is based upon adjusting for loss of degrees of freedom. Kline (2022) defines parsimony as “the fewness of freely estimated parameters relative to the number of observations.” (Kline, 2022) argues that the best model parsimony would have a parsimony ratio (PR) 1.0, implying that the model has as many degrees of freedom as there are available in the data (null model). Schermelleh-Engel et al. (2003) suggest that a lower parsimony implies a good fit. Fit indices for parsimony are presented in Chapter 5 of the study.

4.13 ETHICAL CONSIDERATIONS

A research questionnaire was used to collect primary data. As a requirement, the respondents should consent to participate in the study if they are to provide complete information.

To proceed with data collection, gatekeeper's letters (see appendix IIA, IIB, IIC) were obtained from the Department of Micro, Small Enterprises, Ministry of Commerce, Industry and Trade of Eswatini, and the Small and Medium Enterprises Company (SEDCO). The letter from the Department of Micro, Small Enterprises, Ministry of Commerce, Industry and Trade of Eswatini was submitted to Youth Fund with the intention to inform them that a

study on the strategic impact of resilience on performance optimisation was to be conducted. Gatekeeper's letters provided legitimacy to the data collection activities and showed support for the study.

At the small and medium enterprises level, respondents (owner-managers) were informed verbally about the study, and copies of the gatekeeper's letters were presented to each respondent. Research assistants explained the purpose of the study. Written informed consent was obtained from each respondent (owner-manager of SMEs) before the administration of the questionnaire. Respondents were explained to that they had a right to pull-out of the study any time should they wish to. The right to pull out of the study any time was equally captured in the informed consent. Respondents were further explained to that their privacy and rights would be observed, a fact that was observed during the data collection exercise. No physical or emotional harm was caused during the administration of the questionnaire. Respondents were assured that their identity would not be disclosed in the reporting phase of the study. Respondents' willingness to participate in the study was expressed by signing each respondent signing an informed consent letter attached as appendix IV).

A quality of a good research is being truthful. This study has, therefore, not disclosed the identity of the respondents during the reporting phase of research findings.

4.14 CHAPTER SUMMARY

This chapter presented the methods used in this study. In this study, the ontology of objectivism, with a critical realism stance as well as detachment as the epistemological position, with positivism as its philosophy were adopted in the study of resilience. The study adopted a deductive approach that guided the formulation of research hypotheses, which were tested to establish the possible strategic impact of resilience on performance optimisation of SMEs in the Manzini region of Eswatini.

Underlying the study was the philosophy that reality can be identified and is measurable. Thus, the generation of dimensions representing variables aided the formulation of hypotheses. In this study, a census sampling technique was adopted to select respondents (owner-managers). The collection of data was done through a cross-sectional survey. The analysis of data was done using JASP version 0.18.2 and python. In this study which focused on the strategic impact of resilience on performance optimisation of SMEs in the Manzini region, Eswatini, the results of the analysis of data and the discussion of findings are presented in Chapter 5.

CHAPTER 5: PRESENTATION OF RESULTS

“Data really powers everything that we do.” Jeff Weiner

5.1 INTRODUCTION

This chapter presents results on the strategic impact of resilience on performance optimisation of SMEs in the Manzini region, Eswatini. The presentation of results follows a descriptive and inferential data presentation approach. This chapter aims to present results on the strategic impact of resilience on the performance optimisation of SMEs in the Manzini region, Eswatini. Four key variables, organisational resilience, strategic foresight (transformative resilience), absorptive capacity and strategic orientation were the independent variables. Absorptive capacity mediated the relationship between organisational resilience and performance optimisation while strategic orientation was used to predict resilience. The four independent variables and one outcome variable (performance optimisation) form the resilience model. In this chapter, the response rate, reliability test, fit indices, factor loadings, one-factor measurement model from each variable, results from each of the hypotheses tested, and the structural equation model (path diagram) are presented.

5.2 RESPONSE RATE

For the current study, 294 questionnaires were issued to owners/managers of SMEs. Of the 294 respondents, 206, representing 70%, were returned, while 88, representing 30% were not returned. Table 5.1 shows the response rate.

Table 5. 1: Response rate

Questionnaires issued/returned	Frequency	Percent	Cumulative Percent
Returned	206	70	70
Not returned	88	30	100.000
Total	294	100.000	

5.3 RELIABILITY AND VALIDITY OF RESEARCH INSTRUMENT

The present study had three predictor variables of the integrated model (resilience, strategic foresight-transformative resilience, and strategic orientation) and one mediating variable (absorptive capacity). The three predictor variables had 9 constructs, while the mediating variable had 3. The outcome variable had five constructs. Resilience was conceptualised into the following constructs: preparation, coping, and adaptation. Transformative resilience (foresight) was operationalised as discovery and planning, while Strategic Orientation was conceptualised into the following constructs: prospector, defender, analyser, and reactor. The mediating variable had three constructs: knowledge recognition, assimilation, and application. The outcome variable was conceptualised as customers, innovation, efficiency, production, and finance. In total, 12 constructs were extracted from 4 predictors/mediating variables while 5 constructs were from the outcome variable. For the 17 constructs (predictor and outcome), Cronbach's alpha coefficients ranged from 0.576 to 0.858. Given that most of the constructs had construct validity of 0.60 and above, the internal consistency of the measuring instruments was good. This implies that the constructs could measure what they were supposed to measure.

Table 5. 2: Construct Reliability

Internal consistency	Cronbach's Alpha (α)
Organisational Resilience	0.684
Strategic Foresight	0.637
Strategic orientation	0.576
Absorptive Capacity	0.707
Performance optimisation	0.858

Kline (2022) argues that nearly all statistical packages used in Structural Equation Modelling will always find a factor solution to any given set of variables. Nevertheless, the solution could be meaningless when the variables under consideration are spurious. In this regard, it is essential to explore the inter-correlation between variables. Implying that the test questions measure the exact underlying dimensions or constructs. Inter-item correlation values between 0.15 to 0.50 depict a good result, lower than 0.15 means items are not correlated well. A value higher than 0.50 means that items are correlated to a greater extent and the items may be repetitive in measuring the intended construct. Thus, all the correlations are significant at 0.01 level. Cheung et al. (2023) agree with this assumption and highlight the fact that

unreliable scales in SEM are of minimal concern because such errors are accounted for when estimating relationships between constructs.

The study presents the results of the demographic characteristics in terms of the following: gender, age, education, role in the SME, number of years in the role, tenure of the business, and whether a business is involved in planning or not.

5.4 RESPONDENTS' DEMOGRAPHIC CHARACTERISTICS

The study sought to establish respondents' demographic characteristics. Examining the demographic characteristics of respondents helps to gain insights into the composition of the population being studied. By understanding demographics, it was possible to understand the diversity and representation within the sample. This section presents the demographic characteristics of respondents in terms of gender, age, and level of education. Other aspects, such as the respondent's role in the SME, experience, how long the SEM has been operational, and whether the SME is involved in planning are presented.

5.4.1 Gender of the Respondents

This section sought to establish the gender of the respondents. The aim was to determine the nature of ownership by gender. Table 5.3 presents results of the gender of the respondents.

Table 5. 3 : Gender composition of survey respondents

Gender	Frequency	Percent	Cumulative Percent
Male	118	57.282	57.282
Female	88	42.718	100.000
Total	206	100.000	

From Table 5.3, 57.282% of the respondents were male, while the remaining 42.718% were female respondents. Although more respondents were male, the difference was less than 15%, women start businesses as a means of survival due to high unemployment rates and limited job opportunities. Starting a business becomes a way to generate income and support themselves and their families.

5.4.2: Age Category of the Respondents

Table 5.4 presents the results of the study on age category by gender of the owners/managers of SMEs in Manzini.

Table 5. 4: Age category of respondents by gender

Gender	Age Category	Frequency	Percent	Cumulative Percent
Male	Below 20 years	2	1.695	1.709
	21-25	15	12.712	14.530
	26-30	34	28.814	43.590
	31-35	34	28.814	72.650
	36-40	23	19.492	92.308
	Above 40	9	7.627	100.000
	Missing	1	0.847	
Total		118	100.000	
Female	Below 20 years	2	2.273	2.273
	21-25	15	17.045	19.318
	26-30	33	37.500	56.818
	31-35	13	14.773	71.591
	36-40	13	14.773	86.364
	Above 40	12	13.636	100.000
	Missing	0	0.000	
Total		88	100.000	

Table 5.4 shows that 28.818% of the respondents among male owners/managers were aged between 26-30 and 36-40, while those under 20 were represented by 1.695%. On the other hand, 56.818%, where n=88 of the female owners/managers were between the ages of 26-30. 2.273% of the female owners/managers were below 20 years. The above results show that older males and females were more engaged in business than their younger counterparts.

5.4. 3 Level of Education of the Respondents

The study also sought to understand the educational level of respondents. Education level is a key demographical characteristic that enables researchers to understand the composition

and diversity of the sample under study. Table 5.5 presents the education level of respondents.

Table 5. 5: Highest education level (EducLevel) of respondents by gender

Gender	EducLevel	Frequency	Percent	Cumulative Percent
Male	Matric	15	12.712	12.821
	Certificate	27	22.881	35.897
	Diploma	24	20.339	56.410
	Degree	38	32.203	88.889
	Masters	1	0.847	89.744
	Others	12	10.169	100.000
	Missing	1	0.847	
	Total	118	100.000	
Female	Matric	15	17.045	17.045
	Certificate	20	22.727	39.773
	Diploma	27	30.682	70.455
	Degree	12	13.636	84.091
	Masters	2	2.273	86.364
	Others	12	13.636	100.000
	Missing	0	0.000	
	Total	88	100.000	

From Table 5.5, it can be seen that 32.203% of the males, where n=118(88.889 cumulative) hold undergraduate degrees. This was followed by those who hold a certificate represented by 22.881% or 35.897% cumulative, where n=118 among male owners/managers. Among female respondents, results in Table 5.5 show that 30.682% of female owners/managers or 70.45% where n=88 hold diplomas. This was followed by holders of certificates (22.727%) of female owners/managers of SMEs in Manzini Eswatini. Examining the education level of

respondents provides insights into the diversity and representativeness of the respondents, allowing researchers to assess the generalisability of their findings to the target population. Overall, there was an almost equal number of holders of certificates across the two genders (males 22.881% and females 22.727). On the other hand, there were more female holders of Diplomas (30.682%) than their male counterparts (20.339%). The highest percentage among qualifications was recorded among male respondents, 32.203% for a degree against 13.636% for female respondents.

5.4.4 Respondents' Role in the SME

The study analysed data on the role of respondents in the SMEs that were surveyed. Knowing the role of the respondent provided an understanding of context and enhanced the researcher's understanding of issues under study from the respondents' point of view, but also helped the researcher to interpret responses in view of their position in the organisation.

Table 5.6 presents the results of the study on the role of the respondents in the SME.

Table 5. 6: Roles played (role in SME) by respondents at SME by Gender

Gender	Role in SME	Frequency	Percent	Cumulative Percent
Male	Owner/Founder	72	61.017	61.017
	Manager	46	38.983	100.000
	Total	118	100.000	
Female	Owner/Founder	51	57.955	57.955
	Manager	37	42.045	100.000
	Total	88	100.000	

Results in Table 5.6 show that 61.017% of male respondents, where n=118 were owners/founders, while 38.983 among male respondents were owners/founders. On the other hand, 57.955% where n=88 among female respondents who were owners/founders. The rest were managers. The results of the study revealed that for SMEs, owners have an active role in the day-to-day operations of the enterprise.

5.4.5: Respondent's number of years spent in the role(owner/manager)

Table 5.7 presents results on respondents' number of years spent performing the specific role either as the owner/founder or manager. The role of the respondent enhanced the researcher's

understanding of the context in which the research was conducted as well as appreciating the fact that different roles may call for different perspectives and priorities that in a way, influence the findings of the study.

Table 5. 7 :Years spent in the role played by respondents

Years	Frequency	Percent	Cumulative Percent
Less than 5	145	70.388	70.388
6-10	44	21.359	91.748
11-15	13	6.311	98.058
16 and above	4	1.942	100.000
Total	206	100.000	

Results in Table 5.7 show that the majority (70.388%) of the respondents have been involved in SME activities for less than 5 years, with those who have been involved for 6-10 years ranked second, represented by 21.359%. Respondents who have been involved in SME activities for 16 and above years were the least, represented by 1.942%. Implicitly, post-COVID-19 employment situation has not been good. Since SMEs are seen as alternative sources of income, there is a likelihood that respondents who participated in the study had been affected by COVID-19 or were trying out new opportunities that were brought about by the COVID-19 pandemic.

5.4.6 Age of the SME

Table 5.8 presents results on the age of SMEs of the respondents who had participated in the study.

Table 5. 8: Age of the business unit

Business Age	Frequency	Percent	Cumulative Percent
Less than 5 years	123	59.709	59.709
6-10 years	51	24.757	84.466
11-5 years	21	10.194	94.660
Above 16 years	11	5.340	100.000
Total	206	100.000	

Table 5.8 shows that the majority of SMEs represented by 59.709% had a tenure of less than 5 years, followed by those that had been in existence between 6-10 years (24.757). Table 5.8 further shows that SMEs that have been in existence for more than 16 years were represented by 5.340. These results perhaps confirm the results in Table 5.7 that revealed that COVID-19 could have ushered in new business opportunities or could have forced respondents who participated in the study to start businesses.

5.4.7 Whether SMEs plan

Table 5.9 presents results on whether SMEs are involved in planning or not.

Table 5. 9 : Whether the respondents' business unit/SME is involved in planning

SME_Plan	Frequency	Percent	Cumulative Percent
No	4	1.942	1.942
Yes	202	98.058	100.000
Total	206	100.000	

Table 5.9 shows that many SMEs, represented by 98.058% are involved in planning. This may be attributed to the fact that since most have undergone training in business management/entrepreneurship by the Youth Fund and SEDCO, it is likely that as a requirement to complete the training and gain access to funds, enrolled SMEs are required to develop business plans. Planning helps SMEs define their objectives and set specific goals. It provides a roadmap for the business, outlining the direction it wants to take and the

milestones it aims to achieve. This clarity of purpose enables SMEs to focus their efforts and resources on activities that align with their long-term vision.

5.5 DESCRIPTIVE STATISTICS FOR LATENT AND OBSERVED VARIABLES THAT FORM THE RESILIENCE MODEL

This section presents results pertaining to the multi-dimensional nature of resilience that were tested in the research study. The dimensions presented (latent and observed) were central to developing a resilience model. The section begins with a presentation of descriptive results for each latent variable.

5.5.1 Nature of the Environment

The study examined the nature of the environment in which SMEs operate. Seven observed statements were formulated with a view of establishing the kind of environment SMEs operate in. Statements related to a number of places, changes in technology, opportunities in the sector etc were asked with a view of establishing respondents' perception of the nature of the environment in which they compete/operate. Table 5.10 presents descriptive statistics on respondents' perception of the nature of the environment in which they operate.

Table 5. 10 : Nature of the environment

		N	Mean	Std. Deviation
	Nature of Environment			
NR1	There are many players in the industry with similar characteristics (size, operations etc)	206	4.24	0.75
NR2	Changes in technology and legal framework are rapid and complex	205	3.74	0.822
NR3	Our clients tend to look for new/innovative products and services	206	4.13	0.789
NR4	Although small, the sector offers opportunities for growth	206	4.01	1.045
NR5	Resources to start businesses are easily available and less costly to acquire	205	1.99	1.08
NR6	Networks exist to tap opportunities	206	3.32	0.955
NR7	Market opportunities remain untapped	205	3.29	1.066

Results in Table 5.10 show that the sector offers opportunities, resources to start a business are easily available, and market opportunities remain untapped, have a standard deviation of

1.045, 1.08, and 1.066, respectively. A standard deviation of one implies that on a standard bell curve or normal distribution means that approximately 68% of the data falls within one standard deviation of the mean, 95% falls within two standard deviations, and 99.7% falls within three standard deviations (Mann et al., 2010). On the other hand, there are many players, and our clients tend to look for new/innovative products and services with standard deviations of 0.75 and 0.789, respectively. A standard deviation of 0.75 suggests that, on average, data points deviate from the mean by about 0.75 units. Comparing the two standard deviations (0.75 and 0.789), with other standard deviations, it is safe to conclude that the two converge towards the mean, indicating that the industry is clustered with many players and clients who tend to look out for new/innovative products and services. This is further exemplified by the fact that, there are many players in the industry with similar characteristics (size, operations etc.) had the highest mean of 4.24. A high mean implies that such a factor is considered important. Table 5.11 presents results on the dimensions of resilience.

5.5.2 Dimensions of resilience(forming the resilience model).

In this study, four variables constitute the integrated resilience model of the study (organisational resilience, strategic foresight, absorptive capacity and strategic orientation). The study adopted a multi-dimensional approach rather than a unidimensional approach. This is because resilience is a complex and multifaceted concept that entails various variables and dimensions. A multi-dimensional approach allows for capturing the full complexity of resilience by considering multiple factors and variables that contribute to an individual or an organisation's ability to bounce back from disruptive events/situations. As a result, studying resilience from a multi-dimensional perspective enables a comprehensive understanding of the strengths, vulnerabilities and areas for improvement within the organisation using relevant external and internal knowledge.

5.5.2.1 Organisational Resilience

The organisational resilience was represented by three observed variables: detectability/preparation, coping, and adaptation. The inclusion of the variable on organisational resilience in the resilience model was informed by the fact that the study would be able to take a holistic view that considers not only individual-level factor, but also organisational factors that contribute to the resilience of an organisation.

Table 5.11 presents the mean and standard deviation for the respondents' perceptions of respondents.

Table 5. 11 : Respondents' perception of dimensions of organisational resilience
Dimensions

		N	Mean	Std. Deviation
Detectability/Preparation				
RD1	Our company regularly monitors changes in economic conditions	206	3.84	0.962
RD2	Our company has a recovery plan	206	3.23	1.289
RD3	Our company makes sense of every change that we notice	205	3.71	0.841
RD4	Our company redeploys resources to support organisational strategies	206	3.59	0.802
RD5	In our organisation, we have established mutual relationships to deal with crises	205	3.5	0.973
RD6	Our company can identify the existence of new ideas that can be translated into business opportunities	206	4.04	0.777
RD7	Our company can identify and tap opportunities from supplier networks	206	3.9	0.829
Coping				
RC1	Our company reacts to the introduction of new products/services by competitors	206	3.9	0.902
RC2	Our company responds to changes in consumer demands	206	4.13	0.755
RC3	Our strategic decisions and actions are driven by the fear of change	206	3.53	1.01
RC4	Our company is flexible in the allocation resources to respond to external changes	206	3.73	0.884
RC5	We always renew our operations to ensure relevance	206	3.89	0.822
RC6	We always consult our networks to understand and manage crises	206	3.81	0.825
RC7	As an organisation, we have developed positive behaviour to deal with crises	206	3.78	0.899
Adaptation				
RA1	Our company frequently introduces new products to fit emerging customer needs	205	3.81	1.031
RA2	Our company is always quick to adjust its operations to match current trends	205	3.7	1.002
RA3	Our company is fast at adopting new marketing techniques	206	3.75	0.974
RA4	As an organisation, we usually use lessons learned from a disruption to make improvements to our operations/functions	206	3.91	0.857

RA5	Our company is fast at adopting new specifications and standards for products and services	206	3.78	0.826
RA6	As an organisation, we constantly develop our organisational values, norms and practices to sustain our operations	205	4	0.668
RA7	We always act on every knowledge we generate	206	4.09	0.696

In Table 5.11 under detectability, our company has a recovery plan had a standard deviation of 1.289, while our company can identify the existence of new ideas to be translated into business opportunities had a standard deviation of 0.777. The rest of the items had their standard deviations of less than one, but above 0.777. This implies that, on average, the data set deviates from the mean by an average of one unit. Although subjective, it has been reported that a standard deviation of less than one, may indicate that the spread of the data is closer to the mean (Mann et al., 2010). Under coping, our strategic decisions and actions are driven by the fear of the change had a standard deviation of 1.01 indicating that respondents have various views on strategic decisions and actions are driven by the fear of change.

On the other hand, “our company responds to changes in consumer demands” had the lowest standard deviation of 0.755. This implies that there was relative agreement that SMEs respond to changes in consumer demand. Under adaptation, two statements, our company frequently introduces new products to fit emerging customer needs and our company is always quick to adjust its operations to match current trends appears to have reported the greatest amount of dispersion, 1.031 and 1.002. The standard deviation for the two indicates that there was relatively high disagreement among respondents regarding the introduction of new products and how fast SMEs can adjust their operations. The rest of the labels under adaptation have a standard deviation of less than one. For instance, the statements: i) Our company is fast at adopting new marketing techniques (0.974), ii) Our company is fast at adopting new specifications and standards of products and services (0.826), iii) as an organisation, we constantly develop our organisational values, norms, and practices to sustain our operations (0.668). Overall, the highest mean was recorded under coping, Our company responds to changes in consumer demands (4.13). A high mean implies that there is convergence towards appreciating the fact that SMEs respond to changes in consumer needs. Indeed this is an important factor since SMEs can not survive if customer needs are not met. It was also important to note that to adapt, the statement, we always act on every knowledge

we generate received a mean of 4.09. Without acting on knowledge obtained from the external environment, it becomes difficult for SMEs to adapt to change.

5.5.2.2 Strategic Foresight (Transformative resilience)

The study integrated strategic foresight into the resilience model. Including this variable is important because strategic foresight enables an organisation to analyse trends, uncertainties, and potential future scenarios. As a result, strategic foresight is useful in enabling SMEs to anticipate and prepare for future disruptions.

Table 5.12 below presents results of strategic foresight (transformative resilience).

Table 5. 12 : Respondents' perception of strategic foresight (transformative resilience)

		N	Mean	Std. Deviation
	Discovery			
RFD1	Through research and development, our company has been able to establish areas for future interest	206	3.98	0.817
RFD2	Through our forecasts, future customer needs have been established	206	3.69	0.905
RFD3	As an organisation, we know where our future operations and strategic emphasis will be	206	3.59	0.826
RFD4	The use of ICTs is aimed at preparing the organisation for future operations	206	3.66	0.948
RFD5	We constantly assess competitors' business model in readiness for future organisational changes	206	3.77	0.884
RFD6	We constantly visualise the future of the industry	206	4.02	0.765
RFD7	We raise attention to emerging opportunities	206	4.15	0.725
	Planning			
RFP1	We have a strategic plan to guide our reaction to external and internal events	206	3.74	0.861
RFD2_A	Our activities and actions are driven by our mission and vision	206	4.07	0.775
RFP3	Our company objectives provide clarity of targets to be achieved	206	4.11	0.649
RFP4	Our company has key performance indicators that act as a basis for strategic planning	206	3.76	0.931
RFP5	Our planning horizons stretches beyond a year	206	3.6	1.076

RFP6	Our operations are linked to our future development plan	205	3.92	0.73
RFP7	Our strategies and actions aim at exploiting future opportunities	206	3.89	0.851

Results in Table 5.12 show that the standard deviation for all labels was less than one, with the exception of “our planning horizons stretches beyond a year” with a standard deviation 1.076. On a standard bell curve or normal distribution, a standard deviation of one means that approximately 68% of all data represented by the distribution falls within one standard deviation of the mean. Respondents had different views regarding planning horizon stretching for a year. The other observable variables of transformative resilience (discovery and planning), had a standard deviation of less than one. This means the data points are, on average, closer to the mean compared to a standard deviation of one. This implies that respondents appear to agree that transformative resilience is significant in performance optimisation initiatives. The highest mean was recorded by, we raise attention to emerging opportunities with a mean of 4.15, our company objectives provide clarity of targets to be achieved 4.11 as statements under discovery and planning dimensions of strategic foresight respectively. Respondents rated these as important factors in discovering new knowledge as well as planning to withstand disruptive events. Indeed, without without raising attention to emerging opportunities and without clear objectives, SMEs are not able to effectively withstand disruptions and optimise performance.

The next section presents results on strategic orientation. This was used to present respondents’ perception of the role of strategic orientation in predicting the resilience of SMEs. Table 5.13 presents descriptive results on the mediating variable, absorptive capacity and its observable variables (knowledge recognition, assimilation, and applying).

5.5.3 Absorptive capacity

The study included absorptive capacity in the model because absorptive capacity assists in assessing how organisations adapt to changes, learn from their experiences while effectively utilising knowledge from the environment to enhance their resilience.

Table 5. 13: Absorptive capacity

		N	Mean	Std. Deviation
	Knowledge recognition			
ACKR1	The organisation has the relevant infrastructure to gain new knowledge	205	3.44	1.164
ACKR2	Organisational members are always willing to learn something new	204	4.02	0.8
ACKR3	The organisation organises knowledge into a set of relevant and usable ideas	204	4.02	0.669
ACKR4	When new knowledge is acquired, it is transferred to other units of the organisation	205	4.05	0.596
ACKR5	We have increased our ability to solve existing problems.	205	3.82	0.817
ACKR6	Internal knowledge needs drive the need for new knowledge	203	3.8	0.833
ACKR7	We have an established system for knowledge management	205	3.67	0.844
	Average mean		3.83	
	Assimilation			
ACAS1	The knowledge we acquire from the external environment is integrated into our processes	205	3.88	0.707
ACAS2	New knowledge easily integrates with existing knowledge	205	3.94	0.687
ACAS3	New knowledge is usually acceptable in our operations	205	4.03	0.703
ACAS4	The management of the organisation evaluates every new idea received	204	4.08	0.739
ACAS5	In our organisations, procedures/rules exist with regard to how knowledge is coordinated	203	3.69	0.888
ACAS6	In our organisation, the coordination of professional initiatives and activities is managed through well-structured systems.	205	3.76	0.796
ACAS7	In our organisations, we have stabilised routines that facilitate knowledge integration	205	3.73	0.864
	Average mean		3.87	
	Applying			
ACAPP1	New knowledge is used to create new products/services	205	3.89	0.785
ACAPP2	New knowledge is used to adjust internal processes	205	4	0.675

ACAPP3	New knowledge drives innovation	204	4.01	0.723
ACAPP4	We have identified core areas where to apply learned ideas	205	3.82	0.791
ACAPP5	We can make informed decisions in this organisation	205	4.13	0.703
ACAPP6	Technology has enhanced the use of knowledge to innovate	205	3.89	0.775
ACAPP7	We have established mechanisms to protect our innovation	205	3.78	0.944
Average mean			3.93	

Results in Table 5.13 show that except, “the organisation has the relevant infrastructure to gain new knowledge with a standard deviation of 1.164, a label under knowledge recognition”, all observed variables and their labels had a standard deviation of less than one. The next label with the highest standard deviation was, that we have established mechanisms to protect our innovation (0.944). The rest of the labels under each observed variable had a standard deviation of less than 0.900. Generally, this means that, there seems to be agreement that features of absorptive capacity exist in SMEs. Of keen interest were labels such as, when new knowledge is acquired, it is transferred to other units of the organisation with a standard deviation of 0.596 (knowledge acquisition), the knowledge we acquire from the external environment is integrated into our processes with a standard deviation of 0.707 (assimilation) and new knowledge is used to adjust internal processes with a standard deviation of 0.675 (knowledge application) with significantly low standard deviations.

It should be noted that from the three dimensions of absorptive capacity, applying knowledge had the highest mean of 3.93 followed by knowledge assimilation with a mean of 3.87. Respondents considered these as important dimensions of absorptive capacity. Although knowledge recognition had the lowest mean(3.83) among the three dimensions of absorptive capacity, this mean can be considered good. Implicitly, absorptive capacity observed variables posted less variability in the data, hence the existence of absorptive capacity among SMEs. The next section presents descriptive results on the outcome variable, performance optimisation.

5.5.4 Strategic Orientation.

The study was interested in establishing the nature of the spread or convergence of respondents' views of strategic orientation. Including strategic orientation in the resilience model allowed the researcher to determine whether it can predict the resilience of SMEs.

Table 5. 14: Strategic Orientation

		N	Mean	Standard Deviation
	Prospector			
SOP1	Our organisation's performance is driven by innovation	206	3.95	0.822
SOP2	Innovation is driven by careful planning	206	4.01	0.726
SOP3	Our growth is driven by product and market development	206	4.14	0.817
SOP4	We often change our product/service mix to meet customer needs	206	4.03	0.799
SOP5	We always ensure that our actions are consistent in order to deliver strategic value to our clients	205	4.05	0.736
SOP6	We always monitor changes in the market to inform decision making	206	4.11	0.77
SOP7	We create change in the market through what we do/products and services	206	3.56	1.162
	Mean for the dimension			3.98
	Defender			
SOD1	Our company does not intend to introduce new products/services in the next three years	205	2.48	1.378
SOD2	We believe in building efficient systems to enhance our performance.	205	3.77	0.924
SOD3	We believe that success is driven by the ability to offer better prices to customers	205	3.69	1.111
SOD4	Quality is at the heart of what we do	205	4.25	0.908
SOD5	Our target market is narrow	204	3.31	1.267
SOD6	We focus on penetrating new markets to grow our business	204	3.98	0.923
SOD7	We are not easily distracted by changes in the market	205	3.34	1.188
	Mean for the dimension		3.55	
	Analyser			
SOA1	Innovation is at the heart of what we do	204	3.93	1.002

SOA2	We build efficient systems to sustain our performance	204	3.9	0.752
SOA3	We are a quality driven organisation	204	4.21	0.834
SOA4	We frequently change our product/service to meet our customer needs	203	3.9	0.967
SOA5	We usually undertake risk analysis before making changes to what we do	203	3.84	0.911
SOA6	We engage in intensive planning to ensure that we do the right thing	203	3.86	0.847
SOA7	We conduct performance appraisals	205	3.41	1.133
Mean for the dimension Reactor			3.86	
SOR1	We change our products/services because customers demand so	204	3.75	1.012
SOR2	We take advantage of opportunities only if they appear to all	204	3.57	1.017
SOR3	We rarely take up risky opportunities	202	2.95	1.247
SOR4	We do not have a strategic plan in place	205	2.7	1.23
SOR5	Our company responds to changes when we experience a crisis	205	3.65	1.126
SOR6	We constantly supervise our staff to ensure productivity	204	3.81	0.914
SOR7	Detailed work-plans and routines exist for staff to follow	204	3.69	1.041
Mean for the dimension			3.45	

Looked at carefully, the results of the standard deviation as reflected in Table 5.14 shows that a sizeable number of labels (observed variables) have a high standard deviation (We create change in the market through what we do/products and services (1.162), our company does not intend to introduce new products/services in the next three years (1.378), we believe that success is driven by the ability to offer better prices to customers, 1.111 and detailed work plans and routines exist for staff to follow (1.041). Overall, the latent variable, strategic orientation appears to have had a high standard deviation, implying relatively high disagreement among respondents-on-respondents perception of the nature of strategic orientation in the SME sector. Among the variables, the prospector observable variable appears to have a lower standard deviation, indicating a convergence of the respondents' views toward the prospector observable. This is exemplified by the fact that, overall, the mean for each dimension was 3.98, 3.55, 3.86 and 3.45 for prospector, defender, analyser and reactor respectively. Prospector and analyser are dominant orientations while the reactor and defender are the least pursued by SMEs.

5.5.4 Descriptive statistics on performance optimisation in SMEs in Manzini region of Eswatini.

Table 5. 15: Descriptive statistics on performance optimisation

		N	Mean	Std. Deviation
Customers				
PERC1	We pride ourselves in delivering customer value	204	4.37	0.773
PERC2	We have been able to attract new customers to our business	205	4.35	0.749
PERC3	Our sales to existing customers have increased	205	4.2	0.813
PERC4	Our customers are satisfied with our products and services	204	4.4	0.698
PERC5	Our company delivers what customers want in time	204	4.22	0.814
PERC6	Our company's flexibility in product/service offerings has been appreciated by customers	204	4.21	0.743
PERC7	Our sells have improved because of referrals from customers	204	4.07	0.803
Mean for the dimension			4.26	
Innovation				
PERIN1	We engage in research and development to identify new ways of doing things	204	3.92	0.912
PERIN2	Our company is quick at introducing new products/services	204	3.75	1.046
PERIN3	For products we make or display, our ways of doing it are creative	205	3.74	0.922
PERIN4	Our company has devised innovative ways of acquiring capital	205	3.38	1.085
PERIN5	Our products/service are innovative and offer new experiences	204	3.56	0.993
PERIN6	We embed technology to drive innovation.	205	3.54	1.041
PERIN7	Internal and external networks are a key producer of innovative products/services	205	3.47	0.988
Mean for the dimension			3.62	
Efficiency				
PERE1	The cost of running our operations such as sourcing raw materials/stock, production have reduced over time	205	2.89	1.238
PERE2	We have been able to drive down the cost of production and operations in the recent past	205	3.03	1.202

PERE3	Our economies of scale have improved over the last few years	205	3.27	1.094
PERE4	We have built a system of monitoring efficiency in the organisation	204	3.2	1.066
PERE5	Our customer acquisition costs have gone down	205	2.86	1.193
PERE6	Workforce costs have decreased	205	2.98	1.192
PERE7	Organisational values and norms are configured around building efficiency in all operations	204	3.58	0.941
Mean for the dimension			3.12	
Productivity				
PERP1	The quantity of output has increased over the years	203	3.61	1.072
PERP2	Our production processes have been improved to deliver value	204	3.72	1.02
PERP3	The time to produce a product/service has reduced	204	3.25	1.106
PERP4	Time management has been built into our system	205	3.47	1.087
PERP5	The unit of production per unit of labour has increased	205	3.29	1.134
PERP6	Productivity of capital has increased	204	3.29	1.305
PERP7	Our values and norms drive productivity	204	3.74	0.94
Mean for the dimension			3.48	
Finance				
PERF1	Our profit position has improved over the last few years	205	3.27	1.265
PERF2	Our company has been able to reach its financial targets	205	2.93	1.215
PERF3	Our return on investment is higher than expected	205	2.88	1.209
PERF4	As a company, we have reduced our debt burden and use our finances to run our operations	205	3.26	1.239
PERF5	In recent years, the return on borrowed funds has improved	205	3.21	1.246
PERF6	Our liquidity position is good	204	3.2	1.256
PERF7	We have good financial management systems in place	204	3.63	1.113
			3.20	

Results in Table 5.15 show that standard deviation for three observed variables of performance optimisation, efficiency, productivity and finance had the highest standard deviation of more than 1.00, but less than 1.300. A standard deviation greater than one means

there is more variability or dispersion in the data, thus respondents seem not to have had a common agreement/understanding on efficiency, productivity and finance as observed measures of performance optimisation. On the other hand, the observed variable of the latent variable performance posted the best standard deviation, in fact all, falling below 0.900. This implies that respondents agree with the fact that service/products or having a sizeable number of customers is a key observed variable of performance optimisation in SMEs. Although characterised by some labels with a standard deviation of greater than one, but less than 1.085, such as; our company is quick at introducing new products/services (1.046), our company has devised innovative ways of acquiring capital (1.085) and we embed technology to drive innovation (1.041), most of the labels of the observed variable innovation posted less than standard deviation of one. Using the mean to shade more light on the results of the dimensions of performance optimisation, customers, innovation, efficiency, productivity and finance dimensions of performance optimisation had a mean of 4.26, 3.62, 3.12, 3.48, and 3.20 respectively. Generally, respondents recognise the need to increase their focus on customers and pursue innovation as key dimensions of performance optimisation in Manzini region, Eswatini.

5.6 ITEM-TOTAL STATISTICS

This section sought to make inferences or draw conclusions about the population based on sample data. The section begins by presenting the results of analysis on item correlation for each observed variable, fit indices and one measurement model for each variable. The purpose is to establish whether the data for the specific variable is appropriate for use in SEM.

5.6.1. Inter-item correlation matrix for nature of resilience

This sub-section presents the item correction matrix for nature of resilience.

Table 5.57 (see appendix IX) show that there are negative average co-variances among items (NR1, NR2). As a rule, this violates the reliability model assumption. As such, this variable was dropped for further analysis.

On the other hand, results in Table 5.58 (see appendix X) show that the labels for all observed variables were positive. Detectability had some labels with Cronbach's alpha of less than 0.500 (RD4-0.490 and RD7-0.492). The observed variable of resilience, applying had all its labels above 0.600. Although most of the labels of the observed variable coping were greater than 0.500, four out of seven labels had a Cronbach's alpha of above 0.500 and less

than 0.600 (RC2-0.578, RC4-0.561, RC5-0.574 and RC6-0.569). It should be noted that different authors have advanced different views on Cronbach's alpha (Tapsir et al., 2018). Overall, the constructs of applying had a Cronbach's alpha of greater than 0.600, implying that data met the criteria for further analysis.

5.6.2 Item-total statistics matrix for strategic foresight (transformative resilience)

Table 5.59(see appendix VIII) presents item-total statistics for transformative resilience.

Table 5.59(see appendix VIII) shows the correlation between each item and a scale score that excludes that item. Items with negative item-total correlations are regarded as not good items. However, such items should not be deleted. Again, from Table 5.59(see appendix XI), we examine the "Alpha if Item Deleted" for each item. Although such constructs had low reliability, keeping them had a positive effect on Cronbach's alpha. Results in Table 5.59 show that Cronbach's alpha for all labels of the observed variables discovery and applying were above 0.500.

5.6.3 Inter-item correction matrix for absorptive capacity

The study sought to analyse the inter-item correction matrix for absorptive capacity to evaluate the internal consistency of measurement items. Item correction matrix for absorptive capacity is presented in Table 5.60(See appendix IX)

From Table 5.60(see appendix IX), it is clear that, keeping the items that were to be deleted appears to have improved significantly Cronbach's alpha. In the context of Cronbach's alpha, results in Table 5.22 show that all labels of the observed variable applying were greater than 0.600. This implies that Cronbach's alpha greater than 0.600 generally indicates an acceptable level of internal consistency or reliability for the items or variables being measured. Thus, a substantial proportion of the variance in the observed scores (applying) can be attributed to the true score.

5.6.4 Inter-item correction matrix for strategic orientation(prospector)

Results in Table 5.61(see appendix X) show that Cronbach's alpha for the prospector, an observed variable for strategic orientation was above 0.500 for most labels under strategic orientation. On the other hand, results in Table 5.62 show that Cronbach's alpha was negative for some labels of the defender (SOD1 0.050, SOD3 0.150, SOD7 0.146).

Table 5.62 (see appendix XI) shows the correlation between each item and a scale score that excludes that item. Items with negative item-total correlations are regarded as not good items. However, such items should not be deleted. Again, from Table 5.61(see appendix X the study examined the “Alpha if Item Deleted” for each item. Although such constructs had low reliability, keeping them had a positive effect on Cronbach’s alpha. Results in Table 5.61 (see appendix X)show that the observed variable defender had the greatest number of negative Cronbach’s alpha if item deleted. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. Because of this, this observed variable was not included for further analysis.

Table 5.62(see appendix XI) shows that if some items with low inter-item correction were deleted, Cronbach’s alpha would have not changed significantly. Maintaining them improved Cronbach’s alpha.

5.6.5 Item-Total Statistics for performance optimisation

On the other hand, Table 5.63(see appendix XII) presents results of Cronbach’s alpha if items were deleted for the variable performance optimisation.

In Table 5.63(see appendix XII), a comparison between the corrected item-total items correlation and Cronbach’s alpha shows that maintaining the items gradually improved Cronbach’s alpha for all constructs. Cronbach’s alpha as shown in Table 5.63 was above 0.800 for efficiency and finance, implying a high level of internal consistency or reliability for the items being measured. Regarding other observed variables of performance optimisation for the remaining observed variables (customers, productivity, finance and innovation-0.699), Cronbach’s alpha was greater than 0.600, indicating greater internal consistency in or reliability for the latent variable performance optimisation.

5.7. Sampling Adequacy

The Kaiser-Meyer-Olkin (KMO) Test evaluates the data's suitability for factor analysis. The test evaluates the model's overall sampling appropriateness as well as the sampling suitability for each variable.

Table 5.16: KMO and Bartlett's Test of Sampling Adequacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.723
	Approx. Chi-Square	2324.865
Bartlett's Test of Sphericity	Df	595
	Sig.	.000

Kaiser-Meyer-Olkin and Bartlett's measure of sampling adequacy

From Table 5.16, A Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value of 0.723 indicates a moderate level of sampling adequacy. The KMO value of 0.723 suggests that approximately 72.3% of the variance in the variables can be attributed to underlying factors, while the remaining 27.3% may be attributed to measurement error or other factors not captured by the analysis. A KMO of 72.3% suggests sampling adequacy allowing the analysis to proceed with factor analysis. On the other hand, Bartlett statistic is 0.000 indicating that patterns of correlation are relatively compact, so factor analysis should yield distinct and reliable factors. For these data Bartlett's test is highly significant ($p < 0.0001$) thus factor analysis was appropriate.

5.8 Factor extraction using Varimax

In variable maximisation (Varimax) rotation, the rotated component matrix is a crucial output that provides key insights into the correlation between variables and the components. An assessment of the correlations helps to identify the variables that are strongly associated with each component to gain a deeper understanding of the underlying factors being measured. Table 5.17 presents the results of the rotated component matrix (factor loadings) for 10 components.

Table 5. 17: Rotated Component Matrix

	Component									
	1	2	3	4	5	6	7	8	9	10
RA1	0.700									
RA2	0.710									
RA3	0.569									
RA4		0.593								
RA5		0.503								
RFD1	0.680									
RFD2	0.723									
RFD3	0.676									
RFD4	0.642									
RFP4			0.667							
RFP5			0.727							
RFP6							0.656			
RFP7							0.844			
PERC2			0.721							
PERC4			0.599							
PERC6			0.535							
PERC7			0.669							
PERE1	0.726									
PERE2	0.705									
PERE3	0.714									
PERE5	0.752									
PERE6	0.789									
PERF1		0.671								
PERF7		0.593								
SOP4	0.774									
SOP5	0.694									
SOP6									0.467	
SOA5						0.639				
SOA6						0.673				
SOA7						0.529				
SOR1										.845
ACKR1			0.757							
ACKR5			0.711							
ACKR6			0.511	0.507						

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table 5.17 shows the components extracted. In Table 5.17, 10 components are identified. However, looking at the scree plot in Figure 5.2, only 9 components can be recognised at the point when the curve starts to flatten. Essentially 9 components can be derived from the data. Table 5.61 shows the rotated component matrix or the rotated factor matrix in factor analysis which is a matrix of factor loadings for each variable onto each factor. There are several different rotation methods, however, in this analysis the “variable maximization” Varimax rotation was preferred, because it attempts to redistribute the factor loadings such that each variable (item) measures exactly one factor which is the ideal case for understanding the factors present. In Table 5.17 results show that RA has a significant influence on components 1(.700). Thus, indicating that RA contributes significantly to Component 1. In the same Table 5.17 RA2(.710), RA3(.569), RA4(.593) and RA5(.503) have a significant influence on component 1. A factor loading of .593 in varimax indicates a moderate positive relationship between the observed variable and the latent factor. This means that the variable is moderately associated with the underlying factor being measured. From Table 5.17 it can be further established that RFD3(0.723), and RFD (0.676) significantly affect component 1. A factor loading of 0.676 in rotated factor loading using Varimax rotation indicates a moderate positive relationship between the observed variable and the underlying factor. This means that the variable is moderately associated with the factor (component) being measured. In Table 5.17, RFP7 (0.844) shows that it is associated with component seven. A factor loading of 0.844 in a rotated component matrix suggests a strong positive relationship between the observed variable and the underlying factor. This indicates that the variable has a significant influence on the factor being measured. Regarding the variable strategic foresight (transformative resilience), results in Table 5.17 shows that RFP6 has a factor loading of 0.656. A factor loading of 0.656 suggests a moderately strong positive relationship between the variables and the factor. It indicates that the variable is significantly associated with the factor being measured. In this case, the closer a factor loading is to 1 (or -1), the stronger the relationship between the variable and the component. Four variables under the observed variable (customers of performance optimisation) PERC2(0.721), PERC4(0.599), PERC6(0.535), and PERCE7(0.669) have a positive correlation with component three . The factor loadings range from moderately strong to string. On the other hand, the variables under efficiency (performance optimisation) are moderately correlated to variables, PERE1(0.726), PERE2(0.705), PERE3(0.714), PERE5(0.752) and PERE6(0.789). These loadings show that there is a strong positive correlation between the variables and component one.

With regard to the variables under finance (performance optimisation), PERF1(0.671) and PERF7(0.593) are moderately correlated with component two. As shown in Table 5.17, other observed variables of strategic orientation, SOP4(0.774), SOP5(0.694), are correlated with component one while SOP6(0.467) is correlated with component nine. The observed variables of the latent variable analyser under strategic orientation SOA5(0.639), SOA6(0.673) and SOA7(0.529) are correlated with component six. The implication of having factor loadings of between 0.467 and 0.774 is that factor loadings in this range suggest a moderate to strong relationship between the observed variables and latent factors in the SEM model. On the other hand, variables with a higher factor loading (above 0.700) have a stronger influence on the component. Such factors are important in helping to explain the underlying constructs or dimensions in the model.

Still in Table 5.17 the observed variables of knowledge recognition of absorptive capacity, ACKR1 (0.757), ACKR5 (0.711) and ACKR6 (0.511) are positively correlated with component three. The values 0.757, 0.711, and 0.511 represent the strength of the relationship between the observed variables and the underlying latent factors. It should be noted that ACKR6 (0.507) has a cross-loading with component four as well. In this case, cross-loading may indicate that the variable has complex relationships with multiple latent factors. This suggests that the variable may be influenced by multiple underlying constructs or dimensions, requiring a more nuanced interpretation. Specifically, a factor loading of 0.757 suggests a relatively strong relationship between the corresponding variable and the latent factor, a factor loading of 0.711 indicates a moderate to strong relationship between the variable and the latent factor while a factor loading of 0.511 suggests a moderate relationship between the variable and the latent factor.

In a nutshell, high component loadings indicate that the corresponding variables have a strong influence on the identified principal components. They thus, significantly contribute to the formation of the components and are important in explaining the underlying structure of the data on resilience and performance optimisation.

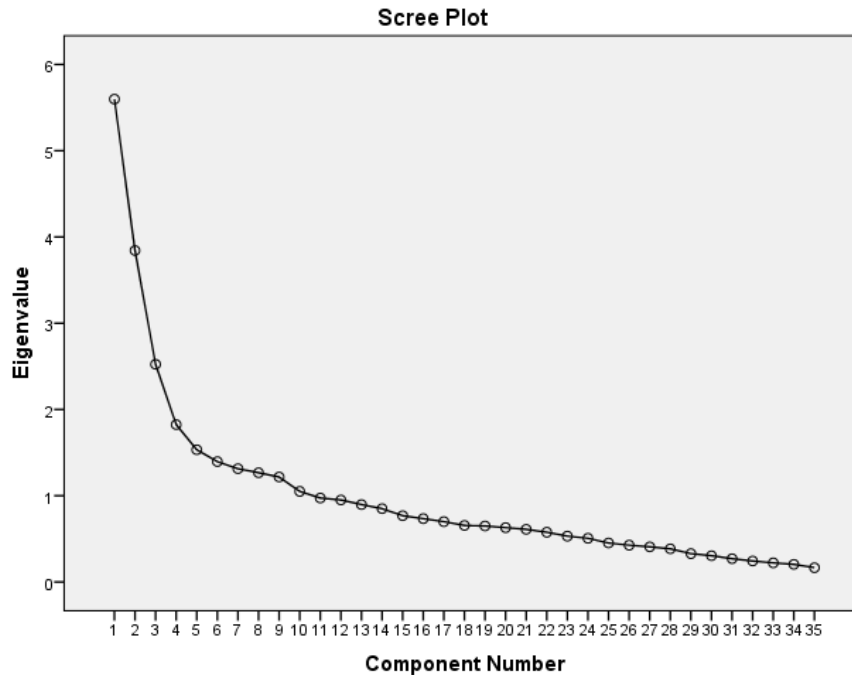


Figure 5. 1: Scree plot indicating the number of extracted components

Figure 5.1 (a scree plot) visualises the eigenvalues (quality scores) as seen in Table 5.17. Again, it is observed that the first 9 components have eigenvalues that are greater than one. These are considered “strong factors”. After that, from component 11 and onwards the eigenvalues drop off dramatically. This explains the fact that only 4 factors out of 35 were considered robust. The four factors were considered to be strong and stable while 31 were found to weak and unstable. The sharp drop between components 9 and 10 onwards, strongly suggests that 9 factors underlie the questions (items) considered in the study. Res-adaptation, SF discovery, SF planning, PER customers, PER efficiency, PER finance, SO prospector, SO analyser, AC capacity, AC knowledge recognition.

The research question underlying the study analysis is: “What do these factors represent?” Theoretically, a factor (or component) represents whatever its variables/ items have in common. The underlying factors that were measured by several observed variables were established using factor analysis. Factor analysis is useful in structural equation modeling (SEM) because it helps to identify and confirm the underlying relationships between observed variables and latent constructs. By reducing data dimensionality, factor analysis allows researchers to develop a measurement model that accurately reflects the theoretical constructs being studied. This process is essential for ensuring that the indicators used in SEM are valid representations of the latent variables, thereby enhancing the overall reliability

and interpretability of the model. Additionally, it aids in assessing the fit of the model, ensuring that the relationships posited by the theoretical framework are supported by the data.

These "underlying factors" included organisational resilience, strategic foresight, absorption capacity, and SME performance since they could not be quantified directly and were measured using a number of questions that partially reflect such factors.

5.9. MEASUREMENT MODELS

Measurement models are any implicit or explicit models that link latent variables to their associated indicators (Hair et al., 2020). Since the measurement model serves as the conceptual foundation for defining latent variables, its evaluation is essential. The measurement models for the latent variables theorised in the conceptual framework.

5.9.1 Confirmatory factor analysis

It is believed that exploratory factor analysis (EFA), a more traditional methodology, is being replaced by confirmatory factor analysis (CFA), a more recent method (Nájera et al., 2023). By allocating the items of an instrument to their respective factors by theoretical expectations, CFA is superior to other methods for determining an instrument's factor structure and for addressing construct validity (Park and Kim, 2021).

Psychometric scales should, according to some researchers' conservative recommendations, include many items. Multiple items allow for the evaluation of internal consistency, which is necessary for psychometric instruments (Vitoratou et al., 2023). Conventionally, psychometric scales comprise multiple items. Indeed, it could be argued that this is a prerequisite of psychometric scales, for only multiple items enable the assessment of internal reliability, and reliability is a prerequisite of psychometric scales (Kline, 2000). The one-factor confirmatory factor analysis was taken into consideration because it is regarded as a core model in CFA. It is presumptive that there is just one common factor causing the covariance (or correlation) among the elements being evaluated.

5.9.2 One factor CFA model: Organisational Resilience (OR)

One-factor measurement model assumes that all observed variables are indicators of a single latent variable. This is useful when examining the overall quality of a set of variables or when there is a theoretical expectation that all variables are related to a single construct. By using a one-factor measurement model, the researcher was able to examine the fit of the one-factor model for overall adequacy of the measurement model before moving on to the next complex models.

Table 5.18: Fit indices for Organisational Resilience

Index	Value
Comparative Fit Index (CFI)	0.966
T-size CFI	0.927
Tucker-Lewis Index (TLI)	0.954
Bentler-Bonett Non-normed Fit Index (NNFI)	0.954
Bentler-Bonett Normed Fit Index (NFI)	0.943
Parsimony Normed Fit Index (PNFI)	0.707
Bollen's Relative Fit Index (RFI)	0.924
Bollen's Incremental Fit Index (IFI)	0.966
Relative Noncentrality Index (RNI)	0.966

Note. T-size CFI is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional CFI cut-off values (poor < 0.90 < fair < 0.95 < close) are **poor** < **0.82** < **fair** < **0.892** < **close** for model: Model 1

CFI index is a commonly used fit index in SEM. It is a normed fit index that ranges between zero and one, with values closer to one, indicating a better fit between the hypothesised model and observed data. As such, results in Table 5.18, show that CFI is 0.966. Since 0.966 is closer to one, there is better fit between the hypothesised model and observed data. 0.966 shows that the factor loadings for the observed variables are strong enough to predict the latent variable. Using Bentler-Bonett Normed Fit Index (NFI) indices, results in Table 5.18 show that with NFI of 0.943, the hypothesised model presents good fit with the data. The model explains a substantial amount of the variance in the observed variables of resilience (latent). Table 5.19 presents results of other fit measures of resilience.

Table 5. 19 : Other fit measures for Organisational Resilience

Metric	Value
Root mean square error of approximation (RMSEA)	0.082
RMSEA 90% CI lower bound	0.057
RMSEA 90% CI upper bound	0.109
RMSEA p-value	0.022
T-size RMSEA	0.109
Standardized root mean square residual (SRMR)	0.076
Hoelter's critical N ($\alpha = .05$)	127.907
Hoelter's critical N ($\alpha = .01$)	149.578
Goodness of fit index (GFI)	0.984
McDonald fit index (MFI)	0.913
Expected cross validation index (ECVI)	

Note. T-size RMSEA is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional RMSEA cut-off values (close < 0.05 < fair < 0.08 < poor) are **close < 0.08 < fair < 0.107 < poor** for model: Model 1

Table 5.19 presents the results of the RMSEA. Root mean square error of approximation is a statistic in the LISREL program. It explains how the model selected fits the population covariance matrix, with a cut-off point of 0.01, 0.05, and 0.08 as excellent, good, and mediocre fit respectively (Schermelleh-Engel et al., 2003). This cut-off is contested since some studies suggest that a range of 0.05-06 is acceptable (Bollen, 1986). Results shown in Table 5.19 demonstrate that a Root Mean Square Error of Approximation (RMSEA) value of 0.082 suggests an acceptable fit between the hypothesised model and the observed data in SEM. RMASE measures the discrepancy between the hypothesised model and the observed data, taking into account the complexity of the model and the degree of freedom. This implies, that the observed data significantly influences the latent variable (resilience).

The Table below provides factor loadings for the onefactor measurement model for resilience as presented in Figure 5.20.

Table 5. 20: Factor Loadings for Resilience

		Estimate	Std. Error	z-value	P	95% Confidence Interval	
Latent	Indicator					Lower	Upper
OR	RA1	1.000	0.000			1.000	1.000
	RA2	1.063	0.098	10.799	< .001	0.870	1.256
	RA3	1.220	0.110	11.063	< .001	1.004	1.436
	RA4	0.759	0.087	8.685	< .001	0.588	0.930
	RA5	0.874	0.089	9.788	< .001	0.699	1.049
	RC1	0.944	0.090	10.456	< .001	0.767	1.121
	RC2	1.119	0.108	10.379	< .001	0.907	1.330
	RC3	0.732	0.079	9.274	< .001	0.578	0.887
	RC4	0.895	0.088	10.197	< .001	0.723	1.067

Table 5.20 provides relevant factor loadings for the measurement model for resilience below, as represented in Figure 5.3 factor loadings are important in a one-factor measurement model in SEM because they provide information about the strength and direction of the relationship between observed variables and the latent construct, they are intended to measure. Figure 5.2 presents the one factor path diagram, with factor loadings drawn from Table 5.20.

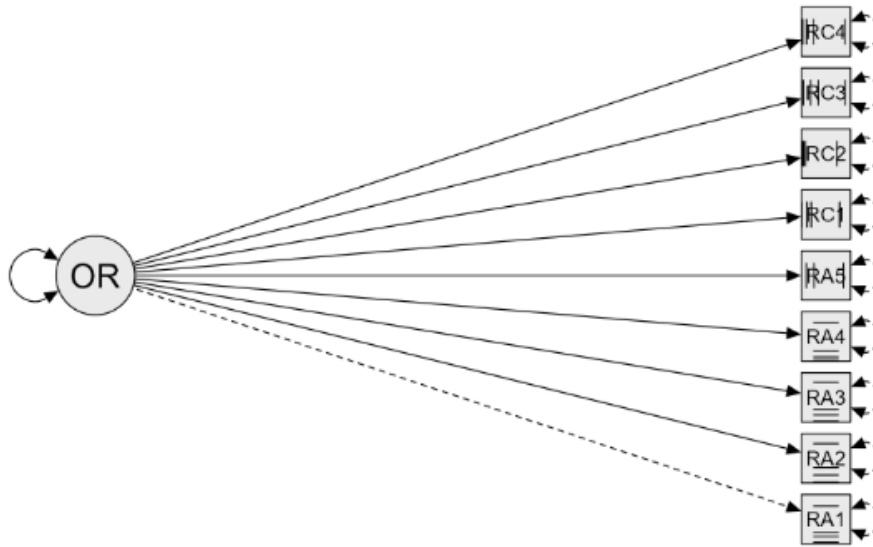


Figure 5. 2: One factor measurement model for organisational resilience

Figure 5.2 shows the results of a one-factor confirmatory factor analysis model for resilience in JASP statistical software. The one-factor CFA assumes that the covariance (or correlation) among items is due to a single common factor, in this case, organisational resilience (OR). The factor loadings for indicator or manifest (observed) variables are 0.944, 1.119, 0.732 and 0.895 representing RC1, RC2, RC3 and RC4 respectively. On the other hand, the factor loads for the manifest variables as depicted in Figure 5.2 are 1.00, 1.063, 1.220, 0.759, and 0.874 representing RA1, RA2, RA3, RA4, RA5 respectively as resented in Figure 5.2. In Table 5.20 factor loadings of greater than one, but less than 1.22 such as RA2-1.063, RA3-1.22 and RC2 1.119 suggest a strong relationship between the latent variable and the observed variables. On the other hand, results in Table 5.20 show that RC1 has a factor loading of 0.944. A factor loading of 0.944 in SEM indicates a strong positive relationship between a latent variable (resilience-coping) and its observed variables. Thus, the observed variables of coping are said to influence the latent variable (coping) by about 0.944. To understand further the fit between the current model and the saturated model, the study further used AIC and BIC to determine model fit. Table 5.21 presents the results of AIC and BIC.

Table 5. 21 Model fit for organisational resilience using AIC and BIC

			Baseline test			Difference test		
	AIC	BIC	N	χ^2	Df	P	$\Delta\chi^2$	Δdf p
Model 1			206	3.359×10 ⁻¹⁶	0	< .001	3.3459×10 ⁻¹⁴	0

Note. Model tests based on scaled and shifted test-statistic.

Results in Table 5.21 show that a value of 3.3459×10^{-14} is considered extremely small. In scientific notation, the number 3.3459×10^{-14} represents a decimal number that is close to zero. The exponent of -14 indicates that the decimal point is shifted 14 places to the left. With a small figure 3.3459×10^{-14} the discrepancy between the current model and the saturated model is small. Thus, the selected model is fit for the data allowing for the analysis of data using the selected model (SEM) (Kline, 2022; Zumbo, 2005).

5.9.3 One factor CFA model: Strategic Foresight (transformative resilience)

Table 5.22 shows the results of a one-factor confirmatory factor analysis model for the variable in JASP statistical software, the one-factor CFA assumes that the covariance (or correlation) among items is due to a single common factor, in this case, strategic foresight (Transformative Resilience) (SF).

Table 5.22: Fit indices for Strategic Foresight (Transformative Resilience)

Index	Value
Comparative Fit Index (CFI)	0.927
T-size CFI	0.847
Tucker-Lewis Index (TLI)	0.891
Bentler-Bonett Non-normed Fit Index (NNFI)	0.891
Bentler-Bonett Normed Fit Index (NFI)	0.906
Parsimony Normed Fit Index (PNFI)	0.604
Bollen's Relative Fit Index (RFI)	0.860
Bollen's Incremental Fit Index (IFI)	0.928
Relative Noncentrality Index (RNI)	0.927

Note. T-size CFI is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional CFI cut-off values (poor < 0.90 < fair < 0.95 < close) are **poor** < **0.804** < **fair** < **0.881** < **close** for model: Model 1

Table 5.22 presents fit indices for the Strategic Foresight (Transformative resilience variable). Fit indices determine how well a priori model fits the sample data (McDonald & Ho, 2002). Such fit indices provide the most fundamental indication of how suitable the proposed model is for the data to be analysed. Results presented in Table 5.22 show that the data meets the criterion, **poor** < **0.774** < **fair** < **0.861** < **close** for the model. Since the Comparative Fit Index (CFI) is an index of goodness fit that measures how well the proposed model fits the observed data, a CFI of 0.927 suggests a reasonably good fit. CFI ranges from zero to one, with values closer to one indicating a better fit.

To verify further whether the model was fit for the data, the study presented results of other fit measures as presented in Table 5.23.

Table 5. 23: Other fit measures for Strategic Foresight

Metric	Value
Root mean square error of approximation (RMSEA)	0.121
RMSEA 90% CI lower bound	0.088
RMSEA 90% CI upper bound	0.155
RMSEA p-value	3.392×10^{-4}
T-size RMSEA	0.155
Standardized root mean square residual (SRMR)	0.085
Hoelter's critical N ($\alpha = .05$)	88.006
Hoelter's critical N ($\alpha = .01$)	108.051
Goodness of fit index (GFI)	0.980
McDonald fit index (MFI)	0.903
Expected cross validation index (ECVI)	

Note. T-size RMSEA is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional RMSEA cut-off values (close < 0.05 < fair < 0.08 < poor) are **close < 0.091 < fair < 0.118 < poor** for model: Model 1

As shown in Table 5.23 RMSEA is 0.121 and A RMSEA of 0.121 suggests a moderate fit. It indicates that the model does not perfectly fit the data, but it is also not a poor fit. On the other hand, an SRMR of 0.085 suggests a reasonably good fit. It indicates that the model has a relatively small discrepancy between the observed and model-implied covariance matrices. Generally, from Table 5.23, the model was fit for the data. Results in Table 5.24 show the factor loadings for the one measurement model path diagram for strategic foresight (transformative resilience) as presented in Figure 5.3.

Table 5. 24: Factor Loadings for the one measurement path for strategic foresight

Table 5.31: Factor Loadings for the one measurement path for strategic foresight

Latent	Indicator	Estimate	Std. Error	z-value	P	95% Confidence Interval	
						Lower	Upper
SF	RFD1	1.000	0.000			1.000	1.000
	RFD2	1.466	0.193	7.607	< .001	1.088	1.843
	RFD3	1.451	0.182	7.957	< .001	1.093	1.808
	RFD4	0.756	0.123	6.153	< .001	0.515	0.996
	RFP4	0.701	0.122	5.755	< .001	0.462	0.939
	RFP5	1.015	0.141	7.205	< .001	0.739	1.291
	RFP6	0.981	0.151	6.477	< .001	0.684	1.278

Results in Table 5.24 below present the factor loadings for the measurement path. In a one-factor measurement model, all observed variables are assumed to be indicators of a single underlying factor. The factor loadings represent the correlations between the latent factor and each observed variable. Higher loadings indicated a stronger association between the latent variables. Figure 5.3 below presents results of the one-factor path diagram and an analysis of results from Table 5.24 is therefore presented.

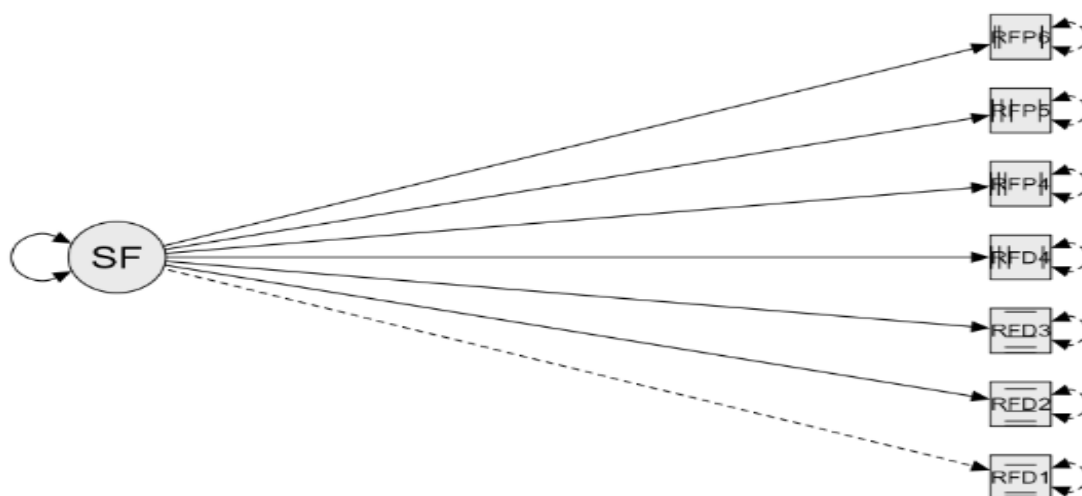


Figure 5. 3: One-factor measurement model for Strategic Foresight (Transformative resilience)

Figure 5.3 shows the results of a one-factor confirmatory factor analysis model for the variable in JASP statistical software, one-factor CFA assumes that the covariance (or correlation) among items is due to a single common factor, in this case, strategic foresight (Transformative Resilience) (SF). Figure 5.3 shows the factor loadings for the indicator or manifest variables are RFDI (1.000), RFD2 (1.466), RFD3 (1.451), RFD4 (0.756). For the observed variable planning, the factor loadings were RFP4 (0.704), RFP5 (1.015), RFP6 (0.981) and the loadings for the latent variables or items are greater than 0.70. Results in Figure 5.3 show that latent variables in the one-factor measurement model hold together and prove that the structural model can be developed from the latent variables. To further test the suitability of the model with the data, the study determined the AIC and BIC model fit criteria. Table 5.25 presents the results of the AIC BIC.

Table 5. 25: Model fit using AIC BIC(Strategic Foresight)

	Baseline test						Difference test		
	AIC	BIC	n	χ^2	df	P	$\Delta\chi^2$	Δdf	P
Model 1			206	27.693	5	< .001	27.693	5	< .001

Note. Model tests based on scaled and shifted test-statistic.

Table 5.25 shows that the structural equation model is significant at $P < 0.001$. This signifies that the selected model fits the data. Thus, the analysis of data would proceed with the use of SEM.

5.9.4 One factor CFA model: Strategic Orientation (SO)

One factor confirmatory factor analysis is important in SEM because it helps to identify a model that the said model is estimable and produces meaningful results. A one factor CFA serves as the starting point for model identification, as it allows researchers to establish a baseline model with a single latent factor and its corresponding observed indicators. Table 5.26 presents results for fit indices for the one factor CFA.

Table 5. 26: Fit indices for strategic orientation

Index	Value
Comparative Fit Index (CFI)	0.497
T-size CFI	0.029
Tucker-Lewis Index (TLI)	-0.005
Bentler-Bonett Non-normed Fit Index (NNFI)	-0.005
Bentler-Bonett Normed Fit Index (NFI)	0.498
Parsimony Normed Fit Index (PNFI)	0.249
Bollen's Relative Fit Index (RFI)	1.000
Bollen's Incremental Fit Index (IFI)	0.509
Relative Noncentrality Index (RNI)	0.497

Note. T-size CFI is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional CFI cut-off values (poor < 0.90 < fair < 0.95 < close) are **poor** < **0.772** < **fair** < **0.859** < **close** for model: Model 1

Table 5.26 presents fit indices for the Strategic Orientation (SO) variable. Fit indices determine how well a priori model fits the sample data (McDonald & Ho, 2002). Fit indices provide the goodness of fit of a particular model for a certain set of data. Results in Table 5.26 show that most of the values are ≤ 0.498 . Since poor < 0.90 < fair < 0.95 < close) are **poor** < **NaN** < **fair** < **NaN** < **close** for the model, it can be concluded that the selected model for Strategic Orientation is not appropriate for the data. A T-size (CFI) value of 0.0029 in SEM suggests a very poor fit between the proposed model and the observed data. Values ranging from zero to one, indicate that the model fits that data. If values ranging from zero to one indicate model fit, it is therefore plausible to deduce that the model fits the data. Further, a Bollen's Relative Fit index (RFI) value of 1000 in SEM indicates a perfect fit between the proposed model and the observed data. RFI is a relative fit index that measures the degrees of improvement in a fit compared to a null model. It ranges from zero to one, with values closer to one indicating a better fit. To verify further the fit of the model with the data, Table 5.27 presents other fit indices.

Table 5.27: Other fit measures for strategic orientation

Metric	Value
Root mean square error of approximation (RMSEA)	0.319
RMSEA 90% CI lower bound	0.268
RMSEA 90% CI upper bound	0.373
RMSEA p-value	0.000
T-size RMSEA	0.373
Standardized root mean square residual (SRMR)	0.158
Hoelter's critical N ($\alpha = .05$)	21.730
Hoelter's critical N ($\alpha = .01$)	29.249
Goodness of fit index (GFI)	0.942
McDonald fit index (MFI)	0.775
Expected cross validation index (ECVI)	

Note. T-size RMSEA is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional RMSEA cut-off values (close < 0.05 < fair < 0.08 < poor) are **close < 0.118 < fair < 0.145 < poor** for model: Model 1

The rule of thumb is RMSEA values of below 0.05 are considered excellent, values between 0.005 and 0.008 as good and values above 0.10 suggest poor fit. This is contestable because different authors have different cut-off points (Bollen, 1986; Davey et. al., 2010; Kline, 2022; Pool et al., 2018; Schermelleh-Engel et al., 2003b). From Table 5.27 since the RMSEA is outside the cut-off zone, the null hypothesis is thus not accepted. The alternative hypothesis is accepted, indicating a significant relationship between strategic orientation and performance optimisation of SMEs in Manzini, Eswatini. Table 5.27 presents results of R-Squared for strategic orientation on performance optimisation.

From Table 5.27, it is evident that RMSEA p-value of 0.000 in SEM indicates a very good fit between the proposed model and the observed data. P-value of 0.000 suggests that the model fits the data. This contradicts A T-size (CFI) value of 0.0029 which suggest poor fit as indicated in Table 5.26. Overall, despite the contradictions, it was established that the model fits the data under study. Table 5.28 presents results of factor loadings for the latent variables,

strategic orientation. The aim is to use them to explain the results of the one measurement path model.

Table 5. 28: Factor Loadings for strategic orientation

Latent Indicator	Estimate	Std. Error	z-value	P	95% Confidence Interval	
					Lower	Upper
SO SOP4	1.000	0.000			1.000	1.000
SOP5	0.232	0.231	1.002	0.316	-0.222	0.685
SOA5	-0.013	0.032	-0.421	0.674	-0.075	0.049
SOA6	-0.093	0.093	-0.999	0.318	-0.274	0.089
SOA7	-0.094	0.093	-1.009	0.313	-0.276	0.088

Figure 5.4 presents the one-factor path diagram for strategic orientation. The factor loading Table above shows positive estimates for SOP4 and SOP5. This signifies that the latent variable is positively influenced by the observed variable. The negative values for SOA5 to SOA7 show a negative influence of the observed variable on the latent variable. From Table 5.28 it is equally important to note that although a combination of negative and positive values (estimates) is shown in Table 5.28 all the p-values show that the identified observed variables do not influence the latent variable. Figure 5.4 presents a one-factor path diagram.

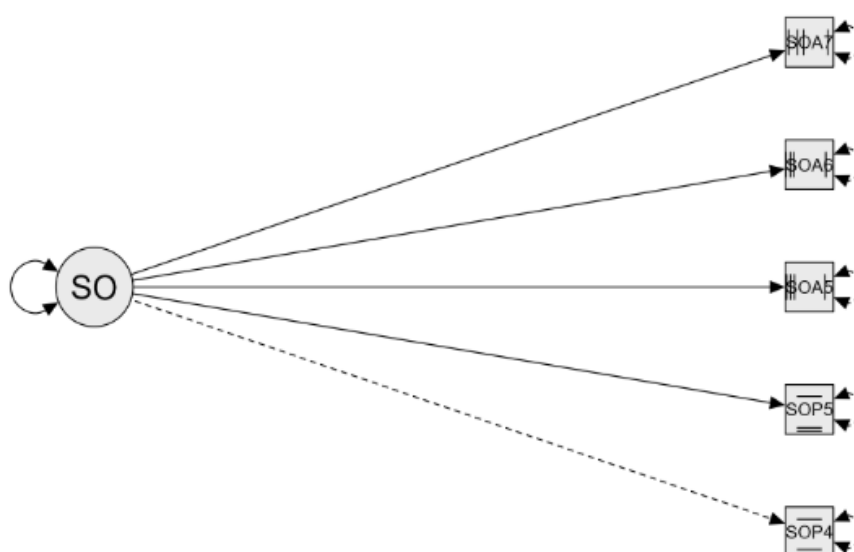


Figure 5. 4:One factor measurement model for strategic orientation

Figure 5.4 shows the results of a one-factor confirmatory factor analysis model for the variable in JASP statistical software, the one-factor CFA assumes that the covariance (or correlation) among items is due to a single common factor, in this case, Strategic Orientation (SO). Results in Figure 5.4 show the relationship between the latent variable and its observed variables. From Table 5.28, the loadings for the various observed variables are reflected as; SOP4 (1.000), SOP5 0.232, SOA5 (-0.013) and SOA6 (-0.093) and SOA (-0.094). From Table 5.28 apart from SOP4 and SOP5, the rest of the factor loadings were negative. In a one-path diagram in SME, negative factor loadings indicate that observed variables are inversely related to the latent construct, they are intended to measure. This mean that as the latent construct increases, the observed variables decrease, and vice versa. Negative loadings in a one-factor measurement model in SEM are not inherently bad or problematic. They can have different interpretations depending on the specific context and reasons behind their occurrence. In this regard, negative loadings were a result of reverse coding; thus, the negative signs signify an inverse relationship between the latent construct and the observed variables. This was meant to align items with the intended direction of the latent constructs. To provide guidance in testing hypothesis on strategic orientation, an examination of model fit using AIC and BIC was conducted as presented in Table 5.29 below of the AIC BIC model fit.

Table 5.29: Model fit for strategic orientation using AIC and BIC

				Baseline test			Difference test	
	AIC	BIC	N	χ^2	df	P	$\Delta\chi^2$	Δdf p
Model 1			206	5.459×10^{-16}	0	< .001	5.459×10^{-16}	0

Note. Model tests based on scaled and shifted test-statistic.

$\Delta\chi^2$ are used to assess the fitness of a model. The chi-square statistic measures the discrepancy between the observed data and the model's predicted values. In the above Table (5.36), a chi-square of 5.459×10^{-16} is small enough to indicate a better fit between the model and the data, suggesting that the current model is very close to the saturated model which represents a perfect fit to the data. Thus, analysis of data would proceed since the ultimate purpose of AIC and BIC (Akaike Information Criterion) and BIC (Bayesian Information Criterion) is to help in model comparison and selection.

5.9.5 One Measurement Model for Absorptive Capacity (AC)

Table 5.30 below presents results of one measurement model for the latent variable, absorptive capacity. A one-measurement model in SEM refers to a model where there is only one latent variable or construct measured by a set of observed variables or indicators. The assumption is that all observed variables are indicators of single underlying constructs. In SEM, the importance of a one-measurement model lies in its ability to assess the relationship between the latent and its observed indicators. This allows the researcher to evaluate the strength and direction of the association between the construct and its indicators.

Table 5.30: Results of the fit indices for Absorptive Capacity

Index	Value
Comparative Fit Index (CFI)	1.000
T-size CFI	0.950
Tucker-Lewis Index (TLI)	1.000
Bentler-Bonett Non-normed Fit Index (NNFI)	1.000
Bentler-Bonett Normed Fit Index (NFI)	1.000
Parsimony Normed Fit Index (PNFI)	0.000
Bollen's Relative Fit Index (RFI)	1.000
Bollen's Incremental Fit Index (IFI)	1.000
Relative Noncentrality Index (RNI)	1.000

Note. T-size CFI is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional CFI cut-off values (poor < 0.90 < fair < 0.95 < close) are **poor** < **NaN** < **fair** < **NaN** < **close** for model: Model 1

CFI is a measure of how well the model fits the data, with values ranging from 0 to 1. A CFI greater than 0.90 is generally considered indicative of a good fit. In Table 5.30 CFI of 1 in a measurement model indicates a perfect fit between the model and the observed data. It suggests that the model provides an excellent presentation of the relationship between the latent (absorption capacity) and its observed indicators (see Figure 5.6).

Table 5. 31: Other fit measures for Absorptive Capacity (AC)

Metric	Value
Root mean square error of approximation (RMSEA)	0.000
RMSEA 90% CI lower bound	0.000
RMSEA 90% CI upper bound	0.000
RMSEA p-value	
T-size RMSEA	∞
Standardized root mean square residual (SRMR)	3.010×10^{-9}
Hoelter's critical N ($\alpha = .05$)	1.000
Hoelter's critical N ($\alpha = .01$)	1.000
Goodness of fit index (GFI)	1.000
McDonald fit index (MFI)	1.000
Expected cross validation index (ECVI)	

Note. T-size RMSEA is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional RMSEA cut-off values (close $< 0.05 < \text{fair}$ $< 0.08 < \text{poor}$) are **close** $< \text{NaN} < \text{fair}$ $< \text{NaN} < \text{poor}$ for model: Model 1

The standardised root mean square residual (SRMR) is a fit index used to assess the discrepancy between the observed covariance matrix and the model implied covariance matrix in SEM. It provides details of how well the model fits the observed data. From Table 5.31 results show that SRMR is 3.010×10^{-9} . Standardised Root Mean Square Residual (SRMR) value of 3.010×10^{-9} indicates an extremely small value, close to zero. The SRMR is a fit index used in structural equation modeling (SEM) to assess the discrepancy between the observed covariance matrix and the model-implied covariance matrix. A lower SRMR value indicates better model fit, with values close to zero indicating a more accurate representation of the relationships among the observed variables. The SRMR measures the average absolute difference between the observed and predicted correlations among the variables in the model. Results in Table 5.31, results show the estimates (loadings) for the observed variables for the latent variable absorptive capacity. The estimates for the observed variable were then used to explain the arrows of the measurement path diagram for the variable absorptive capacity as shown in Figure 5.6.

Table 5. 32: Factor Loading for absorptive capacity

Latent	Indicator	Estimate	Std. Error	z-value	P	95% Confidence Interval	
						Lower	Upper
AC	ACKR1	1.000	0.000			1.000	1.000
	ACKR5	1.623	0.316	5.133	< .001	1.003	2.243
	ACKR6	1.257	0.209	6.003	< .001	0.847	1.667

Figure 5.32 presents the results of a one-factor measurement path diagram for the latent variable, observe, Absorptive Capacity (AC). Model fit indices for 3 latent variables are presented in Figure 5.5 presents the one-factor measurement model path diagram.

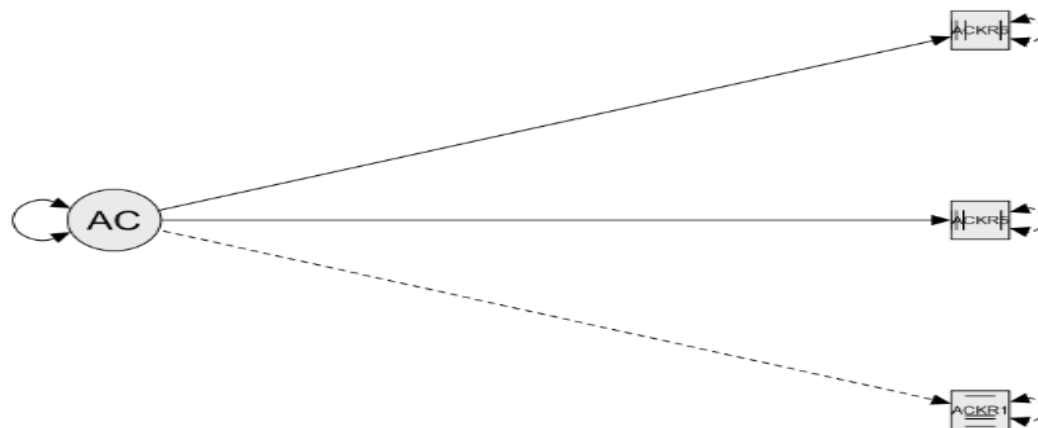


Figure 5. 5: On factor measurement model path diagram for absorptive capacity

Results in Table 5.32 presents results of the one measurement model path diagram for absorptive capacity ACKR1 (1.000), ACKR5 (1.623) and ACKR6 (1.257). In a one measurement model in structural equation modelling (SEM), a factor loading of 1.000 on the arrows represents a perfect relationship between the latent variable (factor), in this case, absorptive capacity and the observed variables (indicators-ACKR1, ACKR5and ACKR6). It indicates that the observed variable is a perfect reflection of the latent variable, meaning that the observed variable fully captures and represents the underlying construct being measured by the latent variable.

A factor loading of 1.000 (ACKR1) suggests that the observed variable is a strong and reliable indicator of the latent variable. It implies that any change or variation in the latent

variable will be perfectly reflected in the observed variable. This indicates a high level of measurement precision and accuracy in the model. A factor loading of 1.623 on the path diagram indicates a strong positive relationship between the latent variable represented by the arrow and the observed variable (indicator) to which it is connected to. On the other hand, a factor loading of 1.257 suggests that the observed variable is positively influenced by the latent variable. It indicates that a unit increase in the latent variable is associated with a 1.257 unit increase in the observed variable. This positive factor loading suggests that the latent variable is a good indicator or predictor of the observed variable. The implication is that the observed variables are strongly influenced by the latent variables. To further understand the appropriateness of the model and the selected data, the study conducted an AIC and BIC analysis as presented in Table 5.33 below.

Table 5.33: Model fit Information criterion for Absorptive Capacity

	AIC	BIC	n	Baseline test			Difference test		
				χ^2	df	P	$\Delta\chi^2$	Δdf	P
Model 1			204	2.997×10^{-14}	0	< .001	2.997×10^{-14}	0	

Note. A total of 2 cases were removed due to missing values. You can avoid this by choosing 'FIML' under 'Missing Data Handling' in the Estimation options.

Note. Model tests based on scaled and shifted test-statistic.

The AIC and BIC provide useful guidance in testing hypotheses through model selection. However, it is important to note that the primary purpose of AIC and BIC is not hypothesis testing but rather model comparison and selection. AIC and BIC penalise models with more parameters, aiming to select the model that provides the best balance between goodness of fit and parsimony. $\Delta\chi^2$ are used to assess the goodness of fit. In this regard, results in Table 5.33 show that chi-square statistic of 2.997×10^{-14} indicates a very small difference between the model and the saturated model. Hence, the selected model fits the data.

5.9.6: One Measurement Model for Performance Optimisation (PO)

This section presents the results of one measurement model. In SEM, one measurement model refers to a model where there is only one latent variable or construct measured by a set of observed variables or indicators. In this type of model, all the observed variables are assumed to be indicators of a single underlying construct. Table 5.34 presents results of the fit indices to determine whether the selected model fits the data.

Table 5. 34: Fit indices for the common factor(Performance)

Index	Value
Comparative Fit Index (CFI)	0.934
T-size CFI	0.917
Tucker-Lewis Index (TLI)	0.923
Bentler-Bonett Non-normed Fit Index (NNFI)	0.923
Bentler-Bonett Normed Fit Index (NFI)	0.921
Parsimony Normed Fit Index (PNFI)	0.799
Bollen's Relative Fit Index (RFI)	0.909
Bollen's Incremental Fit Index (IFI)	0.934
Relative Noncentrality Index (RNI)	0.934

Note. T-size CFI is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional CFI cut-off values (poor < 0.90 < fair < 0.95 < close) are **poor** < **0.847** < **fair** < **0.91** < **close** for model: Model 1

Results in Table 5.34 are for fit indices for the performance optimisation (PO) variable. It has been established that fit indices determine how well a model fits the sample data (McDonald & Ho, 2002). Results in Table 5.34 show that most of the values are >0.900, but <1. The Parsimony Normed Fit Index (PNFI) which shows model complexity, is 0.799. However, results in Table 5.34 show that TLI adjusted for Parsimony is 0.923. A TLI (Tucker-Lewis Index) adjusted for parsimony of 0.932 in fit indices in SEM indicates a good fit between the observed data and the proposed structural equation model. The TLI is a measure of how well the model reproduces the observed covariance matrix, and the adjustment for parsimony considers the complexity of the model. A TLI value of 0.923 suggests that the model explains approximately 93.2% of the covariation among the observed variables. This indicates a relatively good fit, as values closer to one indicate a better fit. Since the T-size equivalents of the conventional CFI cut-off values (poor < 0.90 < fair < 0.95 < close) are **poor** < **NaN** < **fair** < **NaN** < **close** for the model, it can be concluded that the selected model for performance optimisation is appropriate for the data. Since the Bentler-Bonett Normed Fit Index (NFI) is ≤ 0.921 , shows an incremental measure of goodness of fit for a statistical model that is rarely affected by the number of parameters in the model (Bollen, 1986). A higher TLI value

adjusted for parsimony suggests that the model achieves a good fit while maintaining simplicity.

Table 5.35: Other fit measures for Performance Optimisation

Metric	Value
Root mean square error of approximation (RMSEA)	0.157
RMSEA 90% CI lower bound	0.146
RMSEA 90% CI upper bound	0.169
RMSEA p-value	0.000
T-size RMSEA	0.169
Standardized root mean square residual (SRMR)	0.128
Hoelter's critical N ($\alpha = .05$)	42.644
Hoelter's critical N ($\alpha = .01$)	46.412
Goodness of fit index (GFI)	0.948
McDonald fit index (MFI)	0.276
Expected cross validation index (ECVI)	

Note. T-size RMSEA is computed for $\alpha = 0.05$

Note. The T-size equivalents of the conventional RMSEA cut-off values (close < 0.05 < fair < 0.08 < poor) are **close** < **0.066** < **fair** < **0.093** < **poor** for model: Model 1

Results in Table 5.35 show that, a Root Mean Square Error of Approximation (RMSEA) of 0.157 in SEM indicates a moderate fit between the proposed structural equation model and the observed data. The RMSEA is a measure of how well the model fits the observed covariance matrix, with lower values indicating better fit. In this case, an RMSEA of 0.157 shown in Table 5.35 suggests that the model does not fit the data perfectly, but it still provides a reasonable approximation of the relationships among the variables. It indicates that the model may have some room for improvement in terms of capturing the observed covariance structure. However, as shown in Table 5.35 a Standardized Root Mean Square Residual (SRMR) of 0.128 in fit indices in SEM indicates a reasonably good fit between the proposed structural equation model and the observed data. The SRMR is a measure of the discrepancy between the observed covariance matrix and the model-implied covariance

matrix, with lower values indicating better fit. In this case, an SRMR of 0.128 suggests that the model provides a relatively close approximation of the observed covariance structure. It indicates that the model captures a substantial amount of the covariation among the variables, but there may still be some room for improvement. The section below presents factor loadings for the observed variables of performance optimisation.

Table 5.36: Factor Loadings for the observed variables of performance optimisation

Latent	Indicator	Estimate	Std. Error	z- value	P	95% Confidence Interval	
						Lower	Upper
PO	PERC2	1.000	0.000			1.000	1.000
	PERC4	0.619	0.163	3.799	< .001	0.299	0.938
	PERC6	0.608	0.154	3.937	< .001	0.305	0.911
	PERC7	1.626	0.261	6.223	< .001	1.114	2.138
	PERE1	3.704	0.517	7.164	< .001	2.690	4.717
	PERE2	3.604	0.502	7.176	< .001	2.620	4.588
	PERE3	3.459	0.484	7.140	< .001	2.509	4.408
	PERE5	3.053	0.431	7.084	< .001	2.208	3.898
	PERE6	2.976	0.421	7.066	< .001	2.150	3.801
	PERF1	3.381	0.475	7.120	< .001	2.450	4.312
	PERF2	2.895	0.411	7.038	< .001	2.089	3.701
	PERF3	3.478	0.487	7.139	< .001	2.523	4.432
	PERF4	3.187	0.449	7.091	< .001	2.306	4.068
	PERF5	3.209	0.451	7.118	< .001	2.325	4.092
	PERF6	3.710	0.518	7.169	< .001	2.696	4.725
	PERF7	2.662	0.382	6.971	< .001	1.913	3.410

Table 5.36 presents factor loadings of observed variables of performance optimisation. 16 observed variables are presented, each with corresponding factor loadings. In structural equation modelling (SEM), a p-value associated with a factor loading represents the

statistical significance of the relationship between a latent variable (construct) and its observed indicators. It indicates the likelihood of observing the estimated factor loading value or a more extreme value if the null hypothesis of no relationship between the latent variable and the indicator is true. In Table 5.36 p-value for all factors was $< .001$. A p-value of $< .001$ in factor loadings in SEM indicates that the estimated factor loading is statistically significant at a very high level of confidence. It suggests strong evidence for a meaningful relationship between the latent variable (construct) and the observed indicator. The estimates as reflected in Table 5.44 will be used to explain the one factor model diagram below (Figure 5.6).

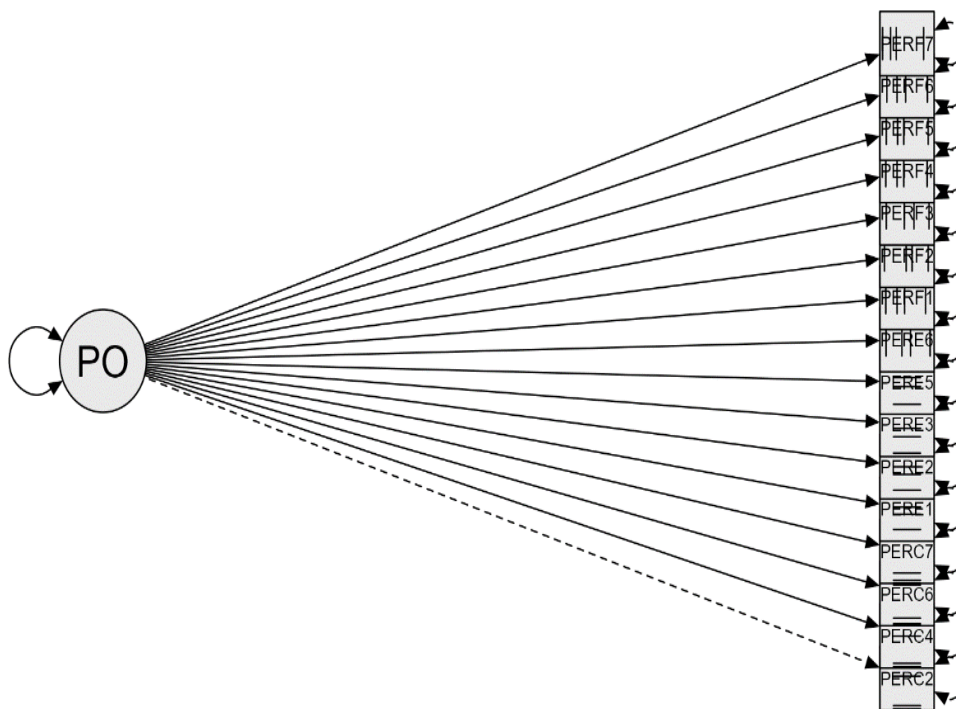


Figure 5. 6: One factor measurement model diagramme for performance optimisation

Figure 5.6 shows the results of a one-factor confirmatory factor analysis model in JASP statistical software where the one-factor CFA assumes that the covariance (or correlation) among items is due to a single common factor, in this case, organisational performance (OP), all the factor loadings are positive. The factor loadings for indicator or manifest variables (see Table 5.44) are PERCE2(1.000), PERC4(0.619),

PERCE6(0.608),PERC7(1.626),PERE1(3.704),PERE2(3.604), PERE(3.459), PERE5(3.053), PERE(2.976), PERF1(3.381),PERF2(2.895), PERF3(3.478), PERF4(3.187), PERF5(3.209), PERF6(3.710), PERF7(2.662). In SEM, positive estimates in factor loadings indicate a positive relationship between the latent variable (construct) and the observed indicator. It suggests that as the latent variable increases, the observed indicator also tends to increase. This positive association implies that the observed indicator is a good representation of the underlying construct. In general, factor loadings represent the extent to which the observed indicator is influenced by the latent variable. A factor loading of 3.053 suggests a relatively strong positive relationship between the latent variable and the observed indicator. It indicates that as the latent variable increases by one unit, the observed indicator is expected to increase by approximately 3.053 units. Fit focuses on the ability of a model to reproduce the data (Davey et. al., 2010). It has been established that a good good-fitting model is reasonably consistent with the data. Good fitting is required before interpreting the causal paths of the structural model. Since all the loadings are ≥ 0.50 and ≤ 1 , the one measurement model is a good indicator of the compactness of the data in supporting analysis using SEM.

Having reported the results of fit indices in SEM, the next stage typically involves testing hypotheses to allow the evaluation of specific hypotheses about the relationships between variables in the model. The next Table presents model fit using AIC and BIC.

Table 5.37: Model fit for performance optimisation

				Baseline test			Difference test		
	AIC	BIC	n	χ^2	Df	P	$\Delta\chi^2$	Δdf	p
Model 1			203	81.349	14	< .001	81.349	14	< .001

Note. A total of 3 cases were removed due to missing values. You can avoid this by choosing 'FIML' under 'Missing Data Handling' in the Estimation options.

Note. Model tests based on scaled and shifted test-statistic.

Table 5.37 shows that a $\Delta\chi^2$ value of 82.249 can be considered relatively large, indicating a significant difference in fit between the compared models. However, the interpretation of whether it is "good" or not depends on various factors such as the degrees of freedom and the context of the analysis. Large $\Delta\chi^2$ value may indicate a poorer fit of the current model compared to the reference model. However, the specific threshold for what is considered a "good" or "acceptable" $\Delta\chi^2$ value can vary depending on the field of study and the specific

research question. In the same Table, p-value is < .001. This signifies that the selected model is fit for the data. This confirms the results of a Standardized Root Mean Square Residual (SRMR) of 0.128 in fit indices in SEM indicating a reasonably good fit between the proposed structural equation model and the observed data. The SRMR is a measure of the discrepancy between the observed covariance matrix and the model-implied covariance matrix, with lower values indicating better fit. In this case, an SRMR of 0.128 suggests that the model provides a relatively close approximation of the observed covariance structure (see Table 5.35). The next section presents results of hypotheses testing.

5.10: HYPOTHESES TESTING AND STRUCTURAL MODEL

This section presents the results of 5 hypotheses. In SEM, testing the hypothesis allows researchers to test specific hypotheses about relationships between variables in a theoretical model. This is important because it helps to determine whether the proposed relationships are statistically significant and align with the theoretical expectations or not.

5.10.1 Hypothesis 1

The first hypothesis of the study was: H_{01} : There is no significant relationship between resilience and performance optimisation of SMEs in the Manzini region of Eswatini. The dimensions of organisational resilience (OR) were: detectability, coping, and adaptation. Table 5.38 presents the results of the correlation coefficients with the objective of identifying indices that depict the acceptance or lack of it for the null hypothesis stated.

Table 5.38 presents regression coefficients, and the predictor-outcome outlook for the variables in question is displayed.

Table 5.38: The regression coefficient for the impact of resilience on performance optimisation

Predictor	Outcome	Estimate	Std. Error	z-value	p	95% Confidence Interval	
						Lower	Upper
OR	PO	-0.787	0.213	-3.697	< .001	-1.204	-0.370

In structural equation modelling (SEM), regression coefficients provide information about the relationship between variables that are represented in the model. Regression coefficients indicate the strength and direction of the relations between the predictor and the outcome

variables. In SEM, these (coefficients) are referred to as path coefficients because they represent the paths or connections between variables in the model. They therefore quantify the extent to which a unit change in the predictor variable is associated with a change in the outcome variable, while at the same time controlling for other variables in the model. The sign of the regression coefficient suggests a positive association, meaning that an increase in the predictor variable is associated with an increase in the outcome variable and vice versa. The strength of the regression coefficients is shown by the magnitude of the regression coefficients. In Table 5.38, $p < .001$, indicating a significant relationship between the predictor variable (organisational resilience) and performance optimisation. It is however interesting to note that in Table 5.38, the z-value for organisational resilience performance optimisation relationship is -3.697 . Negative z-values in the regression coefficients in SEM indicate that the corresponding coefficients are statistically significant and have a negative effect on the outcome variable. Since the estimate of the regression coefficient for the organisational resilience performance optimisation relation is -0.787 , this confirms the fact that although estimates in regression coefficients represent the magnitude of the relationship between predictor and outcome variables, a negative estimate indicates that an increase in the predictor variable (organisational resilience) results in a decrease in performance optimisation while controlling for other variables in the model.

The negative relationship between overall resilience and performance optimisation could be because highly resilient SMEs may be overly focused on coping and adapting to challenges, rather than optimising performance. However, the individual dimensions of resilience, such as the ability to detect issues early, employ effective coping mechanisms, and adapt to changing circumstances, can positively contribute to performance optimisation by enabling SMEs to better navigate challenges and capitalise on opportunities. Proactive resilience strategies and entrepreneurial mindfulness (related to adaptation) were found to have a significant positive influence on organisational performance of SMEs (Pertheban et al., 2023). Three dimensions (detectability, coping and adaptation) were used to measure this variable (resilience). As a result, three sub-hypotheses were formulated.

- H_{01a} : Detectability has no significant impact on the performance optimisation of SMEs.
- H_{01b} : Coping has no significant impact on the performance optimisation of SMEs.
- H_{01c} : Adaptation has no significant impact on the performance optimisation of SMEs.

To determine the strategic impact of each of the 3, sub-hypotheses, Pearson's correlation was determined to establish the level of significance for each.

5.10.1.1 Impact of detectability on the performance optimisation of SMEs

Table 5.39: Correlation between detectability and performance optimisation

		Performance Optimisation
Detectability	Pearson Correlation	.372**
	Sig. (2-tailed)	0.000
	N	206

Results of H_{01a} in Table 5.39 show that there is a significant relationship between detectability and performance optimisation (0.000). The null sub-hypothesis that detectability has no significant impact on the performance optimisation of SMEs is therefore rejected. This implies that managers/owners of SMEs detect changes or signals of likely disruptions to the operations of their businesses during or before disruptions.

5.10.1.2 Impact of coping on the performance optimisation of SMEs

The second sub-hypothesis of hypothesis one was coping, has no significant impact on the performance optimisation of SMEs. Results of the analysis of results are presented below;

Table 5.40: Correlation between coping and performance optimisation

		Performance Optimisation
Detectability	Pearson Correlation	.200**
	Sig. (2-tailed)	0.004
	N	206

In the context of Pearson's correlation coefficient, a value of "0.004" or a p-value of 0.004 suggests that the observed correlation coefficient is statistically significant at a significance level of 0.05. In other words, for the null hypothesis, H_{01b} there is strong evidence to reject

the null hypothesis that there is no correlation in favour of the alternative hypothesis that there is a correlation between the variables. This implies that SMEs are able or recognise the importance of strategies and mechanisms they use to adapt to stress or challenges and unexpected events during crises. Coping strategies enhance SMEs' ability to navigate difficult situations, recover from setbacks and maintain their functioning.

5.10.1.3 Impact of adaptation on the performance optimisation of SMEs

The third sub-hypothesis of hypothesis one was adaptation which has no significant impact on the performance optimisation of SMEs. Results of the analysis of results are presented below;

Table 5.41: Correlation between adaptation and performance optimisation

		Performance Optimisation
Adaptation	Pearson Correlation	.245**
	Sig. (2-tailed)	.000
	N	206

In Table 5.41, results of the study revealed that adaptation significantly impacts the performance optimisation of SMEs, with significance (two tailed) value of 0.000. The hypothesis, H_{01c} is therefore rejected and the alternative accepted. This implies that during a crisis, adaptation allows individuals, organisations, and communities to adjust and respond effectively to changing circumstances and challenges.

5.10.2 Hypothesis 2

The second hypothesis of the study was: H_{02} : Strategic foresight (transformational resilience) does not significantly impact the performance optimisation of SMEs in the Manzini region, Eswatini. The dimensions of strategic foresight (transformational resilience) were discovery and planning. Table 5.42 presents results of the Structural Equation Modelling: CFA, for strategic Foresight (transformative resilience).

Table 5.42: Results of the regression coefficients of the relationship between strategic foresight (transformative resilience) and performance optimisation.

Predictor	Outcome		Estimate	Std. Error	z-value	p	95% Confidence Interval	
							Lower	Upper
SF	PO	direct	0.689	0.113	6.077	<.001	0.467	0.911

Results of the coefficients of hypothesis testing (regression) in Table 5.42 show a direct relationship between strategic foresight and performance optimisation of SMEs in Manzini, Eswatini. Regression coefficients represent the estimated impact of an independent variable on the dependent variable. They indicate a change in the dependent variable associated with a one-unit change in the independent variable. From Table 5.42, an estimate of 0.689, shows that a one unit increase in strategic foresight creates 0.689 change in performance optimisation, assuming other factors remain constant. A standard error of 0.113 in regression coefficients shows the precision that is associated with the estimated coefficients. A standard error of 0.113 shows that the coefficient is likely to be closer to the true population value. Thus, the null hypothesis, that strategic foresight does not significantly impact performance optimisation is not accepted, since p-value < .001.

The section below presents results (Pearson's correlation) of the dimensions of strategic foresight. Two dimensions (discovery and planning) of strategic foresight (transformative resilience) were used to measure strategic foresight) and used to formulate two sub-hypotheses.

- Ho_{2a}: Discovery has no significant impact on the performance optimisation of SMEs.
- Ho_{2b}: Planning has no significant impact on the performance optimisation of SMEs.

5.10.2.1 Impact of discovery on performance optimisation

Table 5.43 presents results of the first sub-hypothesis.

Table 5.43: Impact of Discovery on performance optimisation

Performance Optimisation		
Discovery	Pearson Correlation	.235**
	Sig. (2-tailed)	.001
	N	206

Results presented in Table 5.43 show that p-value of 0.001 suggests that the observed correlation coefficient is statistically significant at a significance level of 0.05. In other words, for the null hypothesis, H_{02a} , discovery does not significantly impact performance optimisation is rejected. The alternative hypothesis is accepted. This implies that SMEs recognise the importance of actively seeking and exploring new possibilities, knowledge, and approaches to improve an organisation's ability to withstand and recover from challenges and disruptions.

5.10.2.2 Impact of planning on performance optimisation

The study also sought to establish the impact of planning on performance optimisation of SMEs as presented in Table 5.44.

Table 5.44: Results of Pearson's correlation on the second sub-hypothesis

Performance Optimisation		
Planning	Pearson Correlation	.182**
	Sig. (2-tailed)	.009
	N	206

Results in Table 5.44 show that p-value of 0.009 suggests that the observed correlation coefficient is statistically not significant at a significance level of 0.05. In other words, for the null hypothesis, H_{02b} , planning does not significantly impact performance optimisation is accepted. The alternative hypothesis is rejected. This implies that in times of crises, SMEs do

not spend time planning to withstand or recover from crises. Instead, they spend time keeping products(existing) in the market.

5.10.3 Hypothesis 3

The third hypothesis of the study was: Ho₃: There is no significant impact of absorptive capacity on the performance optimisation of SMEs in the Manzini region, Eswatini. The dimensions of absorptive capacity were knowledge recognition, assimilation and applying. Table 5.45 presents results of the Structural Equation Modelling: CFA, for absorptive capacity.

Table 5.45 Regression coefficients for absorptive capacity and performance optimisation

Variable	Estimate	Std. Error	z-value	P	95% Confidence Interval		Standardized		
					Lower	Upper	All	LV	Endo
AC	0.307	0.062	4.958	< .001	0.186	0.428	1.000	1.000	1.000

Factor variance is the estimated variance of latent variables (factors). It shows the amount of variability in the latent variable that is not accounted for by the observed variables (indicators) as captured in the model. In Table 5.45 the p-value is < .001. This implies that the null hypothesis, there is no significant relationship between absorptive capacity and performance optimisation is therefore not confirmed. Table 5.45 presents the residual variances for absorptive capacity. In Table 5.45, the estimate of 0.307 reveals that a one-unit change in absorptive capacity, results in 0.307 change in performance optimisation. In the above Table, 0.062 is a small standard error. This suggests a more precise estimate, indicating that the coefficient is likely to be closer to the true population. Table 5.45 shows, the amount of variability is explained by the observed indicators, thus, pointing to the direction that the null hypothesis is not accepted. Bearing in mind the results from the analysis of data on hypothesis 3, the section below presents results (Pearson's correlation) of three dimensions that were used to measure absorptive capacity (knowledge recognition, assimilation, and applying). The sub-hypotheses from hypothesis three are stated below;

- Ho_{3a}: Knowledge recognition has no significant impact on the performance optimisation of SMEs.
- Ho_{3b}: Assimilation has no significant impact on the performance optimisation of SMEs.

- H_{03c} : Applying has no significant impact on the performance optimisation of SMEs.

5.10.3.1 Impact of knowledge recognition on performance optimisation

Table 5.46: Results of the first sub-hypothesis (impact of knowledge recognition on performance optimisation).

Table 5.46: Results of the first sub-hypothesis (impact of knowledge recognition on performance optimisation).

		Performance Optimisation
Knowledge recognition	Pearson Correlation	.494**
	Sig. (2-tailed)	.000
	N	205

Results of the study as presented in Table 5.46 p-value of 0.000 suggest that the observed correlation coefficient is statistically significant at a significance level of 0.05. In other words, for the null hypothesis, H_{03a} , knowledge recognition does not significantly impact performance optimisation is rejected. The alternative hypothesis is accepted. This implies that in times of crises, knowledge recognition before or during a crisis helps SMEs understand the key factors that contribute to their ability to withstand and recover from disruptions.

5.10.3.2. Impact of assimilation on performance optimisation

The second sub-hypothesis sought to test the impact of assimilation on performance optimisation. The results of the analysis are presented in Table 5.47.

Table 5.47: Pearson's correlation coefficient for assimilation and performance optimisation

		Performance Optimisation
Assimilation	Pearson Correlation	.323**
	Sig. (2-tailed)	.000
	N	206

Table 5.47 shows that p-value of 0.000 suggests that the observed correlation coefficient is statistically significant at a significance level of 0.05. In other words, for the null hypothesis, H_{03b} , assimilation does not significantly impact, performance optimisation is rejected. The alternative hypothesis is accepted. This implies that in times of crises, assimilating knowledge during a crisis allows SMEs to make informed decisions. Their ability to understand relevant information, SMEs can assess their internal and external environment, identify potential risk and develop mechanisms to withstand and wade off disruptions.

5.10.3.3 Impact of applying on performance optimisation

This section presents results of an analysis of data on the impact of applying on performance optimisation.

Table 5.48: Pearson's correlation for applying and performance optimisation

		Performance Optimisation
Applying	Pearson Correlation	.342**
	Sig. (2-tailed)	.000
	N	205

Results in Table 5.48 show that p-value of 0.000 suggests that the observed correlation coefficient is statistically at a significance level of 0.05. In other words, for the null hypothesis, H_{03c} , applying does not significantly impact performance optimisation is rejected. The alternative hypothesis is accepted. This implies that in times of crises, applying knowledge allows SMEs to make informed decisions during crises, and as such, they can make strategic choices that enhances their ability to survive and recover.

5.10.4 Hypothesis 4

Hypotheses Ho₄: Absorptive capacity does not mediate the relationship between resilience and performance optimisation of SMEs in the Manzini region, Eswatini. Results in Table 5.49 presents fit measures of mediation between absorptive capacity in the relationship between resilience and performance optimisation.

Table 5.49: Mediation analysis for the effect of absorptive capacity in the relationship between resilience and performance optimisation in SMEs in the Manzini region of Eswatini.

Name	Estimate	Std. Error	z-value	p	95% Confidence Interval	
					Lower	Upper
Indirect	0.583	0.155	3.757	< .001	0.279	0.887
Total	-0.204	0.106	-1.921	0.055	-0.412	0.004
Proportion	-2.862	1.453	-1.969	0.049	-5.710	-0.014

In SEM, mediation analysis is a technique used to examine the indirect effect of an independent variable on the dependent variable through one or more mediator variables. It helps to understand the underlying mechanisms or processes through which the independent variable influences the dependent variable. In Table 5.49 it is evident that the p-value is < .001, indicating the mediating effect of absorptive capacity in the relationship between resilience and performance optimisation in SMEs in Manzini, Eswatini. Thus, in mediation analysis within the context of SEM, the term indirect refers to the effect of an independent variable on the dependent variable that operates through one or more mediator variables. It is thus the proportion of the total effect of the independent variable on the dependent variable that is mediated or explained by the mediator variable. Looking at Table 5.49 the z-value represents the standardised estimate of the indirect effect of the independent variable on the dependent variable through the mediator(s). It is used to assess the statistical significance of the indirect effect. Since the direct z-value is greater than 1.96 (or falls outside the range of -1.96 to 1.96), in this case 3.757, it indicates that the indirect effect is statistically significant at the 0.05 level. This suggests that there is evidence to support the hypothesis that the independent variable influences the dependent variable through the mediator(s). From this, the null hypothesis that Ho₄: Absorptive capacity does not mediate the relationship between

resilience and performance optimisation of SMEs in the Manzini region, Eswatini is not confirmed, and the alternative is confirmed. The next section presents the results of the test of the hypothesis on strategic orientation and resilience. Table 5.50 presents regression coefficients for the absorptive capacity performance optimisation relationship as mediated by absorptive capacity.

Table 5. 50: Regression coefficients

Predictor Outcome		Estimate	Std. Error	z-value	p	95% Confidence Interval	
						Lower	Upper
OR	AC	alpha	0.822	0.143	5.758 < .001	0.542	1.101

Results in Table 5.50 show that a one unit increase in absorptive capacity results in a 0.822 increase in the impact of resilience on performance optimisation in SMEs in the Manzini region of Eswatini. This is equally supported by the fact that since the p-value is < .001, this shows that there is a significant relationship between resilience and performance optimisation as mediated by absorptive capacity in the SME sub-sector in the Manzini region, Eswatini. This result implies that when mediated by absorptive capacity, the net effect of resilience on performance optimisation of SMEs increases, thus the need to pursue SME performance from a multi-dimensional standpoint. Also, since the standard error is 0.143, this is small enough to suggest that the coefficient is likely to be closer to the true population. The null hypothesis that, Ho₄: Absorptive capacity does not mediate the relationship between resilience and performance optimisation of SMEs in the Manzini region, Eswatini was not accepted.

5.10.5 Hypothesis 5

The fifth hypothesis of the study was: Ho₅: Strategic orientation does not predict the resilience capacity of SMEs in the Manzini region, Eswatini. Table 5.51 presents the results of the study.

Table 5.51: Regression coefficients for the relationship between strategic orientation and resilience

Regression coefficients						95% Confidence Interval	
Predictor	Outcome	Estimate	Std. Error	z-value	p	Lower	Upper
SO	OR	0.821	0.123	6.685	< .001	0.580	1.062

Table 5.51 shows that for every one unit increase in strategic orientation, resilience increases by 0.821 units. This is supported by the fact that since the p-value is < .001, suggests a significant relationship between strategic orientation and resilience of SMEs in the Manzini region. The hypothesis, Ho₅: Strategic orientation does not predict the resilience capacity of SMEs in the Manzini region, Eswatini is therefore not supported. This finding is supported by a standard error of 0.123 which suggests the precision associated with the estimated coefficient. The true population coefficient may vary by 0.123. The fifth hypothesis was further operationalised into two sub-hypotheses. Although the latent variable (strategic orientation) was initially operationalised into four dimensions, two dimensions (Defender and reactor) were dropped because of poor factor loadings. The remaining two (prospector and analyser) were used to formulate the sub-hypotheses presented below;

- Ho_{5a}: A prospector orientation does not predict the resilience of SMEs.
- Ho_{5b}: Analyser orientation does not predict the resilience of SMEs.

5.10.5.1 To predict the impact of prospector orientation on resilience

Table 5.52 Results of the test of the first sub-hypothesis of hypothesis five.

Table 5.52: Person's correlation between prospector and resilience

		Resilience
Prospector	Pearson Correlation	.366**
	Sig. (2-tailed)	.000
	N	206

Results of the study (Pearson's correlation) revealed that there is a significant impact/effect of prospector on resilience. The hypothesis that prospector orientation does not predict the resilience of SMEs was rejected and the alternative was accepted (Pearson's significance of 0.000). Since a prospector orientation refers to a strategic approach adopted by organisations that emphasises innovation, risk-taking, and a focus on new opportunities and markets. SMEs in Manzini Eswatini recognise the fact that a prospector orientation can play a crucial role in driving growth and competitiveness, by identifying and exploiting opportunities in new geographical areas as well as targeting niche markets.

5.10.5.2 Predicting resilience using an analyser orientation

This section provides results of analysis of data on whether analyser orientation predicts resilience of SMEs in the Manzini region.

Table 5.53: Predicting resilience using analyser orientation

		Resilience
Prospector	Pearson Correlation	.238**
	Sig. (2-tailed)	.001
	N	205

Results of H_{05b} revealed there is a positive, significant relationship between analyser orientation and resilience, where correlation is significant at the 0.01 level (2-tailed). In this case, Pearson's correlation two-tailed significance of 0.000. the null hypothesis that analyser orientation does not predict resilience of SMEs in Manzini region was reject. The alternative was accepted. This implies that SMEs recognise the significant role played by enhancing operational efficiency since the analyser orientation in SMEs helps to streamline operations, identify inefficiencies, and improve productivity.

The next section presents a structural diagram. known as a path diagram and an important tool in SEM. It is a statistical modelling technique that is used to analyse complex relationships between observed and latent variables. The path diagram visually represents the hypothesised relationships among the variables in the model.

5.11 STRUCTURAL MODEL (PATH DIAGRAMME) FOR RESILIENCE-PERFORMANCE OPTIMIZATION IN SMES IN MANZINI REGION, ESWATINI

In Structural Equation Modelling, a path diagram provides a visual representation of the relationships between variables in an SEM model. As shown in Figure 5.7, the path diagram uses arrows to depict the direction and strength of the relationships between variables, making it possible to understand the complex relationships within the model. Below is the path model as presented in Figure 5.7.

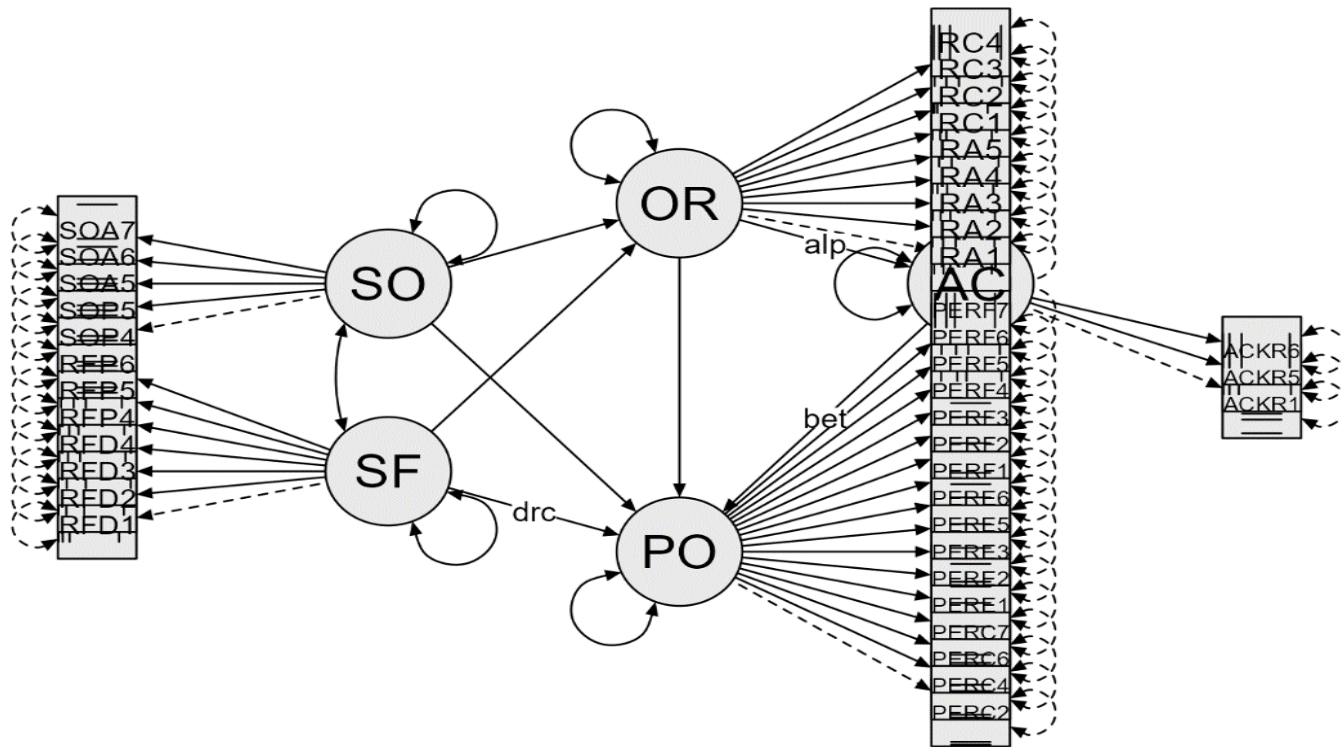


Figure 5. 7: Structural Model/Path diagram

In SEM, each variable is represented by a node or box, and the relationship is depicted by arrows connecting from one node to the other. In Figure 5.7, the direction of the arrows indicates the relationship of predictor variables (OR, SF, AC, SO) to the outcome variable (PO).

5.12 FACTOR LOADINGS FOR LATENT AND OBSERVED VARIABLES IN THE MODEL

Table 5.54 provides a summary of the factor loadings for all latent variables and their observed variables. In structural equation modelling (SEM), factor loading plays an important role in understanding the relationships between latent variables and observed indicators. Factor loading represents the strength and direction of the relationships between latent variables and observed indicators. It helps assess the validity of the indicators, evaluate model fit, and identify the latent variables in the model.

Table 5.54: Factor Loadings for the variables in the model

Latent	Indicator	Estimate	Std. Error	z-value	P	95% Confidence Interval	
						Lower	Upper
AC	ACKR1	1.000	0.000			1.000	1.000
	ACKR5	1.102	0.069	15.964	< .001	0.967	1.237
	ACKR6	0.879	0.058	15.184	< .001	0.766	0.993
OR	RA1	1.000	0.000			1.000	1.000
	RA2	0.951	0.082	11.660	< .001	0.791	1.111
	RA3	1.237	0.099	12.534	< .001	1.043	1.430
	RA4	0.898	0.086	10.441	< .001	0.729	1.066
	RA5	0.853	0.080	10.598	< .001	0.695	1.011
	RC1	0.871	0.078	11.201	< .001	0.718	1.023
	RC2	0.899	0.085	10.552	< .001	0.732	1.066
	RC3	0.636	0.067	9.446	< .001	0.504	0.768
	RC4	0.948	0.082	11.491	< .001	0.786	1.109
PO	PERC2	1.000	0.000			1.000	1.000

95% Confidence Interval							
Latent	Indicator	Estimate	Std. Error	z-value	P	Lower	Upper
SF	PERC4	0.705	0.110	6.398	< .001	0.489	0.921
	PERC6	0.610	0.101	6.038	< .001	0.412	0.807
	PERC7	1.412	0.153	9.253	< .001	1.113	1.711
	PERE1	2.662	0.243	10.932	< .001	2.184	3.139
	PERE2	2.584	0.236	10.962	< .001	2.122	3.046
	PERE3	2.508	0.230	10.887	< .001	2.056	2.959
	PERE5	2.200	0.206	10.695	< .001	1.797	2.603
	PERE6	2.185	0.205	10.669	< .001	1.784	2.586
	PERF1	2.411	0.224	10.785	< .001	1.973	2.850
	PERF2	2.002	0.190	10.511	< .001	1.629	2.375
	PERF3	2.471	0.228	10.837	< .001	2.024	2.918
	PERF4	2.326	0.216	10.748	< .001	1.902	2.750
	PERF5	2.298	0.213	10.777	< .001	1.880	2.715
	PERF6	2.742	0.250	10.962	< .001	2.252	3.232
	PERF7	1.960	0.188	10.406	< .001	1.591	2.330
	RFD1	1.000	0.000			1.000	1.000
	RFD2	2.050	0.207	9.889	< .001	1.644	2.456
	RFD3	1.683	0.173	9.711	< .001	1.343	2.023
	RFD4	0.774	0.112	6.928	< .001	0.555	0.994
	RFP4	1.232	0.145	8.516	< .001	0.948	1.515
	RFP5	1.641	0.174	9.449	< .001	1.300	1.981
	RFP6	1.532	0.173	8.845	< .001	1.193	1.872
SO	SOP4	1.000	0.000			1.000	1.000
	SOP5	1.332	0.123	10.789	< .001	1.090	1.574
	SOA5	0.422	0.073	5.778	< .001	0.279	0.565
	SOA6	0.204	0.071	2.883	0.004	0.065	0.342

Latent	Indicator	Estimate	Std. Error	z-value	P	95% Confidence Interval	
						Lower	Upper
	SOA7	0.042	0.063	0.667	0.505	-0.082	0.166

Table 5.54 provides the factor loadings for each latent variable (AC, OR, PO, SF, and SO) and their corresponding indicators. The estimate column represents the factor loading, which indicates the strength and direction of the relationship between each indicator and the latent variable. The standard error, z-value, p-value, and confidence interval columns provide additional information about the statistical significance and precision of the estimates. Table 5.54 shows that estimates for all observed variables are positive, suggesting positive strength in the relationship between observed and latent variables. Results also show that the p-values for all observed variables is $< .001$, indicating that all observed variables in the model are statistically significant. This finding suggests strong evidence against null hypotheses that the factor loadings are equal to zero or show no significant relationship between predictor variables and the outcome variables. All the null hypotheses are therefore not confirmed. An examination of estimates in Table 5.54 suggests that all estimates are positive. This suggests the positive strength of the observed variables on the latent variable. Although positive, the observed variables of analyser of the variable strategic orientation posted the lowest coefficient, SOA6 0.204 and SOA7, 0.042. This implies that the observed variables in question had a positive, yet weak effect on the outcome variable. In the same Table, performance optimisation (PO) posted the highest coefficients with the most slightly above 2.00. The observed variables of resilience (Applying) posted the second lowest positive coefficients. Although the coefficients were low, they still indicate the strength of the independent variable on the outcome variable (performance optimisation).

Table 5.54 shows that the standard error for all the observed variables is less than 0.228, where 0.228 is the highest. A smaller standard error is seen as being more precise in estimating the relationship between observed and latent variables. Thus, if a coefficient is small, it suggests that it is closer to the true population value. This finding, therefore, suggests that all the five null hypotheses: H_{01} : There is no significant relationship between the nature of resilience and performance optimisation of SMEs in the Manzini region of Eswatini, H_{02} : Strategic foresight (transformational resilience) does not significantly impact performance optimisation of SMEs in the Manzini region, Eswatini, H_{03} : There is no significant impact of absorptive capacity on performance optimisation of SMEs in the Manzini region, Eswatini, H_{04} : Absorptive capacity does not mediate the relationship

between resilience and performance optimisation of SMEs in the Manzini region, Eswatini and Ho₅: Strategic orientation does not predict the resilience capacity of SMEs in the Manzini region, Eswatini are not confirmed. Their respective hypotheses are, therefore, accepted.

Table 5.55: Model Summary for multi-dimensional (integrated) variables of resilience to predict performance optimisation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.660 ^a	0.436	0.406	0.435

a. Predictors: (Constant), Applying, Detectability, Assimilation, Analyser, Coping, Discovery, Planning, Prospector, Recognition, Adaptation

Results of the multiple regression model presented in Table 5.55 show an R-Square of 0.436 and an adjusted R-Square of 0.406. From Table 5.55, the results reveal that the model (multi-variable dimensions of resilience) predicts 40.6% of the variation in performance optimisation of SMEs in Manzini region of Eswatini. To test for the significant effect of independent variables on the dependent variable, the study conducted an analysis of variations (ANOVA). ANOVA can be used to test for significant differences between groups in SEM. Using ANOVA helps to examine whether there are significant variations in the relationships between variables across different groups. This is particularly useful when studying group differences or when comparing the effects of different interventions or treatments. Results of the study are presented below.

Table 5.56: ANOVA(PREDICTORS AND DEPENDENT VARIABLE).

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	28.18	10	2.818	14.898	.000 ^b
1	Residual	36.506	193	0.189		
	Total	64.686	203			

a. Dependent Variable: Performance Optimisation

b. Predictors: (Constant), Applying, Detectability, Assimilation, Analyser, Coping, Discovery, Planning, Prospector, Recognition, Adaptation

Results in Table 5.6 show that the significance level from an ANOVA was 0.000, this means that there is a significant relationship between the independent variables in the model and the

performance optimisation of SMEs. This result implies that if combined, the variables optimise the performance of SMEs in the Manzini region, Eswatini.

5.13 CHAPTER SUMMARY

This chapter presented the results of the study. Results were presented using descriptive and inferential statistics. The descriptive statistics of the study were frequency, mean, and standard deviation. Inferential statistics involved generating fit indices to determine the appropriateness of the data for the selected model, generating a one-factor measurement model for each variable, factor loadings as well and testing hypotheses. All five hypotheses were tested using structural equation modelling (SEM), while the sub-hypotheses under each latent variable were tested using Pearson's Correlation Coefficient (two-tailed test). To test the combined effect of all the independent variables on the dependent variable, ANOVA was used to test for the significant relationship between the independent variables in the model and performance optimisation. Results of the study revealed that all three independent variables (organisational resilience, strategic foresight, and absorptive capacity) significantly impact the performance optimisation of SMEs in the Manzini region, Eswatini. However, the study revealed that there was a significant inverse relationship between organisational resilience and performance optimisation. The study also revealed that there was an indirect positive impact in the relationship between resilience and performance optimisation as mediated by absorptive capacity. The study further revealed that strategic orientation predicts the resilience of SMEs in the Manzini region of Eswatini. The following chapter discusses the findings of the study.

CHAPTER 6: DISCUSSION OF FINDINGS

“Research is formalised curiosity. It is poking and prying with a purpose.”. Zora Neale Hurstone (1891-1960)

6.1 INTRODUCTION

In chapter 5, the study presented results from data collected during the research journey providing a comprehensive overview of the empirical evidence that forms the foundation of this study. In Chapter 6, the study delves into the heart of the thesis as it engages in a rigorous discussion and interpretation of the findings that have emerged from the research investigation. This chapter serves as a critical juncture where the analysis of the data is in-depth, drawing upon theoretical frameworks and existing literature to illuminate the significance and implications of the findings. The primary objective of this chapter is to provide a comprehensive understanding of the research questions and hypotheses that guided this study and to offer insights that contribute to the overall understanding and body of knowledge on resilience. To achieve this, this chapter has been organised into several sections, each focusing on a specific aspect of the findings. The chapter begins by presenting descriptive statistics within the context of the study. The study then embarks on a systematic exploration and analysis of the data, when an effort is made to examine the patterns, trends, and relationships that have emerged. Results are contextualised within the existing literature, highlighting areas of convergence and divergence, and offering explanations for any inconsistencies or unexpected outcomes. Additionally, the study engages in a dialogue with the existing literature, critically evaluating and synthesising findings with the work of other researchers. This is important because it enhances situating the study within the larger scholarly discourse, therefore contributing to the ongoing conversation in the field of resilience in general and SME resilience in particular.

6.2 DISCUSSION OF RESULTS ON THE IMPACT OF RESILIENCE MODEL DIMENSIONS ON PERFORMANCE OPTIMISATION OF SMES IN THE MANZINI REGION, ESWATINI

6.2.1 Impact of resilience on performance optimisation of SMEs

Results of the study show that resilience has a significant negative direct effect on the performance optimisation of SMEs in the Manzini region of Eswatini. This effect is evident in the results of analysis with a p-value of $< .001$. The coefficient of -0.787 indicate a negative relationship between the independent variable (resilience) and performance optimisation. An estimate of -0.787 indicates a negative relationship between resilience and

the dependent variable (performance optimisation). Specifically, for a one-standard-deviation increase in resilience, the performance optimisation variable is expected to decrease by approximately 0.787 standard deviations. A negative relationship between resilience and SME performance optimisation could suggest that the resources allocated to building resilience may, in fact, detract from other critical areas such as innovation and operational efficiency. This trade-off is particularly significant for SMEs, which often operate under constraints of limited resources. Bessant and Tidd(2015) argue that while it is essential for organisations to be resilient, an overemphasis on risk management can hinder creativity and the willingness to explore new business models. For SMEs, fostering a culture of innovation is crucial to long-term success, and a singular focus on resilience could undermine this objective. It is also important to note that, resilience strategies may require the implementation of strict processes and controls, which can lead to bureaucratic inefficiencies. Hamel and Välikangas (2003) discuss how organisations that become overly focused on resilience behaviour may develop rigid structures that inhibit agility and adaptability. For SMEs, maintaining flexibility is vital, and excessive emphasis on resilience could hinder their ability to respond swiftly to market changes.

On the other hand, a review of the dimensions of organisational resilience (detectability, coping and adaptation) reveals a positive direct significant relationship between them and performance optimisation. This finding is consistent with the findings of several studies. First, with a p-value of $< .001$, the results of the study are supported by Erdiaw-Kwasie et al. (2023) whose study established that coping capacity is translated into resilience in SMEs. Their study further explains that coping strategies, if implemented well, may result in reduced vulnerability.

Notably the study reveals that most coping strategies are reactive in nature, thus affecting the long-term effect of resilience coping mechanisms in crisis situations. Erdiaw-Kwasie's study further revealed that SMEs are the least likely to adapt to crisis. Combined with coping, the study argues that adaptation does not necessarily translate into the effectiveness of resilience. Adaptive resilience involves continuous transformation and learning during and before a disruption. Korber and McNaughton (2018) refers to adaptive resilience and argues that it is a dynamic process, not just a characteristic. Although resilience implies a more dynamic perspective, it has been established that adaptive capacity plays a fundamental role in the resilience of firms. Kanyangale and Njoloma (2020) asserts that there are three stages in the process of organisational resilience. The first is anticipation that requires an organisation to

be proactive. The second is coping which involves taking concurrent actions to develop and implement solutions while the third, adaptation calls for action of reflection and learning. According to Kanyangale and Njoloma (2020) the anticipation stage is an important stage in supporting coping and adaptation. The ultimate purpose of building anticipatory capabilities is to prepare and ready the organisation for likely disruptive events. Their study established that resilience emerges from the interplay of individual, organisational and relational capabilities of three dimensions of resilience, anticipation, coping and adaptation. With regard to the negative estimates that depict an inverse relationship between resilience and performance optimisation, Miklian and Hoelscher (2022) found that during global financial crises, small business were significantly affected. Miklian and Hoelscher (2022) argue that business failure after a crisis is a result of existing business models becoming ineffective and suggest that although SMEs may survive a crisis, evidence suggests that small businesses are more vulnerable with poorer performance profiles. Since this study was conducted post-COVID-19, it is possible to argue that most SMEs under study were still recovering from the effects of the pandemic and as such, efforts to recover may not have resulted into quick or positive performance or could have diverted the limited resources from activities that could optimise their performance. The relationship between the size of an organisation and resilience is a contested one (Ahmić, 2022; Kalak & Hudson, 2017; Miklian & Hoelscher, 2022). In fact, Cowling et al. (as cited in Miklian & Hoelscher, 2022) argue that younger firms are likely to grow faster during periods of disruptions because of their capacity to develop flexibility within their operations while others argue that small businesses are more vulnerable during crises than larger organisations. Larger organisations can withstand disruptions or shocks because of their powerful tools to withstand disruptions and the existence of long-term strategic focus. The negative effect of resilience initiatives was also realised in a study by Kim and Kim (2023) who found that resilience practice of product diversity had a negative impact on production system of performance.

The findings of the present study further agree with the findings of Alessandra Tognazzo and Giulia Passarelli (2019) which established that the structural formalisation, specialisation, complexity, and size of a firm create rigidity, hence deprive them of the ability to respond quickly to adversity and unexpected events. Thus, strict approaches to adaptation, coping, and detectability may negatively affect an organisation's resilience. Although not a part of the scope of this study, this finding is important because formalisation and rigidity of organisation structure may have significant negative effects on its ability to withstand shocks.

This finding is further supported by the results of Alessandra Tognazzo and Giulia Passarelli, (2019) which revealed that strict centralisation of certain processes impeded flexibility and is negatively associated with resilience. Giulia (2019) further established that the resilience of the business leader is negatively related to performance shocks ($r = -0.094^*$, $p=0.074$). The study also revealed that the age of the organisation is positively correlated to the level of individual resilience, where $r = 0.103$, with a p-value of 0.012. Older business leaders show higher degrees of individual resilience, but not in terms of leadership at the organisational level.

This finding underscores the importance of age and its effect on resilience. The older a manager/owner becomes, the less resilient or active they become in appreciating and responding to environmental changes. Resilience entails a process of adaptation and growth in difficult times, rather than an end state of being (Southwick et al., 2017). Organisational or individual resilience improves an organisation's ability to adapt to new situations/disruptions. To cope, individuals or organisations should be able to leverage adaptive capacity that allows them to respond effectively to disruptions (Southwick et al., 2017). For researchers such as Korber McNaughton, (2018) resilience is depicted in terms of inherent characteristics of individuals or firms. Resilience is not a given: it is a result of several antecedent conditions, which enhance an organisation's ability to overcome future disruptions. It is important to note that one noticeable weakness of this view is that it fails to explain how individual or organisational actors use their innate resilience to respond to disruptions.

Further, the results of the study are supported by Kotsios (2023) who noted that the concept of resilience is generally founded on the notion of performing well regardless of how difficult the situation might be. According to Sutcliffe and Vogus (2023), an organisation should try to preserve functioning despite the presence of internal or external adversities and recover from untoward events. On their part, Kotsios (2023) refers to business resilience as having the ability to anticipate, avoid, and adjust to the environment. Burnard et al. (2018); Kotsios, 2023, and Kotsios, 2023) place emphasis on the dimension detectability and activation of appropriate organisational responses to external factors. Thus, from these strands of analyses, it is safe to conclude that resilience allows an organisation to respond to disruptive events while at the same time, building new capabilities to improve performance.

In another study by Marcazzan et al. (2022) entitled, "reaction or anticipatory? Resilience in SMEs", using original survey data on 959 Italian and German SMEs, the study established

that previous adversity reduces the chances of adopting a reactive strategy toward business disruptions from 16.96% to 10.77%. The study also reported that the probability of adopting a regular anticipation strategy increases from 40.25% to 47.98% and the difference appears to be statistically significant. In their study, (Marcazzan et al., 2022) further point to the fact that neither desultory nor continuous anticipation significantly changes the likelihood of being adopted after experiencing a prior disruption. In a nutshell, the results reveal that previous experience of a disruption reduces the likelihood of adoption of a reactive strategy, thus increasing the uptake of anticipatory strategy.

Equally recognised is a study by Ducheck (2020), which established that to observe the environment and identify critical developments, members of an organisation need time and the allowance to invest their time into scanning activities. From a resilient standpoint, if employees are too operational, because of their inability to scan the environment, the organisation may not be able to identify critical developments. Ducheck (2020) further established that preparing for critical future events requires financial and human resources to develop recovery plans. Their study further reveals that financial resources are critical to the coping and adaptation phases of resilience. Ducheck's study concludes that resilience is a fundamental organisational ability that is directed toward organisational advancement, which enhances an organisation's ability to adapt to change and innovate. Although their conclusion highlights the importance of resilience in the functioning of the organisation, it equally notes that more knowledge is needed about how organisational resilience works and how it can be developed.

In Denyer (2017) summary of academic evidence at Cranfield School of Management, business insights and new thinking, resilience is required for businesses to respond to disruptions as well as positively adapt in the face of challenging conditions. This also involves leveraging opportunities and delivering sustainable performance improvement. Denyer (2017) established that senior executives need to insure against bad events, adapt and change before the cost of not doing becomes enormous. A study by Purwanti and Hapsari (2022) that analysed "the role of business resilience as SMEs' core competence to improve business performance on the pandemic crisis: A study of Indonesian SMEs" revealed that adaptive resilience has been found to have a positive and significant effect on business performance. The study concludes that the adaptive resilience of a firm creates a competitive advantage and develop its business performance during crisis. Purwanti and Hapsari(2022) in their study, established that the competences to adapt accordingly to treats and challenges

within the business environment that was unpredicted is a strong determinant of good performance of a business. This competence (adaptation) cannot be easily challenged by competitors, especially if internal collaboration, good leadership and organisational experience exists to support organisational operations.

The second form of resilience (dimension) that their study looked at was planned resilience. Results of their study revealed that there is a positive effect on creative efficacy and innovation. Purwanti and Hapsari's (2022) study was not conclusive to determine whether planned resilience positively affects performance. The authors concluded that a study of resilience using a two-dimensional observation yields deeper insight into how resilience could influence business performance. Planned preparation for threats may not be enough to enhance business sustainability without the dimension on adaptive capabilities. Of particular interest is a study by Xiao and Cao (2017) that focused on organisational resilience which revealed that resilience is a newer tradition in organisational theory that incorporates insights from coping and contingency theories.

The paper highlights that there is a lack of integrative construct in the measurement of resilience and that the empirical research is difficult due to the unpredictability of crisis disasters and the lack of samples. The study by Xiao and Cao (2017) recognises that resilience arises from a complex relationship between factors, acting at different levels. This finding implies that organisations may become resilient at three levels (individual, group, and organisational). Factors at every level are different and the forces that act at the different levels constitute the resiliency of an organisation. In addition to forces acting differently at each level, there is a level of transition, from a low level to a higher level. Interactions between levels and learning that result from interactions create opportunities for the organisation to detect the change, cope and adapt. This results in resilience at the organisational level.

In another study by Puumalainen et al. (2023); Saad et al., 2021) on crisis response strategies and entrepreneurial orientation of SMEs: A configuration analysis on performance impacts on Finish SMEs revealed that firms that faced a lot of problems applied coping strategies, resulting in reduced problems. The study also revealed that for firms that experienced minor problems, coping was not a frequently used strategy. The financial performance for both categories of firms (with many problems and with few problems) was mixed when coping or perseverance strategies were used to guard against disruptions.

The study by Dejardin et al. (2023) examined the impact of dynamic capabilities on Portuguese SME performance during COVID-19 delved into the dimension of sensing, conceptualising, co-producing and orchestrating as well as scaling and stretching revealed that sensing (detectability) has a positive effect before the pandemic ($\beta=0.251$, $p<0.043$), but loses significance during the pandemic ($\beta=0.205$, $p<0.058$). The lesson learned from this finding is that during pandemic times/crises, SMEs like their large counterparts focus on keeping their products in the market than the introduction of new ones. From their study, companies should apply new concepts and structures to maintain their levels of performance and innovation during global crises. These new approaches and concepts may greatly differ from what organisations are used to. Dejardin et al.(2023) opine that while theoretical research on the impact of the dynamic capabilities of companies on performance and innovation provided alternative structures, empirical research returns results that are complex to compare. Dejardin et al.(2023) advance that pandemic difficulties are usually generalised in scope, companies gain a greater likelihood of being able to cope with the impact of disruptive events depending on the nature of dynamic capabilities that they develop. Thus, if an organisation can develop dynamic competencies, then it is able to boost the likelihood of organisational success in the current period.

From this study, dynamic capabilities (DC) are the key abilities for the organisation to apply its idiosyncratic permutations of resources to enhance modification, integration, and renewal of existing organisational competencies. For organisational survival and prosperity in the post-COVID-19 pandemic, organisations should be able to seek greater value for less expenditure. For this to happen, there will be a need for greater capabilities such as sensing (detectability) for weak signals to come up with new products and services with a client-oriented focus. Sensing constituted a priority, thus the search for opportunities to come up with new products and services when an organisation faces a disruptive event (Dejardin et al., 2023). Accordingly, this allows the company to be able to develop and to continue to maintain a focus on conceptualising variables that may pose a threat to its existence.

Results of the study further revealed that an SME's dynamic capabilities such as sensing may flourish as it remains necessary to be at the top during times of a crisis. This allows the organisation to produce synergies, thereby transforming them into a formula that grants frugal organisations some unrivalled advantages. The existence of such synergies allows the organisation to cope with crisis, but also with building a crisis legacy that is deeply sustained by the nature of dynamic resources that are based on internal organisational knowledge

(Dejardin et al., 2023). Although this study provides important insights into the role of a dynamic capability such as sensing (detectability) in the management of crises, the study calls for a more nuanced analysis of resilience in different contexts.

In another study conducted in Sweden by Amanda & Marius (2022) titled “COVID-19 crisis and SMEs resilience through digital business model adaptation-an empirical study of internal small and medium-sized manufacturing firms” in Sweden revealed that the organisations in question adapt to change in a rather reactive manner. The qualitative study revealed that; *we are so dependent on how the big players are doing. One positive thing is that we have an order book that is really good. We just have to match the right chassis with the right body and facility. But we don't have a plan, if we don't get chassis, we don't have a plan how to do it with the other thing*”. From this finding, it was established that SMEs under study are reactive in nature but do take note of changes (adapt) whenever they occur. This finding is perhaps supported by Lengnick-Hall et al. (2011) who argue that adaptation is an offensive response, which entails coping during a crisis. This requires creating transformation and learning after a crisis has occurred. This definition is confirmed by the significant relationship between the sub-hypotheses (detectability, coping, and adaptation) on performance optimisation all with a p-value of less than 0.005(0.000). The study results indicate that resilience is significantly related to performance optimisation.

6.2.2 Relationship between strategic foresight (transformative resilience) and performance optimisation

Results of the test of statistics on the impact of strategic foresight on performance optimisation revealed the existence of a direct positive and significant relationship between the two variables. The results show an estimate of 0.689. In the context of Structural Equation Modeling (SEM), an estimate of .689 typically represents the strength and direction of the relationship between two variables. An estimate of 0.689 shows that the relationship between the observed and latent variables is positive and strong. The p-value for the relationship between the variables in p-value is < .001. This means that there is a significant impact of strategic foresight on performance optimisation in SMEs in the Manzini region of Eswatini. Specifically, the results reveal that for a one-standard-deviation increase in strategic foresight (transformative resilience), the performance optimisation variable is expected to increase by approximately 0.689 standard deviations.

Analysis of results of the sub-hypotheses of the variable strategic foresight (transformative resilience) that was measured using two dimensions (discovery and planning) revealed that both observed variables are statistically significant (Pearson's correlation) to performance optimisation (0.000), where correlation is significant at the 0.01 level (2-tailed).

The results of the study are consistent with the findings of Rohrbeck and Kum (2018) in the study on corporate foresight and its impact on firm performance: A longitudinal analysis of German firms which established that 62% of the surveyed firms had a strong to very strong level of corporate foresight need. The study established that most firms surveyed had high need to apply more sophisticated corporate foresight. It was also revealed that vigilant firms, achieved on average, 16% performance (profitability), which surpassed the overall industry average profitability of 12% and made vigilant firms 33% more profitable than the average. The study Rohrbeck and Kum (2018) further established that on the maturity side, majority of firms did not reach above level two, while just 2% of the firms had a maturity level of four, 27% of the firms attained a level three, and 71% had a moderate to low-level corporate foresight. These findings are in line with the findings of Rohrbeck and Schwarz (2013) which established that there is limited implementation of systematic corporate foresight practices across industries. Rohrbeck and Kum (2018) argue that much as the adoption of corporate foresight (transformative resilience) is rising within organisations, its application seems to be on average lacking comprehensiveness, continuity, and institutionalisation.

On the contrary, the findings of the present study are consistent with the findings of Fathi et al. (2021) who conducted a study on the effect of organisational resilience and foresight on firm performance: competitive advantage as mediating variable among Iranian export-oriented pharmaceuticals. The results of their study revealed that organisational resilience had a positive and significant direct influence on strategic foresight (t-value-12.61, $p < 0.000$). The path coefficient for the direct effect of strategic foresight on financial performance was 0.146, whereas the indirect was 0.054. Like resilience, strategic foresight involves anticipating and preparing for future challenges and opportunities. This involves analysing trends, examining and identifying potential disruptions and designing strategies to navigate uncertain environments. As transformation resilience, strategic foresight enhances an organisation's ability to gain a deeper understanding of the forces shaping the industry and make informed decisions to stay ahead of the "curve" (Johan et al., 2023).

The link between strategic foresight (transformative resilience) and organisational resilience emanates from their shared focus on adaptability and preparedness. Strategic foresight enables organisations to identify potential risks and opportunities, allowing them to proactively develop resilience strategies. By anticipating future changes and disruptions, organisations can possibly prepare themselves to respond and recover fast when faced with disruptions which affect their ability to maintain their performance (Fathi et al., 2021b). Furthermore, strategic foresight informs the development of organisational resilience strategies by identifying potential transformational changes in the external environment. This includes understanding emerging trends, knowledge, technological advancements, and shifts in customer tastes and preferences. By incorporating these insights into their resilience strategies, organisations can position themselves to adapt, cope and thrive in a rapidly changing landscape (Duchek et al., 2020).

These results are further confirmed by Manalu et al. (2023) study on the moderating effect of the competitive effect of competitive intensity on foresight capability and product innovation in SMEs in Indonesia that revealed that the moderating effect of competitive intensity in networking (strategic foresight) relationships on performance innovation is supported by a p-value of $0.008 < 0.01 (\beta = -0.49)$. The study concludes that the ability of SMEs to find information related to market desires, the better their innovation capabilities. This allows SMEs to get important information such as consumer desires that can be used to improve SME performance.

The study further revealed that analysing data to discover new knowledge from the external environment to determine potential conditions in the future is central to every SME's survival during a crisis. SMEs with robust approaches to evaluate performance will enhance their innovative capacity and performance. SMEs with the capacity to discover new knowledge/information through effective data analysis can improve the quality of future decision-making (product innovation). The findings of this study were consistent with the findings of Manalu et al. (2023), which concludes that the more often companies do foresight, the more they improve innovation capabilities.

Another study by Almujaeni et al. (2021) that examined the direct impact of corporate foresight and organisation learning on the performance dynamic of SMEs in the United Arab Emirates (UAE) revealed a positive impact of corporate foresight on performance. Their study further revealed that higher foresight may lead to greater performance. The study also

indicated that a unit change in the value of foresight positively impacts performance. Interestingly, the study recognises that even if the results suggest that corporate foresight enhances the performance of an organisation, not much has been done to create certainty in the conclusion that foresight positively improves the performance of SMEs. Almujaeni et al.'s (2021) study, therefore, calls for more empirical analysis to establish the relationship between resilience and performance of SMEs.

Another study by Obomeghia and Chima (2023) aimed to explore the relationship between strategic foresight and competitiveness of small and medium businesses in Rivers State, Nigeria, established that strategic foresight has a significant relationship with measures such as organisational responsiveness and cost leadership. The study further revealed that for an organisation to thrive, strategic foresight becomes a necessary tool that enhances an organisation's ability to look for new business opportunities and covert threats to opportunities and weaknesses to strength.

However, Obomeghia and Chima's (2023b) findings do not align with the findings of Ibrahim Gumel (2019), who conducted a study on the impact of strategic planning on the growth of small businesses in Nigeria. Although strategic foresight has a significant relationship with performance (Almujaeni et al., 2021; Manalu et al., 2023; Obomeghia & Chima, 2023b) the study by Ibrahim Gumel (2019) did not find a significant relationship between formal planning and transitional growth, instead the study found that there is a relationship between planning process in communicating the owner's goals, vision, mission, and intentions to both internal and external stakeholders of small businesses. Important to note is the fact that the study revealed evidence of both planning schools in the development and the execution of strategic planning. The study further revealed that a formalised planning approach with written documents serving as strategic planning tools for the business was available despite there being no evidence for using them. The study also established that employees understood the contents of the planning tools, and this was found to be an essential avenue for communicating the goals, mission, and vision of the firm.

Interestingly, results of the study by Nyuur et al. (2015) contradict the findings of Ibrahim Gumel (2019) but, agree with the findings of (Almujaeni et al., 2021; Manalu et al., 2023; Obomeghia & Chima, 2023b). The study by Nyuur et al. (2015) titled foresight capabilities and SME product/service adaptiveness of Croatian SMEs revealed that there is a relationship between planning and visioning on SME's product/service adaptation ($\beta=0.417$, $p<0.001$).

This is interesting because the study by Ibrahim (2019) established that planning and performance in SMEs are not related. Instead, SMEs use planning to communicate their vision and mission through planning tools. This is indeed interesting because, by their very nature, SMEs focus on market exploitation by taking advantage of quick opportunities that emerge, with very little in terms of initiatives to plan. Although previous studies (Amstéus & Intellecta infolog), 2011) highlight the significant role of foresight practices and capabilities on firm performance, there are still few studies that have empirically tested this assertion. Nyuur et al.(2015) examined the impact of environmental scanning capabilities (an input into planning), strategic election capabilities, and integrating capabilities on organisational ambidexterity. This study aimed to extend knowledge about the limited but surging conceptual literature on foresight by empirically testing the influence of foresight on SMEs' product/service adaptiveness. The findings of this study add to the ongoing debate on the role of foresight in the performance/product/service adaptiveness of SMEs. The study endorses the view that foresight practices have a high direct impact on SMEs' ability to strategically adapt their product/services to market and customer needs. Nyuur et al. (2015) reinforce the fact that adaptation, a component of transformative resilience (foresight) allows an organisation to respond to challenges caused by environmental turbulence. Foresight capabilities such as adaptation enable an organisation to respond to market dynamics.

The study by Nyuur et al.,(2015b) recognises the lack of empirically tested assessment of the link between foresight and other organisational processes. To fill this gap, the study examined the effect of industry dynamism on the association between foresight capabilities and SME product or service adaptiveness. Results of this analysis revealed that there is no significant relationship between industry dynamism on the association between foresight and serve adaptation. These findings deviate from the narrow view that external variables such as economics, social, and technological diminish the accuracy of foresight activities in the medium term. Foresight practices allow SMEs to adapt their products and services in response to market dynamics. Nyuur et al. (2015b) endorsed the view that foresight capabilities such as environmental scanning, developing network ties and planning and visioning have a high level of direct impact on SME ability to strategically adapt their products and services to the needs of the customers, although the study finds no support for the interaction effect of industry dynamics on these associations.

An important discovery is one on foresight for SMEs: How to overcome the limitations in small firms (Vishnevskiy et al., 2015). The findings of a research project implemented at the

National Research University Higher School of Economics (HSE) revealed that the standard methods of corporate foresight cannot be completely taken for long-term forecasting in the interest of SMEs, although some aspects of corporate methodology can be adopted for SME needs. The inability to adopt all methodologies for planning is a result of financial/resource constraints. If SMEs are willing to change, the chances of using knowledge from foresight are very high. This in a way, allows and enhances the SME's reliability of future investment decisions. The need to act and build a strategy to safeguard an organisation against an uncertain future can be a result of pressure from competition and the changes taking place in the environment. The study established that European SMEs use foresight to support strategic planning and innovation (Vishnevskiy et al., 2015). This resonates with the view that strategic foresight has become a dominant factor in organising in high-velocity environments. It enables an organisation to reconfigure past and present organisational potentialities and limits into productive outcomes. Since foresight has been established as the creative re-organisation of relevant information into meaningful future-oriented knowledge in the context of change and uncertainty (Andriopoulos and Gotsi, 2006; Amsteus, 2011; Paliokaitė et al., 2014).

In another study by Rohrbeck and Schwarz (2013) on “the value contribution of strategic foresight: insights from empirical study of large European companies” that explored the potential and empirically observable value creation of strategic foresight activities in firms established that there are four potential value contribution of strategic foresight: 1) perception (gaining insights into changes in the environment and contributing to reduction of uncertainty), 2) interpretation and usage (helps to foster a conversation about the overall strategy of the company, supporting adaptation during uncertainty, and improving coordination), 3) interpretation and usage (helps to reduce the level of uncertainty in research and development), 4) enhancing (understanding of customer needs while being able to identify potential customers). Overall, the study established that foresight enhances organisational learning, while shaping the future of the organisation. Interview results from 6 Multinational corporations (MNCs) and 6 small and medium enterprise (SMEs) revealed that respondents from the two categories of organisations (MNCs and SMEs) had limited knowledge of value creation from strategic foresight. This was probably for two reasons: absence of formalised strategic foresight activities in the organisations in question and secondly, lack of a systematic assessment of the resulting value creation of strategic foresight in case evidence of formalised strategic activities exist. This was worse in SMEs where there

was no comment regarding value creation from strategic foresight. The overall picture from the study was that respondents agreed that gaining insights into changes in the organisational environment is the basis for any strategic foresight system. This view was disputed by 4% of SMEs that reported that they do not get value from strategic foresight system. This low percentage is indicative of the fact that respondents think that strategic foresight can do a better job in achieving value.

On another note, regarding how having insight creates changes in organisational environment, high performing organisations that participated in the study (17%) revealed that they disagree with the statement that uncertainty has reduced with the adoption of foresight systems. However, 42% of top performers appear to be satisfied that foresight systems leading to a reduction in uncertainty. The study further revealed that strategic foresight improves internal coordination, despite 25% and none of the low performers agreeing to this statement. It is likely that disagreement with the statement that strategic foresight improves internal coordination could have been a result of lack of participation by the relevant units/persons. It is evident that companies that carry-out strategic foresight activities without collaboration are unlikely to add value in terms of coordination between organisational or divisional goals and units (Rohrbeck & Kum, 2018b).

With its focus on resilience-performance optimisation nexus, the study ascertained that transformative resilience (strategic foresight) improves an organisations ability to discover, plan and coordinate processes within an organisation. In the long-run, the link of strategic foresight to innovation (performance) has been highlighted. Whereas large organisations are reported to develop foresight activities/systems that allow them to gain insights into changes in the organisational environment, 4% of SMEs reported not having gained much from foresight. The overall picture is that building foresight activities enhances an organisation's ability to ensure coordination and to innovate. Foresight systems/activities allow an organisation to develop a better understanding of customer needs. If fully developed, foresight might enhance an organisation's ability to gain more value through internal coordination and reduced level of uncertainty during a crisis (Rohrbeck & Kum, 2018b).

6.2.3 Relationship between absorptive capacity (AC) and performance optimisation of SMEs in the Manzini region, Eswatini

Findings in this study revealed that absorptive capacity has a direct and positive significant impact on performance optimisation of SMEs in Manzini region, Eswatini (z-value was

0.4958 and a p-value < .001). Absorptive capacity was measured using three observed variables (constructs), knowledge recognition, assimilation and applying. Using Pearson's regression coefficients, the study revealed that the three constructs of absorptive capacity are significantly correlated (two tailed Sig. 0.000) with performance optimisation. The results of the study imply that, recognising and accessing external knowledge allows SMEs to tap into a wider pool of information that can be used to improve organisational functioning and performance. External knowledge improves decision making, problem solving as well as enabling an organisation to stay competitive. Regarding assimilation, it enhances an organisation's ability to integrate external knowledge, build organisational capabilities while at the same time facilitating learning. Assimilation allows SMEs to strengthen their competitive position and increase chances of success in the marketplace. Overall, the results of the study imply that absorptive enables SMEs to recognise, assimilate and apply knowledge. As a result, AC significantly impact performance by enhancing innovation and contributing to their competitive advantage. This is a result of effective utilisation of external knowledge and incorporating it into their operations. Absorptive capacity enhances an organisation's ability to recognise the value of new, external information, assimilate and apply it for purposes that result in commercial benefits for the organisation (Cohen & Levinthal, 1990).

The result of the study on absorptive capacity and performance optimisation are supported by the results from a study by Zhai et al. (2018) that was conducted on an empirical study on "entrepreneurial orientation, absorptive capacity, and SME's innovation performance: a sustainable perspective on SMEs in Yangtse River Delta in China" revealed that absorptive capacity positively moderates the relationship between entrepreneurial orientation and innovative performance. The study establishes that managers need to cultivate staff's learning and research ability that allows/equips them with the ability to learn, transform and apply new knowledge and technologies to support growth and innovation. Also, important to note, a team made up of team-based employee has a higher absorptive capacity, hence promoting technological innovation performance. The study recommends that managers should be forward-looking to anticipate crises and take action ahead of time before a crisis occurs.

In another study by Camilo Ortigueira-Sánchez et al. (2020) whose aim was to test for the relationship between "absorptive capacity and innovation from SMEs that were beneficiaries of the public tender names Technological mission" in Peru, the independent variable (absorptive capacity) was operationalised into the acquisition of external knowledge, internal

research development, employee training and innovation subsidy. Results of the study revealed that all the independent variables related to absorptive capacity have a positive correlation with the dependent variable (0.001). The study also revealed that there is a positive correlation between external knowledge acquisition with employee training and innovation. According to Cohen and Levinthal (1990) the concept of absorptive capacity is premised on the view that organisation needs prior related knowledge to assimilate, and use new knowledge. This view surfaces prominently in the area of cognitive and behavioural sciences that opine that like organisations, individuals require prior knowledge to assimilate new knowledge. Cohen and Levinthal (1990) argue that prior knowledge increases the ability to store new knowledge (acquisition of knowledge) and apply it (use it). As a principle, memory development is self-reinforcing the view that the more objectives, patterns and concepts individuals or organisations store in memory, the greater the chance for new information about these constructs to be acquired and stored.

Apriliadi's (2018) study on "the impact of knowledge management on SME's performance in the city of Bandung, Indonesia" operationalised knowledge management as knowledge creation, storage, transfer/sharing and utilisation. The balanced score card perspectives were used to measure performance of SMEs. The study revealed that there is a significant positive influence of knowledge management on the performance of SMEs in the city of Bandung, Indonesia. The study also revealed that knowledge management capabilities (creation, acquisition, storage, transfer/sharing, and utilisation) were proven to have a positive and significant influence on the performance of SMEs ($p\text{-value} < 0.05 = 0.000$). These results are consistent with the findings of Gharakhani and Mousakhani (2012) which established that the key capabilities of knowledge management (knowledge acquisition, knowledge sharing, and application) have a positive and significant effect on SME performance. Coefficients of knowledge acquisition, knowledge sharing, and application are significantly related to sales growth ($p < 0.05$, $p < 0.01$ and $p < 0.01$). These findings show that SMEs achieve a higher level of sales growth if they can develop knowledge acquisition, knowledge sharing and knowledge application capabilities.

The results of the current study are further consistent with the findings of Seleim and Khalil (2011) whose study revealed three patterns of relationship between knowledge management and intellectual capital relationship: *"one-way influence from KM to IC (e.g. knowledge application influences each of human capital, organisational capital, and relational capital; one-way influence from IC to KM (e.g. human capital influences knowledge acquisition and*

knowledge transfer); and two-way influence between KM and IC (e.g. between knowledge documentation and organisational capital, between knowledge transfer and relational capital).” The study contributes by adding voice to existing studies and confirms that there is a significant relationship between knowledge management and intellectual capital. These findings are important because they add to a body of growing research efforts that may provide an empirically examined explanation of the complex relationship between knowledge management capabilities and intellectual capital. Another key significant finding of this study is that if a dynamic approach is applied, intellectual capital and knowledge management are viewed as performance areas of a firm. The present study agrees with this view since elements of knowledge management such as knowledge acquisition, transfer and applying are seen as key drivers for enhancing performance optimisation of SMEs in the Manzini region. SMEs create value through the application of knowledge rather than the mere acquisition of it. This view is supported by Muntean, (2009) who argues that businesses do not necessarily exist to spread knowledge. They exist to create value by selling products and products of high quality. The role of management therefore is to ensure that there are synergetic interactions between knowledge management processes that lead to the creation of organisational value. If synergetic interactions exist, they can facilitate knowledge distribution, improving planning and development while at the same time creating more functions and productive relationships within teams. As a result, organisational productivity increases with a better understanding of internal and external environments.

Another study by Ademuyiwa et al. (2021) on the effects of knowledge management and creation capabilities on the performance of SMEs in Kogi state, Nigeria revealed that knowledge creation has a strong predictive power over competitive advantage in Kogi state. Their study shows that a combination of knowledge has a positive relationship with competitive advantage (sig. 0.000). The study introduced a dimension of socialisation as the source of creating knowledge. The study found that socialisation positively contributes to the competitive advantage of SMEs in Kogi state. It is important to note that earlier definition of absorptive capacity focused on new information as well as ability to evaluate and utilise outside knowledge (Cohen & Levinthal, 1990). Van et al.(2006) aptly argues that new information is not knowledge. In an attempt to extend Cohen and Levinthal (1990) definition of absorptive capacity Van et al. (2006) proposed that absorptive capacity should be considered as a firm-level construct with the following definition: *the ability to recognise the value of new external knowledge, assimilate it, and apply it for commercial ends*. This

definition is important because it highlights the importance of organisational systems and processes to appreciate the value of knowledge to create change. Although relevant, the study by Ademu et al. (2021) fails to indicate whether valuing external knowledge precedes knowledge creation.

Pam et al. (2023) in their study on the effect of knowledge application and knowledge sharing on the performance of small and medium enterprises in North Central Nigeria found that knowledge application has a positive and significant effect on performance (0.238 which is significant at 5% level of significance with p value =0.000) while knowledge sharing has a significant influence on the performance of SMEs (0.319, with the significance of 0.000). The study further revealed that an R-square value of 0.186, signifies that approximately, 19% of the variation in the performance of SMEs in North-Central Nigeria may be explained by the combination of knowledge application and sharing in SMEs. The remaining 81% variation in performance could be explained by other factors that may not have been included in this study. The study f-statistics stood at 34.118 and the probability of the f-statistics was found to be significant at 5% level of significance ($p=0.000$). Results of this study (Pam et al., 2023) imply that if SMEs deploy knowledge, their performance may improve.

The study by Samir (2020) investigated the relationship between knowledge management and organisational performance in the context of SMEs in Egypt conceptualised knowledge management into three dimensions: knowledge acquisition, knowledge sharing and knowledge application. The study revealed that there is a positive significant relationship between knowledge acquisition, knowledge sharing, knowledge application and innovativeness since their corresponding p -values are less than 0.05 and correlation coefficients of 0.318, 0.229 and 0.122 respectively. Results of the study further show that there is a significant effect of knowledge acquisition on innovativeness (regression coefficients of 0.429), with an R-Square of 0.097(9.7%). On the other hand, knowledge sharing has a positive significant relationship with innovativeness (regression coefficient of 0.238, and a p -value of 0.0000) and an R Square of 0.061(6.1%). Regarding the last dimension, the study revealed that there is a significant positive effect of knowledge application on innovation (regression coefficients of 0.184, and a p -value of 0.001). R-square was 0.020(2%). From this study the dimension knowledge application accounts for only 2% of variation in performance of SMEs in Egypt. The dimension recorded the lowest variation in contributing to performance among the three dimensions (knowledge acquisition, knowledge sharing and knowledge application).

The study by (Samir, 2020) also sought to test the relationship between the three dimensions of knowledge management and competitive advantage. Results of the study revealed that there is a positive significant relationship between knowledge acquisition, knowledge sharing, knowledge application and competitive advantage (all with p-value of less than 0.05). Whereas knowledge acquisition, knowledge application had a significant relationship with customer satisfaction, results of the study revealed that the relationship between knowledge sharing, and customer satisfaction was insignificant (p-values of more than 0.05, 0.565). R-square was 0.039(3.9%). This implies that knowledge sharing explains only 3.9% variation in customer satisfaction with the remaining percentage being explained by other factors. This is an important finding because, knowledge sharing significantly affects innovation and competitive advantage, but not significantly related to customer satisfaction. The study supports the view that organisational assets such as knowledge create innovation and competitive advantage (Nason & Wiklund, 2018). Thus, organisational learning is a fundamental element in sustaining innovative, competitive advantage (Anatoliivna, 2013) and customer satisfaction that increase the performance of SMEs.

The results of the present study on absorption capacity are supported by a study by (Gomezelj Omerzel, 2019) who conducted a study on “the impact of knowledge management on SME growth and profitability: a structural equation modelling study”. The proposed model of their study had three dimensions: use of knowledge, knowledge acquisition at an individual level, knowledge storage, motivation, measuring efficiency of knowledge management implementation and knowledge transfer. Results of the study revealed that all dimensions are interrelated and important for firm performance with p-value <0.05. The study concludes that knowledge is an essential resource for the performance of an organisation.

Similarly, a study by Fletcher and Prashantham (2011) on “knowledge assimilation processes of rapidly internalising firms: longitudinal case studies of Scottish SMEs” revealed that knowledge assimilation was important for firm internalisation. Through interviews, the qualitative study established that, *“we share everything, we spend a lot of time sharing because if you don’t share you can’t discuss, if you can’t discuss you can’t move forward, for example, when we are going to start working with a new company I tend to take the other staff to the first meeting”*.

Another finding of the study was : *“we communicate a lot, every Wednesday we organise lunch with our personnel and during these lunches there is always a presentation done by an*

employee, a manager engineers from the development, or it could be marketing people explaining what is the situation in Germany and in the UK, and it is also linked with a video conference with America which mean that we are doing in R&D up to a certain point known and it is shared with the rest of the company. It could also be financial presentation or IT strategy, you name it-everything which deserves to be communicated is communicated”. The study reveals that prior experience is a central area in building an organisation’s capacity to assimilate knowledge. Coupled with experience, firm growth and size of a firm play a significant role in knowledge sharing processes. Formally structure organisations appear to develop processes and systems that enhance knowledge sharing and assimilation than those which are not. This is supported by the finding that firms that have a mixture of tacit and explicit knowledge sharing processes with a formal structure allow for quicker sharing of knowledge. Faster decision making was supported by the existence of tacit knowledge, and this supported the emergency of entrepreneurial behaviour. The paper equally notes that learning through information discussion with staff enhanced knowledge acquisition and assimilation among those involved in the discussion. Also, through internationalisation initiatives, the transfer of knowledge assimilation processes across international markets may enhance learning processes to support the domestic growth of SMEs.

The above findings are further supported by results of a study by Germanos (2018), which revealed that a firm with high absorptive capacity is able to develop a range of innovative capabilities that contribute to product innovation and significantly contribute to the competitiveness of SMEs in Australia. The study established that assimilating new knowledge was achieved through a ‘trial and error’ learning process. The firm explored new knowledge about textile and technology fibres, textile design and abrasive resistance properties for its business operations and practices. The study shows that the assimilation phase sees the firm emerging from initial searches for technological change to its existing knowledge bases and advances its business learning to procure new or extend its technological platforms. Developing an early prototype is a manifestation of learning through the concept of “trial and error”. In Germanos (2018), it was further established that

“the open mindedness of the firm’s management drives the pursuit of knowledge to learn more about science and technology associated with fibres and textiles providing personal protection qualities such as abrasive resistance in road, and motorcycles clothing. Also, to exploit knowledge, the firm works closely with suppliers across its supply chain, thus being

able to secure a strong partnership as reputable manufacturers that natures the use of technological advances.”

Worth noting is the fact that the study established that firms (Beta and Alpha) were significantly different in the relative importance of assimilation and transformative learning. For the organisation coded as Alphas, the transformative learning process was established to be of limited importance (2%), while assimilative learning dominates the linkage between exploratory and exploitative learning (21%) for the same organisation. Regarding the firm coded as Beta, 24% was established as the level of transformative learning, while assimilative was reported at just 4%. Beta transforms the potential knowledge stock into commercial purposes to achieve commercial purposes and achieve realistic absorptive capacity and higher efficiency ratio. According to Rizwana et al. (2022), the discrepancy between the firm's levels of assimilation and transformative processes varies for several reasons and transformative learning processes are essential for firms to convert potential knowledge stocks into commercial purposes.

In another study by Harrison and Pooe (2022) on “the antecedents for export orientation, innovation capacity and performance for South African manufacturing SMEs”, using structural equation modelling revealed that absorptive capacity (AC) and knowledge management capabilities (KMC) are certainly significant capabilities that should be embedded in the SME business since AC and KMC positively influence the development of export orientation and innovation capacity. The study confirms the results of a study by Harrison and Pooe (2022) that absorptive capacity and innovative capacity are correlated. This suggests that integrating new information with existing one may improve an organisations' ability to innovate. Further, the results show that KMC has a positive relationship with export orientation with z-value of 0.388, at $p < 0.001$ level of significance. These findings are essential for this study for two reasons: first, they confirm differences in the processes of knowledge acquisition, assimilation and transformation. Secondly, the study's results highlight the importance of absorptive capacity (applying) in generating commercial benefits. As an important lesson, knowledge transformation requires more than a high efficiency factor since few strategically selected actions lead to strategic innovation and performance. Coordination and integration are key in ensuring that knowledge is acquired, transferred, and applied for commercial gain. Leaders or firms with a traditional classical management approach do not consider the environment as a source of valuable knowledge. Managers with a classical management logic have a narrow understanding of the

environment, and as such, external knowledge may not be considered a source of valuable knowledge (Paliokaitė et al., 2014).

6.2.4 Mediating effect of absorption capacity in the relationship between resilience and performance optimisation

Results of the study on the mediating effect of absorptive capacity in the relationship between resilience and performance optimisation reveal that the p-value is $< .001$, indicating the mediating effect of absorptive capacity in the relationship between resilience and performance optimisation in SMEs in Manzini, Eswatini. Thus, in mediation analysis within the context of SEM, the term indirect refers to the effect of an independent variable on the dependent variable that operates through one or more mediator variables. Therefore, it is the proportion of the total effect of the independent variable on the dependent variable that is mediated or explained by the mediator variable. Since the direct z-value is greater than 1.96 (or falls outside the range of -1.96 to 1.96), in this case 3.757, it indicates that the indirect effect is statistically significant at the 0.05 level. This suggests that evidence supports the hypothesis that the independent variable influences the dependent variable through the mediator(s). From this, the null hypothesis H_{04} : Absorptive capacity does not mediate the relationship between resilience and performance optimisation of SMEs in the Manzini region, Eswatini is not confirmed, and the alternative is confirmed.

Results of this study are supported by Suprayitno et al. (2020) who conducted a study on “absorptive capacity: as a mediator between social capital and supply chain resilience in the textile industry of Thailand”. The study established that absorptive capacity mediates the relationship between social capital and supply chain resilience. The study's findings (model 3) revealed the positive effect of absorptive capacity on supply chain resilience. The coefficient of absorptive capacity (AC) was 0.326, and significant at the level of 5% with a p-value of greater than 0.01 and less than 0.05 ($0.01 < 0.035$). The coefficient shows that a unit increase in AC tends to increase supply chain resilience (SCR) by 0.326 units. However, when mediated by absorptive capacity, results show that the mediator AC reduces the significance and coefficients of the relationship between social capital and supply chain resilience from 0.645 to 0.534, and 0.000 to 0.033. However, overall, results show that AC mediates the relationship between social capital and supply chain resilience. Thus, a one unit increase in social capital increases 0.534 units of supply chain resilience. Suprayitno et al. (2020) recommend that managers should make financial and behavioural investments in absorptive capacity to optimisation its effect on the outcome variable. This recommendation

is significant because it highlights the importance of dimensions of absorptive capacity such as knowledge acquisition, assimilation and application in enhancing the performance of small enterprises. Investing in absorptive capacity (AC) allows the firm to be able to acquire relevant knowledge and apply it for commercial gain, while at the same time building internal knowledge sharing mechanisms to understand changes in the external environment and use acquired knowledge to withstand crises.

The results of a study by Ajeeli (2018) entitled “the mediating role of absorptive capacity (AC) on the relationship between intellectual and firm performance in high-tech SMEs in the UK” show that capital has a strong positive relationship with firm performance, through AC (0.22, with a p-value of 0.003) as well as realised AC (0.228, p-value of 0.003). The study also revealed partial relationship between relational capital and firm performance (0.000). Overall, the study revealed that potential and realised absorptive capacity fully mediate the relationship between human, and structural high tech SME performance (0.000 and $p < 0.05$). However, the study revealed that potential absorptive capacity partially mediates the relationship between relational capital performance of high-tech SMEs in the UK. The results of this study show that there are two main dimensions to absorptive capacity, realised and potential (Zahra & George, 2002). Zahra and George (2002) conceptualised potential absorptive capacity as having two capabilities: knowledge acquisition and knowledge assimilation. When firms acquire new knowledge, the newly acquired knowledge flows into the systems and routines of the organisation. Although SMEs may acquire and assimilate external knowledge, it is not likely that all the new information might be used. The inability to use all information gained from external sources translates into an inability to create value (Leal-Rodregous 2014; Ajeeli, 2018). On the other hand, realised absorptive capacity represents two capabilities: knowledge transformation and knowledge exploitation. Using knowledge for commercial ends is a relatively complex task for SMEs. Although SMEs may acquire and assimilate external knowledge and information, they may not be able to use it to create value. Thus, potential and realised absorptive capacity complement each other (Ajeeli, 2018; Cohen & Levinthal, 1990; Zahra & George, 2002).

The study by Goail and Al-Hakimi (2021) examined the moderating effect of absorption capacity in the relationship between entrepreneurial orientation (EO) and supply chain resilience (SCR). Drawing from a sample of 171 Yemen manufacturing SMEs, the findings of the study revealed that AC positively moderates the relationship between EO and SCR. Further, Kumar et al. (2014) in their paper, “the mediating role of absorptive capacity in its

effect on organisational support factors and technological innovation in Sulaimani City, Kurdish region” established that absorptive capacity (AC) served as a mediating factor in the relationship between organisational support factors (OSF) and technological innovation (TI), where $\beta=0.448$, $p<0.01$. The study established that organisational support factors disappeared from the model where absorptive capacity has achieved full mediation impact on organisational support factors and technological innovation. This could be explained by two factors: the extent to which the organisation can provide suitable supportive factors to enhance innovation and, secondly, the extent to which individuals in an organisation can mobilise knowledge absorption to create and enhance innovation. These findings are supported by Kumar et al.(2014) whose study on absorptive capacity in buyer-supplier relations: empirical evidence of mediating role from an American multinational spare parts distributor and European multinational retail chain organisation revealed that absorptive capacity mediates between organisational compatibility on one hand and innovation and efficiency performance on the other hand.

Results also indicate that there is a mediating effect of absorptive capacity on an increase in innovation with uncertainty in demand. The paper concludes that absorptive capacity is an important factor in achieving sustainable performance improvement. The implications of this finding are that organisations should encourage risk taking behaviour since this encourages innovation. It is also important that a listening atmosphere is encouraged while providing physical and emotional support to employees to share knowledge, use and apply knowledge. One key area the study recommends is fostering cooperation among companies to increase experience and learning. This would inadvertently increase a firm’s absorptive capacity. The findings are also supported by Rahim et al. (2021) in their study on the mediating role of absorptive capacity in the relationship between research community participation and open innovation based on a survey of 115 senior engineering faculties from three universities in Malaysia. The study established that the relationship via absorptive capacity was significant ($t=7.7621$, $p<0.01$). The strength of the mediation was done using variance accounted for (VAF). In this case (Rahim et al., 2021) VAF was 0.562 divided by the total effect (1.093). This gave a value of 0.514. thus, absorptive capacity accounts for about 51% of variation in the relationship between community participation and open innovation. Again, these findings are important because they confirm the study’s results and highlight the significant role of absorptive capacity in contributing to knowledge exploitation and innovation.

For their part, Kastelli et al. (2022) conducted a study to link “digital capacity to innovation performance: the mediating role of absorptive capacity” using evidence from 1014 Greek manufacturing firms. Results of the study show a positive direct contribution of digital capacity to innovation performance that is enhanced by absorptive capacity. The study finds that the indirect effect of digital capacity on innovation performance through absorptive capacity is stronger than the direct effect of absorptive capacity on innovation performance ($\beta=0.182$, $p<0.1\%$ -indirect effect and direct effect $\beta=0.173$, $p<0.1\%$. Kastelli et al.’s 2022) study reported that the difference in effect and strength between the direct and indirect interaction of digital capacity on innovation performance was significant at $\alpha=0.005(5\%)$ if tested through a 10,000 sample bootstrapping parameter estimation ($0.0091>\beta-\beta>0.0116$, $p<0.005$). The findings of their study highlight the complementarity of digital capacity and absorptive capacity as enablers of innovation. Both (digital capacity and absorptive capacity) contribute to innovation performance. Digital capacity was found to present a stronger effect on innovation performance when mediated by the effect of absorptive capacity.

Goaill and Al-Hakimi (2021) found interesting results. Entrepreneurial orientation-supply chain resilience is not positive when absorptive capacity is low. The study established that the relationship between entrepreneurial orientation is not favourable in all cases, where the internal and external components of absorptive capacity enhance the potential of an entrepreneurial-oriented firm to search out and seize opportunities using trial and error techniques. Absorptive capacity is a crucial driver for entrepreneurial-oriented firms in the face of disruptions along the supply chain. Yemeni SMEs were found to leverage dynamic capabilities to acquire, assimilate, transfer, and exploit new knowledge.

This study ascertained that absorptive capacity mediates the relationship between resilience and performance optimisation in Manzini, Eswatini. Absorptive capacity focuses on knowledge recognition, assimilation, and application. The usefulness of the absorptive capacity construct is in examining the consequences of organisational outcomes. Previous studies i.e Cohen and Levinthal’s, 1990) study relate absorptive capacity to outcomes such as innovation, performance and allow the organisation to predict more accurately the nature and of technology. Organisations heavily relies on resilience. Organisational resilience life is fed by learning, which is about nurturing generative doubt (Maria et al., 2022) . This allows an organisation to return to a sense of organisational purpose during and after disruptions. In a Volatile, Uncertain, Complex and Ambiguity (VUCA) environment, the level of absorptive

capacity enhances a firm's aspirational level during disruptive events. The higher the firm's absorptive capacity, the greater the chances are for the firm to be proactive.

6.2. 5 Predicting the impact of strategic orientation on the resilience of SMEs in the Manzini region, Eswatini

Results of the test of hypothesis 5 revealed that for every one-unit increase in strategic orientation, resilience increases by 0.821 units. This is supported by the fact that since the p-value is $< .001$, suggests a significant relationship between strategic orientation and resilience of SMEs in the Manzini region. The hypothesis, H_{05} : Strategic orientation does not predict the resilience capacity of SMEs in the Manzini region, Eswatini is therefore not supported. A standard error of 0.123 was established, which suggests the precision associated with the estimated coefficient. The actual population coefficient may vary by 0.123. The fifth hypothesis was further operationalised into two sub-hypotheses. Although the latent variable (strategic orientation was initially operationalised into four dimensions, two dimensions (Defender and reactor) were dropped because of poor factor loadings. The remaining two (prospector and analyser) were used to measure the variable and to formulate the sub-hypotheses. This finding is related to the finding of Puumalainen et al. (2023b), who used a principal component analysis of the entrepreneurial items, only resulting in two components, accounting for 61% variance in the items. Their first component had an eigenvalue of 4.43 and the second 1.03. In the unrotated factor solution, only one factor loaded highly on the component, thus treating entrepreneurial orientation as a unidimensional construct. In the present study, defender and reactor dimensions of strategic orientation had very low Cronbach's Alpha. Based on standardised items of 0.037 and 0.037 respectively. The remaining observed variables of strategic orientation (analyser and prospector) had Cronbach's Alpha Based on Standardized Items of 0.561 and 0.486 respectively.

The results of this study are supported by the findings of Puumalainen et al. (2023b) who conducted a study on "crisis response strategies and entrepreneurial orientation of SMEs: a configuration analysis on performance impacts in Finland". Results of the study revealed that as a response to COVID-19, it was common for SMEs to apply pivoting rather than perseverance strategy. Entrepreneurial orientation was positively related to pivoting, growth and subjective performance but not to profitability. The study further revealed that SMEs that face more problems tend to apply a perseverance strategy, although their financial performance was weaker. Those that faced minor problems had a moderate entrepreneurial orientation and no coping strategies were deployed. The study, however, reported

inconsistencies in terms of the impact of strategic orientation on financial performance. This current study did not delve into this since it was not the focus of the study. On the other hand, non-entrepreneurial firms that faced challenges scored poorly on all performance measures, regardless of the type of resilience strategies (pivoting and perseverance) adopted. Interestingly, the study (Puumalainen et al., 2023b) reported that highly entrepreneurial firms enjoy high subject performance if they apply a pivoting strategy and avoid applying the perseverance strategy. This raises a fundamental question: when do SMEs become and remain resilient? It seems attention is paid to keeping products and services in the market rather than building resiliency into their operations. Secondly, because of their meagre resources, SMEs may be unable to build resilience capabilities. Instead, they commit such resources to building stock and improving existing ones. According to Miller (2011), the debate on entrepreneurial orientation still ranges regarding its drivers, manifestations, and connections with performance. The vagueness of the concept is manifested in the failure to operationalise it as an attitude held by the executive, a set of firm behaviour or some combination of the two. In fact, the ambiguity may bring back memories of confusion where scales reflecting attitude or set of behaviour exist. The worst is when executives express entrepreneurial attitudes that are not matched by the corresponding behaviour to reflect their strategic orientation. To make matters worse, the existence of few longitudinal studies has made it difficult to tease out the relationship between entrepreneurial orientation, firm environment, the strategic context of the firm and its performance (Miller, 2011). However, although recent studies have indicated that more studies have been conducted on the topic recent studies, a key question remains: does taking or pro-activeness lead to greater opportunities resulting in valuable relationships and social capital, or does pro-activeness lead to more risk? Maria et al.(2022) suggest that routines promote innovation by guiding and assembling the resources that are urgently needed to enhance proactive initiatives. Miles and Snow's typology (as cited in Gurkov, 2012; O'Regan & Ghobadian, 2006a, 2006b; Zinn et al., 2008) has relevant implications for managers/organisations depending on the strategic orientation adopted (prospector, defender, analyser, and reactor). A firm orientation adopted may influence) aspects of management such as technological position, design of the organisation, performance of the organisation and human resource management approaches taken (Maria et al., 2022).

A study by Zinn et al. (2008) on “strategic orientation and nursing home responses to public reporting of quality measures: an application of miles and Snow typology” in New York and

California revealed that about 43% of surveyed administrators self-typed as defenders, 33% as analysers and 19% as prospectors. The reactor orientation had the lowest response of 6.6%. Results of the regression models indicate differences in response to quality measure publication by strategic type. The study revealed that prospectors and analysers were likely to report while reactors were less likely to respond than defenders. In the study; *“while 37% of the sample took action immediately after the initial publication of the quality measures, almost 30% took no action at all. The actions most frequently undertaken were the investigation of reasons for poor scores (63%) and the focusing of existing quality assurance and quality improvement programmes to address poor quality scores (42%). For many facilities, these programmes are the mechanisms for instituting change. In general, more conservative response to quality measure publication were chosen over the ore consequential.”*

Results of the study (Zinn et al., 2008) further show that prospectors are more likely to be for profit and chain affiliated and to perceive competition in their local market. Comparatively, defenders were 62% more likely to take no action. Poorer initial quality and higher perceived competition are associated with significantly reduced likelihood of no action. Of interest, there was no significance for the prospector. Defenders were likely to report more than prospectors. Relative to defenders, prospectors and analysers were more likely to investigate the reasons for poor scores. On the other hand, prospector status increased the likelihood by 59%, and analyser status made investigation 54% more likely.

Regarding action to revise job description in response to quality measure publication, prospectors are twice likely to make revisions when compared with defenders. Prospectors were also twice likely and analysers 67% more likely to change priorities of existing quality programmes when compared with defenders. Overall, the study establishes that strategic orientation of nursing homes is an important determinant pf whether, when, and how they react to an environmental shock. Aragón-Sánchez and Sánchez-Marín (2005) agree with the findings. They argue that SMEs implementing flexible practices are seen to be among those that follow a prospector rather than a defender orientation. They also argue that SMEs following a prospector strategy put greater emphasis on developing a system of human resource management, a view that was highlighted in Anwar et al., (2021; Gnjidić (2014)

It is also noted that whereas Miles and Snow(1978) viewed the three strategies (prospector, defender and analyser) as distinct, studies (Zinn et al., 2008) report that analysers are more

similar to prospectors they are to defenders. Studies show that in SMEs experience of crises increases the likelihood of regularly adopting proactive but with no formalised anticipation actions which in a way decreases the likelihood of adopting a purely reactive strategy to crises (Marcazzan et al., 2022). The study by Marcazzan et al. (2022) suggests that entrepreneurial resilience is non-linearly associated with strategies for anticipation during a crisis. This also suggests that a strong orientation towards formalisation in strategic planning does not necessarily correspond with higher levels of resilience. This might be due to differences in the perceived value of planning and the perceived value of averting disruptions (Zinn et al., 2008).

Another study by Asare-Kyire et al. (2023) on “entrepreneurial orientation and organisational resilience: role of organisational reconfiguration and absorptive capacity” among SMEs in Ghana revealed that entrepreneurial orientation dimensions (innovation, risk-taking and proactiveness) have a significant and positive impact of organisational resilience among SMEs in Ghana. The findings of this study indicate that the more entrepreneurial SMEs are, the greater the chances of being able to proactively seek new opportunities while at the same time mitigating against disruptions. These results were confirmed by the outcome of hypothesis testing that shows the direct effect of entrepreneurial orientation is confirmed by R^2 value of 0.568, thus confirming the hypothesis that the dimensions of entrepreneurial orientation are significantly related to SME resilience. These findings are similar to those of O'Regan and Ghobadian (2006) whose study established that the type of orientation an SME takes is associated with the type of environment. The study revealed that prospectors tend to perceive their environment as dynamic while defenders perceive it as stable. The type of orientation equally affects the strategy, culture, and leadership adopted by the organisation. Prospectors appear to perform better than defenders. SMEs are likely to be prospectors compared to firms that employ more than 100 people.

O'Regan and Ghobadian (2006) demystify the assertion that the Miles and Snow strategy typology (orientation) is not applicable to SMEs. The study confirms the applicability of the Miles and Snow typology (orientation) that has been neglected by previous studies. Similar to previous studies (Anwar et al., 2021; Desarbo et al., 2005; Ingram et al., 2016; Tan et al., 2019), the study by (O'Regan & Ghobadian, 2006b) which established that 47.4%, 44.4 %, 5.2%, and 2.6% were prospectors, defenders, analysers and reactors respectively. Interestingly, the analysis of the study claims that there is no “middle ground” in the sectors where the study was conducted. A key highlight of the study is that as firm size increases, the

number of organisations that claim to be prospectors declines, and firms transit from prospecting to adopting a defensive strategy orientation (a shift in orientation to defending market position). Overall, prospectors tend to post greater achievement of performance indicators compared with analysers. This is an area of interest since the percentage of SMEs that were classified as analysers was low.

Another study by Handoyo et al. (2023) on “firm characteristics, business environment, strategic orientation, and performance” on Indonesian SMEs, revealed that small and medium enterprises (SMEs) preferred to adopt proactive orientation, prospector, and analyser. The orientation taken by an SME positively influences their performance, with prospectors and analyser posting better performance than defenders. This finding contradicts the findings of O'Regan and Ghobadian (2006) whose study revealed that prospectors and defenders perform better than analysers and reactors. Their study also found that prospectors tend to perceive their environment as dynamic whereas defenders assume a stable environment. Each orientation appears to bear differences in relation to leadership, culture, and performance outcomes.

It is not clear, whether differences in findings were a result of the variables and setting of the study selected. Nevertheless, there appears to be a common thread that industry environment/type significantly affects the strategic orientation that SMEs adopt. The study by Yanes-Estévez et al. (2018) on the strategic behaviour of SMEs in the Canary Islands highlight that SMEs pursued a prospector approach to technological problems while the same SMEs pursued defender approach to administrative issues. The study showed that there were no SMEs with pure defender or prospector behaviours. Further, the study revealed that SMEs do not follow any comprehensive framework to develop their strategies. It is important to note that these results show that SMEs develop and follow behaviour that responds to strategies that are deliberate and adjusted to times of uncertainty. Thus, the strategic behaviour SMEs develop has a significant bearing on the dynamics of their adaptive capacity.

From the findings of O'Regan and Ghobadian, (2006) and Yanes-Estévez et al. (2018) it seems that it is unrealistic to categorise organisations as pure types (defender or prospectors). (Boyne & Walker, 2004). What is generally acceptable however is the view that as proposed by Miles and Snow, managers develop enduring strategic behaviour that seeks to align an organisation to its environment. This behaviour can change depending on the nature of disruptions and the orientation of the manager. Therefore, as argued, strategies are not like

“species” of animals since they can be combined or integrated. The mere fact that strategies constitute stances and actions is sufficient justification that strategic orientation cannot be put on a single list of conceptual classifications (Boyne & Walker, 2004). The owner’s/manager’s, culture and strategy, as well as the environment, have a significant bearing on orientation and on behaviour/responses during disruptive events.

With regard to the effect of strategic orientation on predicting resilience, the findings of this study confirm that strategic orientation (prospector and analyser) has an impact on organisational resilience. These results are consistent with the view that the Miles and Snow (1978) typology has had widespread effect on organisational management. Studies (Shortell & Zajac, 1990, Aragón-Sánchez & Sánchez-Marín, 2005b) have been conducted to empirically verify this model (Miles and Snow typology). The model has been found to be accepted within the realms of the academia and internally consistent. Its strength lies in the three premises that it proposes: 1) successful firms align their processes with the environment (responding to the adaptive cycle), 2) prospector (organisations that continue to search for new opportunities), defender (firms that focus on a narrow range of products, mostly in stable environments trying to protect their market share), analyser (firms that act defensively or prospectively depending on how they perceive the environment) and reactor (inconsistent because of inability to develop mechanisms to understand environmental changes) orientation can be identified in every industry and, 3) three orientations (prospector, defender and analyser may lead to performance while reactors are not able to lead to performance because of an inconsistent approach to environmental changes and lack of mechanisms to make sense of environmental changes. Dvir et al. (1993) state that analysers are more careful in their approach, they act only after a careful analysis of possibilities and watching the steps of early adapters. Generally, prospectors are more progressive than the rest of the typologies (orientations). Of interest is the question “how much should business invest in monitoring and adapting their technological innovation?” raised by Dvir et al. (1993). This question has a resilience orientation to it. Put the other way, does investing in monitoring initiatives result in gaining knowledge about the environment and the organisation’s resilience? They argue that the impact of the strategic decision depends on the orientation (strategy) taken. The results obtained in this study on strategic orientation are in line with theoretical models (Anwar et al., 2021; Gnjidić, 2014; Tan et al., 2019) and research studies that were conducted by other scholars (Aragón-Sánchez & Sánchez-Marín, 2005c; Dvir et al., 1993; Nguyen et al., 2022; Ogbari & Amahian, 2018).

The findings indicate that strategic orientation, particularly the prospector and analyzer types, positively influences organisational resilience. This suggests that organisations with these orientations are better equipped to adapt to challenges, making them key constructs in the model. Furthermore, absorptive capacity serves as a crucial mediator in the relationship between resilience and performance optimization, as it enhances the ability of organisations to leverage resilience for improved outcomes. By employing statistical methods such as regression analysis or Structural Equation Modeling (SEM), the direct and indirect effects of these constructs were quantified, demonstrating their significance. Grounding these findings in established literature, such as the Miles and Snow typology, dynamic capabilities and panarchy theories further reinforced the validity of the identified constructs and their interactions within the resilience model.

6.3 DISCUSSION OF THE VALIDATED MULTI-DIMENSIONAL (INTEGRATIVE) RESILIENCE MODEL

In Chapter one, the study highlighted the need for a multi-dimensional resilience model due to uncertainty and high mortality rate of SMEs in Eswatini as reported by other studies and government documents (FinScope, 2017; Hlatshwako, 2012; International Trade Centre, 2022). Internationally, effort has been made to develop resilience models that can help organisations to respond and withstand disruptive events (Ashraf & Abd Kadir, 2012; Dahlgaard et al., 2003; Duchek, 2020a; Duchek et al., 2020; Rohrbeck, 2010; Rohrbeck & Kum, 2018b; Van et al., 2006). However, most resilience models were developed in the context of large western organisations, with little application for SMEs. In Eswatini, the development of the 2018 (Eswatini MCIT, 2018), SME policy was a deliberate effort by the government to develop targeted interventions to address the significant challenges faced by SMEs. Despite the development of new resilience models for large organisations, there is limited evidence to suggest that these are applicable to SMEs. Locally, the SME mortality rate is still high. The gaps highlighted in existing models and the lack of a multi-dimensional model of resilience in Eswatini necessitated the design, testing, and validation of a resilience model for SMEs in the Manzini region, Eswatini. The integrated model of resilience has four variables to it (organisational resilience, strategic foresight, absorptive capacity and performance optimisation). Organisational resilience was conceptualised into three dimensions (detectability, coping, adaptation), foresight was conceptualised as two dimensions (discovery and planning), absorptive capacity into three (knowledge recognition, assimilation, and application) while performance optimisation was conceptualised into five

dimensions (customers, innovation, finance, productivity, and efficiency). In terms of ranking of the independent variables, if Cronbach's alpha were considered from highest to the lowest, each variable would rank: first, absorptive capacity (0.707), organisational resilience (0.684), strategic foresight (transformative resilience) (0.637) and strategic orientation (0.576).

Analysis and discussion of results revealed that detectability, coping, adaptation, discovery, planning, knowledge recognition, assimilation, and application were significantly related to the performance optimisation of SMEs in the Manzini region, Eswatini. Looking broadly, all the variables in the model indicated a significant and positive relationship with the performance optimisation of SMEs in the Manzini region, Eswatini. The study also revealed that the dimensions of strategic orientation (prospector and analyser) were significantly related to resilience, a view that the two dimensions of the Miles and Snow typology (orientation predict the resilience of SMEs in the Manzini region of Eswatini. This was not surprising because, for most, research results have indicated that reactors are associated with failure while defenders tend to thrive in stable settings. This explains why their factor loadings were very low, and thus did not qualify for inclusion in the model.

A key contribution of this study is the realisation that knowledge is not acquired for its own sake, but rather for use to generate value for commercial purposes. It was interesting to note that the variables in the resilience model complement each other to optimise the performance of SMEs in the Manzini region. This view reinforces the study's stance for using dimensions such as detectability (sense-making), coping, adaptation, knowledge recognition, assimilation, applying, planning, and discovery, to measure their impact on performance optimisation. In the face of economic challenges that the world and Eswatini, in particular, is experiencing, building firm-level resilience requires support at policy and organisational levels.

Another noticeable contribution of this study is the recognition of the significant role played by enhancing operational efficiency since the analyser orientation in SMEs helps to streamline operations, identify inefficiencies and improve productivity.

The study established that the z-value for organisational resilience performance optimisation relationship was -3.697. Negative z-values in the regression coefficients in SEM indicate that the corresponding coefficients are statistically significant and have a negative effect on the outcome variable. Since the estimate of the regression coefficient for the organisational resilience performance optimisation relation is -0.787. This confirms the fact that although

estimates in regression coefficients represent the magnitude of the relationship between predictor and outcome variables, a negative estimate indicate that an increase in the predictor variable (organisational resilience) results in a decrease in performance optimisation while controlling for other variables in the model. The inverse relationship between resilience in small and medium-sized enterprises (SMEs) and performance optimisation can be attributed to several factors. First, the issue of inadequate resources. Like any other organisations, SMEs that prioritise resilience may allocate resources towards risk mitigation, contingency planning, and building resilience in their operations. These efforts may divert resources away from activities directly focused on performance optimisation. Secondly, resilience strategies often involve trade-offs between short-term performance gains and long-term stability. For example, investing in redundant systems or backup suppliers may increase costs in the short term but provide protection against disruptions in the long term. Thirdly, SMEs that tend to prioritise resilience may adopt a more cautious approach to decision-making, focusing on risk avoidance rather than pursuing aggressive growth strategies. A risk aversion strategy/approach may limit the potential for performance optimisation since it stifles creativity and innovation. The other important factor that may account for the inverse relationship is factors external to the organisation. External factors, such as new regulatory framework or changes in market structure, can influence the relationship between resilience and performance optimisation. For instance, investing in sustainability has become a norm. This may impact short-term performance optimisation.

Whereas extant literature has reported the relationship between resilience and performance, studies have not focused on integrating strategic foresight in the relationship between resilience, absorptive capacity and performance optimisation. Strategic foresight involves scanning the external environment and identifying potential challenges and opportunities. By considering various scenarios and trends, organisations can better anticipate disruptions and build resilience. This proactive approach may help SMEs to prepare for potential risks and uncertainties that may impact performance optimisation. Secondly, since resilience is focused on adapting to change and bouncing back after disruptions, strategic foresight come in handy to identify changes and shifts in the environment that require changes to internal operations. If SMEs are aware of changes in advance, they can pro-actively develop absorptive capacity (recognise the value of external knowledge, assimilate and apply it). As such, absorptive capacity allows organisations to effectively respond to changes and develop relevant coping mechanisms to optimise performance.

Further, by using the Miles and Snow strategy typologies, this study contributes knowledge to understanding how SMEs can build resilience. Since resilience focuses on developing capabilities to recover from disruptions, the Miles and Snow typology provides a framework for how SMEs can respond to environmental changes. Categorising SMEs based on their strategic orientation (prospectors, defenders, analysers, and reactors) allow for targeted interventions. By assessing the strategy orientation of SMEs using the Miles and Snow typology, practitioners and researchers can gain relevant insights regarding each orientation's propensity to adapt, innovate and respond to disruptions. Aware of this information, policymakers and SMEs can develop policies and programmes to support SMEs and enhance their resilience. It is important for researchers and practitioners to know that the relationship between resilience and strategic orientation is complex. As demonstrated by the discussion in this study, strategic orientations are sometimes transient. There might not be permanency in an organisation's strategic orientation, and therefore, the environment, strategy, organisational resources, culture, and leadership of an organisation play a significant role in the type of orientation to pursue or influencing a change in strategic orientation. In view of the discussions above, Figure 6.1 presents the new validated multi-dimensional Resilience Model with variables and links showing their interaction.

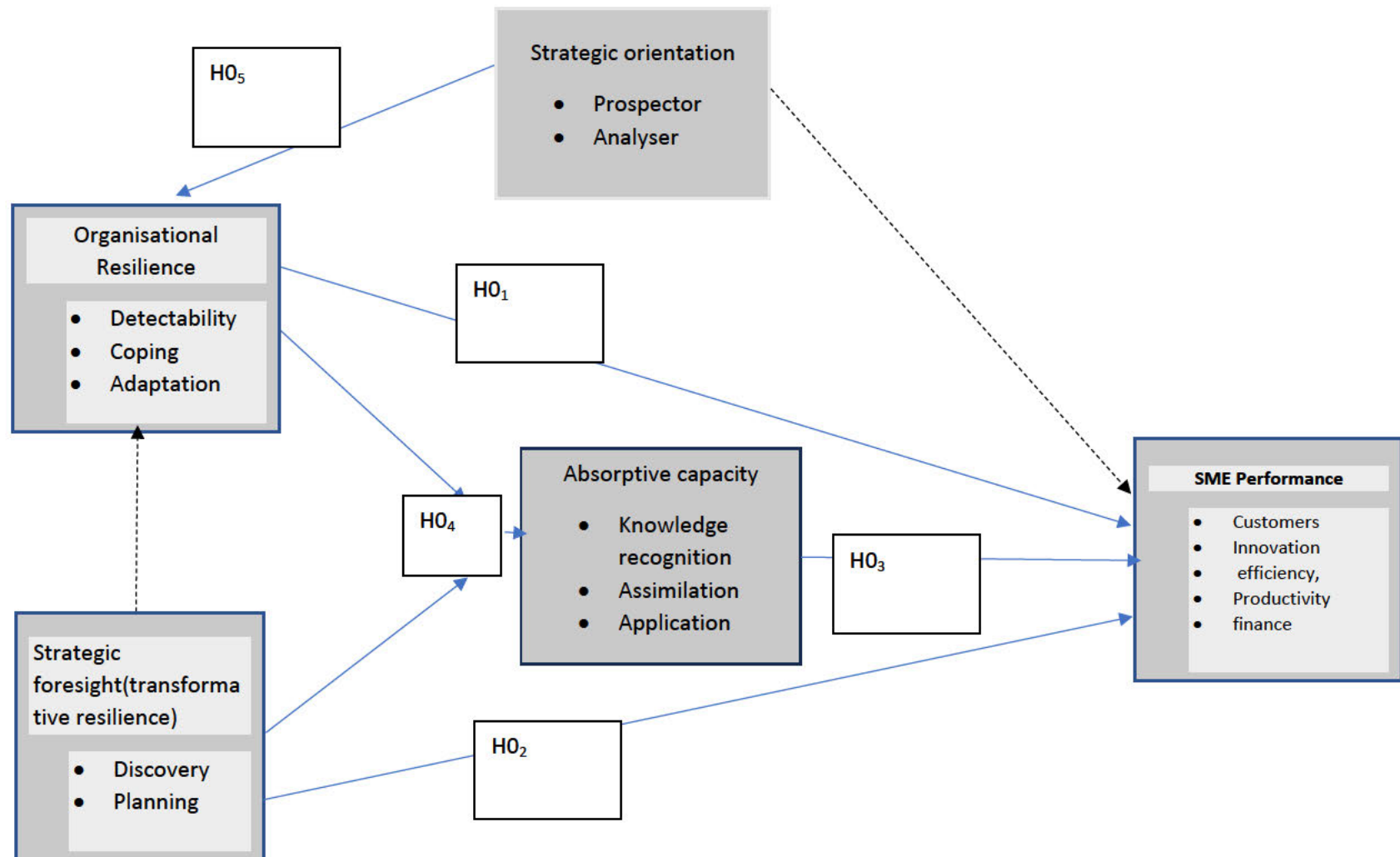


Figure 6.1: Validated Resilience Model

6.4 CHAPTER SUMMARY

This chapter presented a discussion of findings relative to existing studies. The findings of the study revealed that there is a significant inverse relationship between organisational resilience and performance optimisation. The inverse relationship could have been caused by limited resources or adaptive capacity which hinder their ability to invest in resilience-building strategies/processes. Lack of resilience within systems/processes can affect performance optimisation. Lack of resiliency within SMEs may cause more vulnerability because of inability to effectively adapt and respond to unexpected events. The study further revealed that there is an indirect positive relationship between resilience and performance optimisation as mediated by absorptive capacity. Strategic foresight (transformative resilience) measured by two observed variables (discovery and planning were found to have a significant positive relationship with performance optimisation). The quantitative study also revealed that strategic orientation measured by prospector and analyser orientations predicts the resilience of SMEs in Manzini Eswatini. overall, the study established that resilience significantly impacts the performance optimisation of SMEs in the Manzini, region, Eswatini. The implications of these findings are that by developing proactive approaches to resilience, SMEs can enhance their ability to adapt, anticipate, and respond to uncertainty, therefore leading to improved performance. It is also important to note that resilience is a crucial factor for the survival and resumption of operations after experiencing a disruption. By optimising resilience, SMEs can increase their chances of managing and overcoming uncertainty and ensure that they bounce back better. A validated multi-dimensional resilience model may help SMEs to develop the ability to adapt quickly to changing market factors. This is because SMEs can identify and manage risk because of their ability to anticipate potential risks and take proactive measures.

CHAPTER 7: CONCLUSIONS

“If we knew what we were doing, it would not be called research, would it?” Albert Einstein (1879-1955).

7.1 INTRODUCTION

The aim of this chapter is to present the study’s conclusions and elaborate not only how this study has met its objectives, but also contributed to the body of existing knowledge on SME resilience. The main subsections of this chapter are: summary of the study, which mainly delves into the objectives of the study, research process, key results and conclusions. The ultimate purpose of this subsection is to determine the extent to which research objectives were met. The other important section focuses on the recommendations drawn from the analysis and discussion of the study. The section also discusses the value of the study. The implication of the study is equally presented. The last two sections reflect on the limitations of the study, and a conclusion to the entire study is made. The chapter presents sections which illuminate the purpose of the study, study process, outcomes and impact of the study.

7.2 SUMMARY OF THE QUANTITATIVE STUDY

Recognising the crucial contribution of SMEs towards Eswatini’s growth, poverty alleviation and job creation, the government of Eswatini has ensured that considerable effort is devoted towards supporting the SME sector. The Small Enterprises Development Company (SEDCO) and the Micro, Small and Medium Enterprises unit under the Ministry of Commerce, Industry and Trade were established to support SMEs (Enterprise Policy of Eswatini 2018). Comparatively, the Eswatini MSME sector is the smallest in the Southern African region. Although the sector is small, it has potential to contribute 65 percent employment of the total workforce and national output of 50 percent if more support is provided to boost their resilience (Eswatini Diagnostic Making Access Possible SME, Centre for Financial Inclusion, 2018). Despite the above outlook, SME failure rate in Eswatini remains high, with an average of about 50% of low impact and 30% high impact SMEs facing closure (International Trade Centre, 2022). As a result, the primary purpose of the study was to determine the strategic impact of resilience on performance optimisation of small and medium enterprises in Manzini region, Eswatini. Five main objectives guided the discourse of the study:

- a) To examine the strategic impact of resilience on performance optimisation in SMEs in the Manzini region, Eswatini.

- b) To assess the strategic impact of strategic foresight (transformational resilience) on performance optimisation of SMEs in the Manzini region, Eswatini.
- c) To evaluate the strategic impact of absorptive capacity on performance optimisation of SMEs in the Manzini region, Eswatini.
- d) To investigate the mediating impact of absorptive capacity in the relationship between organisational resilience and performance optimisation of SMEs in the Manzini region, Eswatini.
- e) To determine whether the strategic orientation of SMEs can predict their resilience in the Manzini region, Eswatini.

Literature on the history and nature of resilience, strategic foresight (transformative resilience), absorptive capacity, and performance optimisation was reviewed. The review provided a theoretical foundation for the study and critical information relevant to the design of a conceptual model purposely to bridge the knowledge gap identified in previous resilience models. The study employed positivism with a cross-sectional research design.

The study adopted a positivistic paradigm, which upholds the view that objective reality exists. The quantitative study adopted realism as its ontological stance in examining the strategic impact of resilience on performance optimisation of small and medium enterprises in Manzini region. In this study, the target population was all owner-managers of Small and Medium Enterprises. SMEs under the support of Small Enterprises Development Company (SEDCO) and SMEs under the support of Youth Fund in Manzini region, Eswatini. This study focused on SMEs which had existed for three years or more. A 3-year period was considered as sufficient to observe the impact of adversity on SMEs and their subsequent recovery process. The criteria for inclusion and exclusion were also based on what Small Enterprises Company (SEDCO) and Youth Fund have adopted to support SMEs. Youth Fund and SEDCO use a three-year window to determine an SME's survival and ability to transition to another business category. The target population in this study was 294 SMEs and census was used in this study as the number of qualifying SMEs was small. Data was collected using a self-administered questionnaire from the owner-managers of the SMEs.

To ensure that the designed data collection captures what it was supposed to collect, two forms of pilot tests were carried out. The first was feedback from the supervisor regarding the data collection tool. Feedback on the tool from the supervisor was incorporated into the tool for the clarity of questions as well as their validity. The second phase of the pilot study

involved collecting data from non-participating respondents (owners/managers) of SMEs). Corrections were made regarding the clarity of questions. From an initial nine statements per observed variable, statements were reduced to seven per observed variable. This was because completing the questionnaire took longer than 15 minutes. Post-pilot, the study then computed Cronbach's alpha coefficients to test for reliability. Confirmatory factor analysis (CFA) was computed to determine the validity of the data. The study also determined the fit indices for each variable. Fit indices in Structural Equation Modeling (SEM) provide a quantitative assessment of how well the model fits the observed data. Fit indices enabled the researcher to evaluate the model's overall goodness and determine whether the model adequately represents the relationship among variables of interest. Hypotheses were tested using Pearson's correlation and structural equation modelling.

The results of the quantitative study on hypothesis 1, H_{01} : there is no significant relationship between resilience and performance optimisation of SMEs in the Manzini region of Eswatini revealed that there is a significant relationship between resilience and performance optimisation of small and medium enterprises (SMEs) in the Manzini region. The regression coefficient estimate for the impact of resilience on performance optimisation was -0.787. This means that there is an inverse relationship between resilience and performance optimisation. The dimensions of organisational resilience (OR) were detectability, coping, and adaptation. A test of statistics for the three sub-hypotheses of resilience revealed a significant relationship between each and performance optimisation of SMEs in the Manzini region of Eswatini.

The second statistical hypothesis was stated as, H_{02} : Strategic foresight (transformational resilience) does not significantly impact performance optimisation of SMEs in the Manzini region, Eswatini. Strategic foresight was measured using two observed variables: discovery and planning. The test of statistics revealed that there is a significant positive relationship between strategic foresight (transformative resilience) and performance optimisation of SMEs in the Manzini region, Eswatini. The statistical hypothesis was therefore not confirmed, and the alternative was accepted. Further analysis of results show that discovery and planning were significantly related to performance optimisation.

The third statistical hypothesis states that, H_{03} : There is no significant impact of absorptive capacity on performance optimisation of SMEs in the Manzini region, Eswatini. The variable absorptive capacity was measured using three dimensions: knowledge recognition,

assimilation and application (applying). Results of the statistical hypothesis test on absorptive capacity revealed a positive and significant relationship between absorptive capacity and performance optimisation of SMEs in the Manzini region. The test of hypotheses of the three dimensions of absorptive capacity revealed a significant relationship between each and the performance optimisation of SMEs. The implications of these findings are that a positive significant relationship between absorptive capacity and its dimensions suggests that SMEs with higher absorptive capacity are more likely to perform better. With its ability to recognise, assimilate and apply knowledge, SMEs can utilise and integrate new knowledge to enhance performance and competitiveness.

The fourth statistical hypothesis was stated as Ho₄: Absorptive capacity does not mediate the relationship between resilience and performance optimisation of SMEs in the Manzini region, Eswatini. Testing this hypothesis revealed a positive indirect impact of absorptive capacity in the relationship between resilience and performance optimisation of SMEs in the Manzini region, Eswatini.

The final hypothesis, Ho₅: Strategic orientation does not predict the resilience capacity of SMEs in the Manzini region, Eswatini revealed a positive and significant relationship between strategic orientation and resilience of SMEs. The dimension strategic orientation was measured using two observed variables: prospector and analyser. Defender and reactor were dropped due to very low factor loadings. Results of the test of statistics of the sub-hypotheses (prospector and analyser) revealed a positive significant relationship between each dimension and resilience of SMEs. It is evident enough to suggest that, the five objectives and five hypotheses were met.

7.3 IMPLICATIONS OF THE STUDY

This quantitative study delved into the intriguing relationship between resilience and performance optimisation in SMEs in the Manzini region, Eswatini and explored the mediating role of absorptive capacity. Additionally, the study examined the impact of strategic foresight (transformative resilience) and strategic orientation on the resilience-performance optimisation link. The results of this quantitative study have significant implications that extend beyond the study's immediate scope. Therefore, this section aims to highlight the implications of the findings in various areas, including policy, research, management, practice, education and social change. Examining the implications of the study to gain a deeper understanding and appreciation of how the findings are translated into

actions that translate to the advancement of SMEs as agents for economic transformation through enhancing the optimisation of their performance was vital.

7.3.1 Implications for policy

The results of the study suggest that policy-makers should consider initiatives which are aimed at promoting resilience in SMEs. Such cardinal initiatives may focus on providing the necessary resources that SMEs urgently need to enhance their resilience. Targeted initiatives could include providing access to finance, networking opportunities and training programmes. The significant role of networks cannot be amplified more than Japanese business network system. Hundley (2001) argues that the Japanese Keiretsu (network) offers preferential trading relationships among members and provides cushion to members during disruptions. To foster SME growth, policy-makers should establish dedicated platforms or forums where SMEs can connect with each other, industry associations, and government representatives. These platforms can facilitate regular meetings, workshops, and events that encourage knowledge sharing and collaboration. For example, organising industry-specific conferences or regional trade fairs can provide opportunities for SMEs to showcase their products and services while networking with potential partners.

It is equally pertinent to develop policies that promote partnerships between SMEs and government agencies. This could involve creating joint initiatives that address common challenges, such as access to finance, technology adoption, or market expansion. Government agencies can offer support through grants, or access to research and development resources. Develop policies that incentivise SMEs to pool resources for shared services, such as joint marketing campaigns, bulk purchasing, or shared logistics. For example, offering a discounted rate for transporting goods by railway from South Africa or Mozambique could be highly attractive to SMEs. This initiative can help reduce transportation costs and increase operational efficiency, ultimately making SMEs more resilient in the face of economic challenges. These policy measures can help improve the overall performance and sustainability of SMEs.

7.3.2 Implications for Research

This quantitative study suggests areas for further research on resilience in SMEs, strategic foresight, absorptive capacity and strategic orientation. The relationships between these variables can allow researchers to uncover underlying mechanisms and dynamics. Future research could explore how the impact of resilience dimensions varies across different

contexts such as industry sectors, geographical locations, or cultural environments. Understanding these contextual factors can help tailor resilience strategies to specific settings, enhancing their effectiveness in optimizing performance for SMEs. Each industry and geographical location presents unique challenges and opportunities. For instance, SMEs in rural areas may face different market dynamics and resource constraints compared to those in urban settings. By examining these variations, future research can identify specific resilience dimensions that are particularly relevant to certain contexts, helping SMEs navigate their unique challenges more effectively.

It would be beneficial to conduct longitudinal studies that track SMEs over time to better understand how resilience develops and evolves. This could include examining the stages of resilience building and their influence on performance optimization across different life cycles of SMEs, providing insights into when and how resilience strategies should be implemented. Longitudinal studies allow researchers to observe how resilience develops and evolves within SMEs across different stages of their life-cycle. This understanding is vital because resilience is not a static trait; it can change based on internal and external factors. By examining these trajectories, researchers can identify key moments when resilience is particularly critical, such as during crises or significant market changes. Such studies may significantly contribute to a better understanding of what influences the performance and success of SMEs and inform evidence-based practice.

7.3.3 Implications for Management

The study collected data from owners/managers of SMEs. As such, the findings of this study have practical implications for managers and owners of SMEs. The results of the quantitative study suggest that SMEs/managers/owners should prioritise building resilience. This may involve developing strategies and tactics to foster a resilient culture in systems and processes, investing in developing knowledge acquisition and use capabilities, as well as enhancing employees' ability to adapt to change or respond to or before the occurrence of disruptive events. Building resilience and acquiring knowledge acquisition application capabilities may enhance the performance and long-term sustainable growth of SMEs.

7.3.4 Implications for Practice

The results of the study show that external stakeholders such as SEDCO, Youth Fund, Business Coaches or external consultants working with SMEs directly or sourced by government to assist SMEs need to emphasise the importance of resilience in the

management of SMEs. Since the study recognises the significance of detectability, coping, adaptation, discovery, planning, knowledge recognition, assimilation, and the orientation of owners/managers on performance optimisation emphasising the creation of mechanisms for developing these capabilities could help SMEs to achieve their goals.

To enhance the resilience of SMEs in the Manzini region of Eswatini, SEDCO, the Department of Micro, Small and Medium Enterprises at the Ministry Commerce, Trade and Industry and Youth Enterprises Fund can organise workshops on building enterprise resilience to optimize performance. These workshops can focus on empowering SME owners/manager with skills to anticipate future trends and challenges in their organisations/industries. Participants can learn techniques for scenario planning, market analysis, and risk assessment, enabling them to make informed decisions that enhance their resilience against unforeseen events. Further, training in innovation management, knowledge sharing, and collaboration techniques, encouraging SMEs to leverage external information and resources can improve their performance. As technology plays a crucial role in enhancing resilience, training initiatives that focus on digital skills and the adoption of relevant technologies can be beneficial. This could include workshops on using digital tools for marketing, customer relationship management, and operational efficiency. The ultimate purpose of encouraging the development of these capabilities is to help SMEs respond to disruptive events and adapt to changing market conditions.

7.3.5 Implications for Education

To boost and promote a culture of entrepreneurship, most universities worldwide have embedded entrepreneurship training in their programmes. However, it is yet to be established how such initiatives have been successful in boosting a culture of entrepreneurship in Eswatini. Nevertheless, the findings of this study can influence practice in education by re-focusing and emphasising the need to incorporate resilience-building skills and strategic foresight training in entrepreneurship and other commerce or business-related programmes. Curriculum design should focus on producing graduates with courses that equip future entrepreneurs with relevant knowledge to understand the environment, learn from it, and prepare the organisation to deal with disruptive events.

7.3.6 Implications for Social Change

Studies have indicated that most small and medium enterprises are poverty driven and as such, employ a sizeable number of people without jobs or people looking for means of

survival. Failure of SMEs has serious ramifications on people's livelihoods. Therefore, the findings of this study suggest that fostering resilience can broaden societal benefits. Since SMEs employ many people, supporting SMEs to promote resilience can promote social economic benefits such as economic growth, job creation, and local development. Armed with the knowledge of resilience, transformative resilience, absorptive capacity and strategic orientation, SMEs can anticipate and respond to societal challenges, thus contributing to overall resilience and sustainability.

7.4 RECOMMENDATIONS

The findings of this study provided an opportunity to make recommendations as presented below:

7.4.1 Recommendation one

This study recommends that owners/managers of SMEs adopt the dimensions of organisational resilience (detectability, coping and adaptation) into their operations to optimise their performance. Since the study results reported a significant negative relationship between organisational resilience and performance optimisation, SMEs should balance pursuing resiliency and maintaining market presence. The need for a balanced approach to resource deployment to ensure resilience should not compromise the pursuit of market positioning or product development strategies. Long-term sustainability should be aligned with the immediate and current needs of the SME.

7.4.2 Recommendation two

The study recognises the significant role played by transformative resilience in optimising performance. Since the discovery and planning of the organisation's activities are central to success, SMEs should be able to translate the knowledge they acquire from external sources into actionable insights. The ability to anticipate and prepare for potential disruptions and challenges enhances an SME's ability to proactively respond to disruptions or recover from them after a disruption. Embedding foresight into their operations, SMEs will be able to navigate uncertainties and optimise their performance.

7.4.3 Recommendation three

Absorptive capacity focuses on the organisation's ability to recognise external knowledge, assimilate and use it commercially. The study recommends that by absorbing external knowledge, SMEs can tap into external knowledge of market trends, changes in demand,

technological changes as well as any exogenous threats that could disrupt performance. Armed with external knowledge, SMEs can remain on top of latest developments and leverage external knowledge to enhance their operations and competitiveness. If SMEs can acquire external knowledge, they can use such ideas to develop new innovative products and services to meet customer needs and remain competitive.

7.4.4 Recommendation four

Managers/owners of SMEs have an orientation. Their viewpoint affects the strategic initiatives and actions they take to respond to changes. The study recommends the adoption of strategic orientation in the strategic management of the SME. Strategic orientation helps SMEs to anticipate and adapt to changes in the business environment by being forward looking and being proactive at responding to external changes. SMEs can identify potential threats and opportunities, build resilient capabilities that may enhance their ability to respond to uncertainties and, maintain their performance in the face of difficulties. Strategic orientation enhances an SMEs renewal process/initiative. Renewal results from an SMEs ability to review and renew its strategies to ensure alignment between market changes and customer preferences.

7.5 CONTRIBUTION OF THE STUDY

The present study has contributed to the body of knowledge of SME resilience and performance by not only establishing that there is a significant relationship between resilience and performance optimisation, strategic foresight (transformative resilience) and performance optimisation, strategic orientation and resilience, and absorptive capacity mediating in the relationship between resilience and performance optimisation. More importantly, the study contributes an integrative framework of SME resilience which is helpful to future researchers, entrepreneurs and policy makers:

7.5.1 Resilience and performance optimisation

The quantitative study highlights the importance of resilience in optimising the performance of SMEs. The study suggests that higher levels of resilience are related with higher performance optimisation. This finding is important because it emphasises the need for SMEs to develop capabilities that enhance their resilience capacity, but also offer them an opportunity to navigate challenges that might affect their ability to achieve optimal performance. In this regard, this finding is helpful to policy makers and business

development practitioners who should pay critical attention to building the resilient capabilities of SMEs if they are to optimise performance.

7.5.2 Developing a multi-dimensional model

As limited research has developed a model of SME resilience, it is noteworthy that this study has made a significant contribution by developing a multi-dimensional model of resilience in the SME sector. The study, was able to capture the interplay between the variables and how such variables impact performance optimisation. A multi-dimensional approach to developing a resilience model contributes to a deeper understanding of the complex dynamics that influence performance optimisation. The study provides much-needed information and insights into how resilience, strategic foresight, absorptive capacity, and strategic orientation can interact and influence the performance of SMEs in the Manzini region of Eswatini and other similar contexts. Future researchers may also find the multi-dimensional model of resilience of SMEs insightful for more research to test the model in different contexts.

7.5.3 Strategic orientation in SMEs

As indicated in the discussions of the study, few studies have delved into matters of understanding the application of the Miles and Snows typologies in predicting the resilience of SMEs. Whereas most studies have focused on examining the effect of entrepreneurial orientation on performance of SMEs, this study contributes to the existing body of knowledge by using the Miles and Snow typology (orientation) to predict the resilience of SMEs. This is novel and adds further to the ongoing debate regarding the relevance of the Miles and Snow typology on organisational management. In fact, the study advances that although Miles and Snow typology is an old, the model provides the foundation for most resilience initiatives. Understanding the orientation of owners/managers of SMEs provides a foundation for other SME capabilities such as strategic foresight, absorptive capacity that enhance the optimisation of SMEs.

7.6 LIMITATIONS OF THE STUDY

The present study has the following key limitations;

One of the limitations of this study relates to sample size and generalisation. The study's findings may be limited in their generalisability because data was collected from 206 respondents, yet Eswatini and Manzini region have more than 206 SMEs. This could restrict the ability to generalise results to a broader setting.

Secondly, the study was restricted to SMEs that are under the support of Youth Fund and Small Enterprises Development Company. These SMEs have access to training, mentorship, and funding opportunities. It is therefore not clear whether the results could be the same if applied to a different set of SMEs that have not enjoyed such “privileges” (training, mentorship and funding opportunities inform of loans).

Thirdly, the study used a self-administered questionnaire (hard-copy and on-line on Google forms) for the quantitative study that adopted a cross-sectional design. One noticeable weakness of cross-sectional studies is that they provide a snapshot of data at a specific point in time and do not capture changes in trend. Using a questionnaire restricts the ability to examine the dynamic nature and relationships between variables. It is also important to note that questionnaires utilise self-reported data, which is subject to recall bias or deliberate inaccurate reporting (for sensitive data such as performance). The use of closed-ended questions may have limited the depth of information collected, hence omitting important aspects of the study.

7.7 SUGGESTIONS FOR FURTHER RESEARCH

The quantitative study identified two areas for further research. Firstly, the study focused on small and medium enterprises under the support of Small Enterprises Company (SEDCO). SMEs that participated in the current study have received training, mentor-ship and opportunities for funding. The developed resilience model was a by-product of data from SMEs that have been trained to develop entrepreneurship, unlike their counterparts who are outside this cohort. As a result, the developed model is limited in its explanatory power across various SME groups without funding, training and mentorship. The study suggests that future studies should focus on developing an all-encompassing resilient model, involving both categories of SMEs, those that have undergone training and have access to funding and those that have not. Such a model will incorporate the unique characteristics of the two categories of SMEs. In light of the above, future research should enhance the diversity of the sample to embrace a variety of SMEs and enhance the explanatory power of the model.

Secondly, the study was conducted post-COVID-19. It is, therefore, not clear whether evidence of resilience was a result of deliberate mechanisms to respond to disruptions after their occurrence as a result of the training that they were subjected to by the Youth Fund and SECO. To ensure its explanatory power, future studies should be longitudinal, and collect

time series data that might be useful for understanding response mechanisms and capabilities of SMEs during and after crises.

Lastly, strategic orientation was operationalised in the context of the Miles and Snow typology. As earlier stated, although the typology is old, it is still relevant today. Future researchers may conduct a study on strategic orientation of SMEs in Manzini to understand the influence of local culture and business practices on the strategic orientation of SMEs. This would help to understand the influence of local culture on a manager's/owner's strategic orientation and how such may influence their resilience, strategy and performance optimisation.

7.8 CONCLUSION OF THE STUDY

The quantitative study examined the strategic impact of resilience on performance optimisation of SMEs in the Manzini region of Eswatini. A key contribution of the study was developing a multi-dimensional model of resilience that explains the strategic impact of resilience on performance optimisation of SMEs in the Manzini region of Eswatini. The chapter presented the contribution of the study, limitations and suggested areas for further research. Integrating various variables and their dimensions to develop a resilience model was centripetal in explaining the concept of resilience in the context of SMEs in the Manzini region of Eswatini. Although the study developed a model for resilience to optimise the performance of SMEs in the Manzini region, it is equally important to note that such a model can be used by other organisations, especially with a focus on recognising the value of external knowledge, and using it for commercial purposes.

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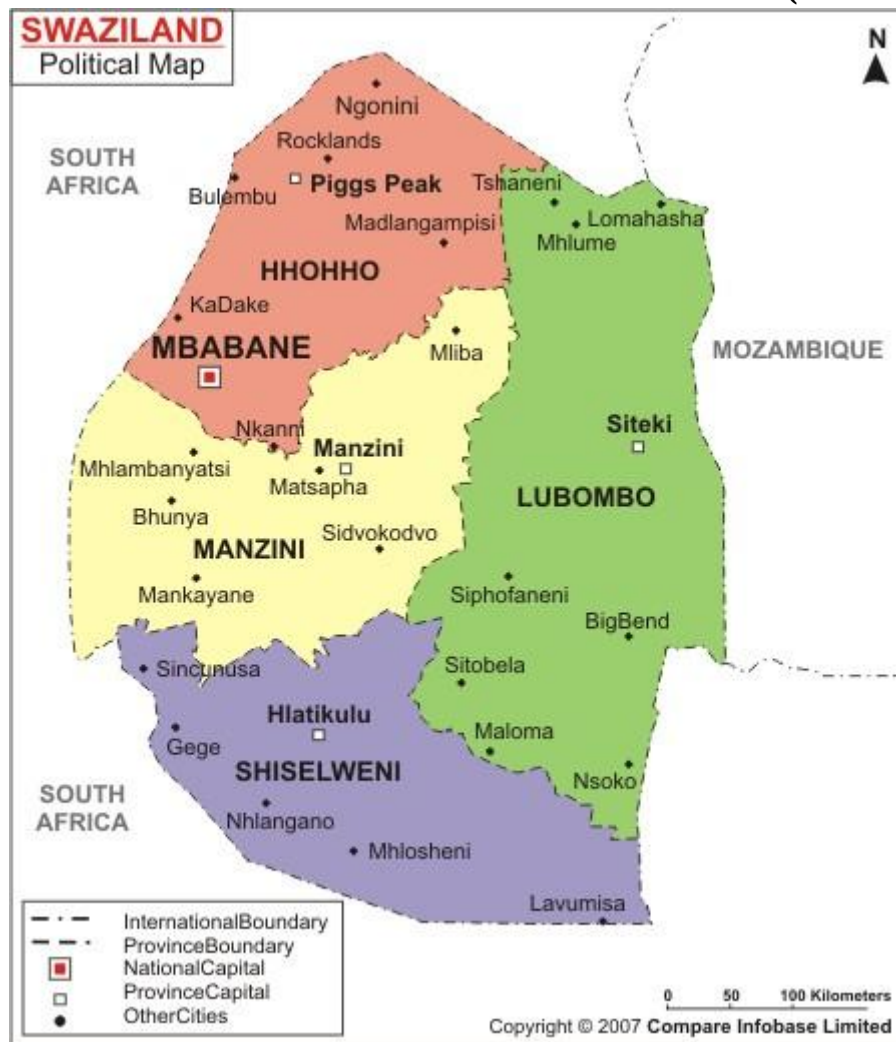
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APPENDIX I: LOCATION OF THE STUDY RESPONDENTS(MANZINI)



APPENDIX II: QUESTIONNAIRE

INSTRUCTIONS FOR FILLING IN THE TOOL

- a) Kindly answer all questions
- b) Tick your preferred option.

SECTION A: RESPONDENT'S PERSONAL INFORMATION

1. Gender (please tick where appropriate)

Male ☐	Female ☐

2. Age Group

Below ☐ 20	21-25 ☐	26-30 ☐	31-35 ☐	36-40 ☐	Above ☐ 40

3. Highest Education

Matric ☐	Certificate ☐	Diploma ☐	Degree ☐	Masters ☐	Others ☐

4. Role in the SME

Owner/Founder ☐	Manager ☐

5. No of years in that role

Less ☐ than 5	6-10 ☐	11-20 ☐	11 and ☐ above

6. For how long has your business been in operation?

Less ☐ than 5	6-10 ☐	11-20 ☐	11 and ☐ above

7. Is your SME involved in planning? Yes.....No.....(please tick your preferred answer)

SECTION B

Kindly tick your preferred response in the box (1-Strongly disagree, 2-Disagree, 3-not sure, 4-agree, 5-strongly agree) on resilience, strategic orientation, absorptive capacity and SME performance optimization.

i. Nature of the environment

SN	Statement	1	2	3	4	5
NR1	There are many players in the industry with similar characteristics (size, operations etc)					
NR2	Changes in technology and legal framework are rapid and					

	complex					
NR3	Our clients tend to look for new/innovative products and services					
NR4	Although small, the sector offers opportunities for growth					
NR5	Resources to start business are easily available and less costly to acquire					
NR6	Networks exist to tap opportunities					
NR7	Market opportunities remain untapped					

ii. Resilience

SN	Statement	1	2	3	4	5
	Detectability/Preparation					
RD1	Our company regularly monitors changes in economic conditions					
RD2	Our company has a recovery plan					
RD3	Our company makes sense of every change that we notice					
RD4	Our company redeploys resources to support organisational strategies					
RD5	In our organisation, we have established mutual relationships to deal with crises					
RD6	Our company is able to identify the existence of new ideas that can be translated into business opportunities					
RD7	Our company is able to identify and tap opportunities from supplier networks					
	Coping					
RC1	Our company reacts to the introduction of new products/services by competitors					
RC2	Our company responds to changes in consumer demands					
RC3	Our strategic decisions and actions are driven by the fear of the change					
RC4	Our company is flexible in allocation resources to respond to external changes					
RC5	We always renew our operations to ensure relevance					
RC6	We always consult our networks to understand and manage crises					
RC7	As an organisation, we have developed positive behaviour to deal with crises					
	Adaptation					
RA1	Our company frequently introduces new products to fit emerging customer needs					
RA2	Our company is always quick to adjust its operations to match current trends					
RA3	Our company is fast at adopting new marketing techniques					
RA4	As an organisation, we usually use lessons learned from a disruptions to make improvements to our operations/functions					
RA5	Our company is fast at adopting to new specifications and standards of products and services					
RA6	As an organisation, we constantly develop our organisational values, norms and practices to sustain our operations					
RA7	We always act on every knowledge we generate					

iii. Foresight (transformative resilience)

SN	Statement	1	2	3	4	5
	Discovery					
FD1	Through research and development, our company has been able					

	to established areas for future interest					
RFD2	Through our forecasts, future customer needs have been established					
RFD3	As an organisation, we know where our future operations and strategic emphasis will be					
RFD4	The use of ICTs is aimed at preparing the organisation for future operations					
RFD5	We constantly assess competitors' business model in readiness for future organisational changes					
RFD6	We constantly visualise the future of the industry					
RFD7	We raise attention to emerging opportunities					
	Planning					
RFP1	We have a strategic plan to guide our reaction to external and internal events					
RFP2	Our activities and actions are driven by our mission and vision					
RFP3	Our company objectives provide clarity of targets to be achieved					
RFP4	Our company has key performance indicators that act as basis for strategic planning					
RFP5	Our planning horizons stretches beyond a year					
RFP6	Our operations are linked to our future development plan					
RFP7	Our strategies and actions aim at exploiting future opportunities					

iv. Strategic orientation

SN	Statement	1	2	3	4	5
	Prospector					
SOP1	Our organisation's performance is driven by innovation					
SOP 2	Innovation is driven by careful planning					
SOP 3	Our growth is driven by product and market development					
SOP 4	We often change our product/service mix to meet customer needs					
SOP 5	We always ensure that our actions are consistent in order to deliver strategic value to our clients					
SOP 6	We always monitor changes in the market to inform decision making					
SOP 7	We create change in the market through what we do/products and services					
	Defender					
SOD1	Our company does not intend to introduce new products/services in the next three years					
SOD 2	We believe in building efficient systems to enhance our performance.					
SOD 3	We believe that success is driven by the ability to offer better prices to customers					
SOD 4	Quality is at the heart of what we do					
SOD 5	Our target market is narrow					
SOD 6	We focus on penetrating new markets to grow our business					
SOD 7	We are not easily distracted by changes in the market					
	Analyser					
SOA 1	Innovation is at the heart of what we do					
SOA2	We build efficient systems to sustain our performance					
SOA3	We are a quality driven organisation					
SOA4	We frequently change our product/service to meet our customer needs					
SOA5	We usually undertake risk analysis before making changes to					

	what we do					
SOA6	We engage in intensive planning to ensure that we do the right thing					
SOA7	We conduct performance appraisals					
	Reactor					
SOR1	We change our products/services because customers demand so					
SOR2	We take advantage of opportunities only if they appear to all					
SOR3	We rarely take up risky opportunities					
SOR4	We do not have a strategic plan in place					
SOR5	Our company responds to changes when we experience a crisis					
SOR6	We constantly supervise our staff to ensure productivity					
SOR7	Detailed workplans and routines exist for staff to follow					

v. Absorptive capacity

SN	Statement	1	2	3	4	5
	Knowledge recognition					
ACKR1	The organisation has the relevant infrastructure to gain new knowledge					
ACKR2	Organisational members are always willing to learn something new					
ACKR3	The organisation organizes knowledge into a set of relevant and usable ideas					
ACKR4	When new knowledge is acquired, it is transferred to other units of the organisation					
ACKR5	We have increased our ability to solve existing problems.					
ACKR6	Internal knowledge needs drive the need for new knowledge					
ACKR7	We have an established system for knowledge management					
	Assimilation					
ACAS1	The knowledge we acquire from the external environment is integrated into our processes					
ACAS2	New knowledge easily integrates with existing knowledge					
ACAS3	New knowledge is usually acceptable in our operations					
ACAS4	The management of the organisation evaluates every new idea received					
ACAS5	In our organisations, procedures/rules exist with regard to how knowledge is to be coordinated					
ACAS6	In our organisation, the coordination of professional initiatives and activities is managed through well-structured systems.					
ACAS7	In our organisations, we have established routines that facilitate knowledge integration					
	Applying					
ACAPP1	New knowledge is used to create new products/services					
ACAPP 2	New knowledge is used to adjust internal processes					
ACAPP 3	New knowledge drives innovation					
ACAPP 4	We have identified core areas where to apply learned ideas					
ACAPP 5	We are able to make informed decisions in this organisation					
ACAPP 6	Technology has enhanced the use of knowledge to innovate					
ACAPP 7	We have established mechanisms to protect our innovation					

vi. Performance optimization

SN	Statement	1	2	3	4	5
	Customers					
PERC1	We pride ourselves in delivering customer value					
PERC 2	We have been able to attract new customers to our business					
PERC 3	Our sales to existing customers have increased					
PERC 4	Our customers are satisfied with our products and services					
PERC 5	Our company delivers what customers want in time					
PERC 6	Our company' s flexibility in product/service offerings has been appreciated by customers					
PERC7	Our sells have improved as a result of referrals from customers					
	Innovation					
PERIN1	We engage in research and development to identify new ways of doing things					
PERIN 2	Our company is quick at introducing new products/services					
PERIN 3	For products we make or display, our ways of doing it are creative					
PERIN	Our company has devised innovative ways of acquiring capital					
PERIN 5	Our products/service are innovative and offer new experiences					
PERIN 6	We embed technology to drive innovation.					
PERIN 7	Internal and external networks are a key producer of innovative products/services					
	Efficiency					
PERE1	The cost of running our operations such as sourcing raw materials/stock, production have reduced over time					
PERE 2	We have been able to drive down the cost of production and operations in the recent past					
PERE 3	Our economies of scale have improved over the last few years					
PERE 4	We have built a system of monitoring efficiency in the organisation					
PERE 5	Our customer acquisition costs have gone down					
PERE 6	Workforce costs have decreased					
PERE7	Organisational values and norms are configured around building efficiency in all operations					
	Productivity					
PERP1	The quantity of output has increased over the years					
PERP2	Our production processes have been improved to deliver value					
PERP3	The time to produce a product/service has reduced					
PERP4	Time management has been built into our system					
PERP5	The unit of production per unit of labour has increase					
PERP6	Productivity of capital has increased					
PERP7	Our values and norms drive productivity					
	Finance					
PERFI1	Our profit position has improved over the last few years					
PERFI2	Our company has been able to reach its financial targets					
PERFI3	Our return on investment is higher than expected					
PERFI4	As a company, we have reduced our debt burden and use our finances to run our operations					
PERFI5	In recent years, the return on borrowed funds has improved					
PERFI6	Our liquidity position is good					
PERFI7	We have good financial management systems in place					

Thank you for your time

APPENDIX IIIA: GATEKEEPER'S LETTER

GOVERNMENT OF THE KINGDOM OF ESWATINI

Tel: (+268) 2404 3201/6
Fax: (+268) 2404 4711/3055
E-mail: mcit@gov.sz



Principal Secretary's Office
Ministry of Commerce, Industry & Trade
P.O. Box 451, Mbabane

13th September 2022

Dear Mr. Kule Julius Warren,

RE: PERMISSION TO CONDUCT RESEARCH/COLLECT DATA ON MSMEs IN MANZINI REGION.

Reference is made to the above subject matter as per your letter dated September 1, 2022.

Having reviewed your request to conduct research, I am pleased to inform you that permission has been granted to conduct research on the proposed research topic: **The Effect of Resilience and Foresight on Performance of Manufacturing SMEs in Manzini Region, Eswatini.**

Please note that, individual MSME's participation is voluntary and at their own discretion.

We understand that our department's responsibilities include; giving you general industry information (reports, surveys, population of SMEs in the region) on SMEs and, giving you permission to access SMEs in the Manzini region of Eswatini.

The permission granted covers a period of 6 (six) months with effect from September 13, 2022.

The permission granted is to conduct a study for your doctoral research (academic purposes) only.

You will be required to ensure the confidentiality of respondents.

As per your letter, you will be required to submit to us a copy of the findings after completion of the final research study.

If you need further assistance, contact Mr. Christopher Mavuso – Promotional Officer at [REDACTED]

We at the Department of Micro, Small and Medium Enterprises Unit wish you the best of luck in the pursuit of your research endeavors.

Yours Sincerely; [REDACTED]

MLULEKI S. DLAMINI

DIRECTOR - MSME



APPENDIX III B: GATEKEEPERS LETTER-EXTENSION

ESWATINI

Tel: (+268) 2404 3201/6

Fax: (+268) 2404 4711/3055

Email: mcit@gov.sz



GOVERNMENT

Principal Secretary's Office
Ministry of Commerce, Industry & Trade
P.O. Box 451, Mbabane H100

13 March 2023

Kule Julius Warren
7631 7301
Kingdom of Eswatini

Dear Sir

RE: PERMISSION TO CONDUCT RESEARCH/COLLECT DATA ON MSMEs in
MANZINI.

Regard is being given to the aforementioned subject matter in light of your correspondence dated 9 March 2023.

The Ministry of Commerce, Industry and Trade (MSME Unit) is delighted to notify you that authorization has been granted to continue with the research /data collection on the suggested topic: **The effect of Strategic Resilience on the Performance of SMEs in the Manzini Region.** Please take note that each MSME's involvement is entirely optional and up to them as previously stated.

Over the duration of the authorized research, you are required to maintain the respondents' privacy. The Ministry will anticipate that you transmit a copy of the study paper once it is finished so that it can be used to make policy.

Best of luck with your research, and please don't hesitate to contact the MSME Unit if you need any additional help. You can reach Mr. Mavuso at [REDACTED]

Yours sincerely,

MLULEKI S. DLAMINI
DIRECTOR-MSME



APPENDIX III C: GATEKEEPER'S LETTER-SMALL ENTERPRISES
COMPANY(SEDCO)



The Small Enterprises Development Company Ltd.

Industrial sites
Mbabane
Next to Government Stores

P.O. Box A186, Mbabane
Tel: 2404 3046/7 & 2404 2811/2
Fax: 2404 0723
E-mail: business@sedco.co.sz
Web site: www.sedco.biz

"Business Growth is Our Business"

09th September 2022

Dear Mr. Warren,

**RE: PERMISSION TO COLLECT DATA / CONDUCT RESEARCH ON
SEDCO SME's**

1. We refer to the above captured subject matter as per your letter dated the 1st September 2022.
2. Based on my review of the request on the proposed research study, I hereby give you provisional permission to conduct the research study on the **Effect of Resilience and Foresight on Performance of SEDCO's Small and Medium Enterprises based in the Manzini Region**. Please note that the individuals' participation on the study will be voluntary and at their own discretion.
3. We understand that our organization's responsibilities only include giving you permission to access the SME's. We reserve the right to withdraw from the study at any time if our circumstances change. This permission only covers a period of three months from the date of receipt of this letter.
4. Please note that the provisional permission is granted based on the letter written to us and on the premise that the data collected will only be used for academic purposes. Upon completion of the study, please do provide us with a copy of the full research report.
5. Also make sure that the data collected remain entirely confidential at all times and may not be provided to anyone outside of the research team without a written permission from SEDCO.
6. For more information, please contact the Senior Manager Business Incubation Skhumbuzo Mbuyisa at 2404 2811 or mbuyisas@sedco.co.sz.
7. Thank you for choosing SEDCO to contribute in your research paper and wish you luck in your research study.

Yours sincerely


KHETHIWE C. MHLANGA
CHIEF EXECUTIVE OFFICER

APPENDIX IV: INFORMED CONSENT

**UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS
COMMITTEE (HSSREC)**

**APPLICATION FOR ETHICS APPROVAL
For research with human participants**

Information Sheet and Consent to Participate in Research

Date:

Dear Madam/Sir

Our names are Prof M. Kanyangale and Kule Julius Warren from the Graduate School of Business & Leadership at the University of Kwazulu-Natal, South Africa. Our contact number is [REDACTED] and my email address is Kanyangalem@ukzn.ac.za

You are being invited to consider participating in a study that seeks to understand the **the strategic impact of resilience on performance optimization of small and medium Enterprises in Manzini region, Eswatini**. We know much about the effect of resilience on performance of large organisations in the developed world, but little on the effect resilience on SMEs which are labelled as engines for economic growth.

The Department of Micro, Small and Medium Enterprises at the Ministry of Commerce, Industry and Trade and Samall Enterprises Development Company Eswatini have granted support and approval to conduct the research (please see the attached approval letter.

You have been selected because you are owner/manager of an SME which has been operating for over three years in Eswatini to provide insights on **the strategic impact of resilience on performance optimization of small and medium Enterprises in Manzini region, Eswatini**.

The questionnaire being used will take from 15 to 30 minutes at most to be administered. You have been selected to participate in the interview since you are a owner/manager of an SME. This study is being conducted for academic purposes only.

The study has no foreseen risks and/or discomforts that may be suffered by participants. The study might not provide direct benefits to the participants. However, the results of this study mainly may assist owner/managers of SMEs and policy makers in Manzini to support SMEs because of their contribution to economic growth and development.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number 00005562/2023).

In the event of any problems or concerns/questions you may contact the researcher at [REDACTED] and my email address is Kanyangalem@ukzn.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Participating in this study is voluntary and you are under no obligation to consent to participation. You are free to withdraw at any time, without giving a reason. In the event of withdrawal of participation, you will not incur penalty or loss of treatment or other benefit to which they are normally entitled.

All research will be conducted on site at your premises/location. Therefore, I do not anticipate that you should incur any expenses to participate in this research. Furthermore, participants will not receive incentives or payment of any kind for taking part in this research project.

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and identified members of the research team, will know about your involvement in this research (this measure refers to confidentiality). Furthermore, your name will not be recorded anywhere, and no one will be able to connect you to the answers you give [this measure refers to anonymity]. Your answers will be given a code number, or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings [this measure refers to anonymity]. Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records. It is also possible that your anonymous data may be used for other purposes, such as a research report, journal articles and/or conference proceedings. In such instances, the data is contained in a report that used tables and graphs to present the data.

Electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. If necessary, information will also be destroyed [i.e., hard copies notes will be shredded, and/or electronic copies will be permanently deleted from the hard drive of the computer using a relevant software programme].

CONSENT

I have been informed about the study entitled the **strategic impact of resilience on performance optimization of small and medium Enterprises in Manzini region, Eswatini** by Prof. M. Kanyangale and Kule Julius Warren. I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

I have been informed about any available compensation or medical treatment if injury occurs to me as a result of study-related procedures.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at (provide details).

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview / focus group discussion	YES / NO
Video-record my interview / focus group discussion	YES / NO
Use of my photographs for research purposes	YES / NO

Signature of Participant

Date

**Signature of Witness
(Where applicable)**

Date

**Signature of Translator
(Where applicable)**

Date

APPENDIX V: EDITING CERTIFICATE



Date: 05/06/2024

RE: TO WHOM IT MAY CONCERN

This letter serves to confirm that I edited a thesis titled:

The strategic impact of resilience on performance optimisation of small and medium enterprises (SMEs) in the Manzini region, Eswatini

by

Julius Warren Kule 222127377

Please do not hesitate to contact me for any queries.

Yours sincerely,



Betina Moffat
Associate Member

Membership number: MOF002
Membership year: March 2024 to February 2025



www.editors.org.za

*Ph.D, Communication, Master of Social Science, Communication, (University of Fort Hare)
B.A. Honours, Literature & Media Studies (University of Venda), B.A. Media Studies (University of Venda).*

APPENDIX VI: INTER-ITEM CORRELATION MATRIX FOR NATURE OF RESILIENCE

Table 5. 57: Inter-item correlation matrix for nature of resilience

Table 5.16: Item-Total Statistics for nature of resilience					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
NR1	20.47	6.428	-0.013	0.049	0.164
NR2	20.97	6.425	-0.035	0.078	0.182
NR3	20.57	6.049	0.074	0.019	0.108
NR4	20.69	5.5	0.068	0.122	0.107
NR5	22.73	5.753	0.006	0.057	0.167
NR6	21.4	5.074	0.227	0.11	-.034 ^a
NR7	21.42	5.582	0.046	0.093	0.128

APPENDIX VII: ITEM-TOTAL STATISTICS FOR ORGANISATIONAL RESILIENCE

Table 5. 58 Item-Total Statistics for organisational resilience

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Detectability					
RD1	21.98	10.423	0.125	0.084	0.596
RD2	22.59	8.469	0.262	0.224	0.564
RD3	22.13	9.885	0.285	0.148	0.538
RD4	22.25	9.319	0.436	0.235	0.49
RD5	22.33	9.236	0.328	0.161	0.522
RD6	21.78	10.101	0.291	0.155	0.538
RD7	21.94	9.277	0.425	0.205	0.492
Coping					
RC1	22.86	9.211	0.282	0.119	0.609
RC2	22.64	9.228	0.386	0.209	0.578
RC3	23.23	8.863	0.28	0.136	0.614
RC4	23.03	8.575	0.427	0.223	0.561
RC5	22.87	8.969	0.391	0.228	0.574
RC6	22.95	8.885	0.407	0.247	0.569
RC7	22.99	9.458	0.235	0.136	0.624
Applying					
RA1	23.29	9.215	0.411	0.234	0.646
RA2	23.39	9.021	0.475	0.309	0.624
RA3	23.33	8.638	0.582	0.359	0.589
RA4	23.17	10.203	0.359	0.168	0.658
RA5	23.31	10.284	0.364	0.174	0.657
RA6	23.09	11.131	0.291	0.149	0.674
RA7	23.01	11.193	0.257	0.088	0.681

APPENDIX VIII: ITEM TOTAL STATISTICS FOR STRATEGIC FORESIGHT
(TRANSFORMATIVE RESILIENCE)

Table 5. 59: Item-total statistics for strategic foresight (transformative resilience)

Variable	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Discovery					
RFD1	22.88	7.932	0.431	0.229	0.551
RFD2	23.16	7.872	0.373	0.334	0.569
RFD3	23.27	8.177	0.365	0.306	0.572
RFD4	23.19	7.826	0.351	0.145	0.577
RFD5	23.08	8.398	0.274	0.195	0.603
RFD6	22.83	8.587	0.315	0.215	0.589
RFD7	22.71	9.085	0.223	0.17	0.614
Planning					
RFP1	23.35	8.639	0.34	0.143	0.603
RFP2	23.03	8.587	0.404	0.285	0.585
RFP3	22.98	8.902	0.444	0.318	0.582
RFP4	23.35	8.257	0.357	0.165	0.598
RFP5	23.5	7.565	0.391	0.25	0.589
RFP6	23.18	8.538	0.459	0.276	0.572
RFP7	23.2	9.664	0.121	0.156	0.669

APPENDIX IX: ITEM TOTAL STATISTICS FOR ABSORPTIVE CAPACITY

Table 5. 60: Item total statistics for absorptive capacity

Variable	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Applying					
ACAPP1	23.63	8.156	0.415	0.231	0.675
ACAPP2	23.51	8.222	0.501	0.292	0.656
ACAPP3	23.5	8.35	0.42	0.224	0.674
ACAPP4	23.7	7.966	0.458	0.23	0.663
ACAPP5	23.39	8.682	0.349	0.197	0.69
ACAPP6	23.62	7.804	0.523	0.295	0.647
ACAPP7	23.75	8.132	0.299	0.15	0.714
Knowledge recognition					
ACKR1	23.41	6.754	0.363	0.201	0.583
ACKR2	22.82	8.701	0.219	0.093	0.617
ACKR3	22.82	8.718	0.288	0.123	0.597
ACKR4	22.8	8.963	0.279	0.14	0.6
ACKR5	23.02	7.534	0.471	0.289	0.537
ACKR6	23.05	7.418	0.48	0.291	0.532
ACKR7	23.18	8.281	0.274	0.103	0.602
Assimilation					
ACAS1	23.22	6.025	0.057	0.055	0.468
ACAS2	23.17	5.609	0.179	0.169	0.418
ACAS3	23.08	5.34	0.258	0.235	0.383
ACAS4	23.03	5.727	0.114	0.133	0.448
ACAS5	23.42	5.165	0.177	0.145	0.424
ACAS6	23.34	4.455	0.482	0.389	0.253
ACAS7	23.38	5.167	0.19	0.315	0.416

APPENDIX X: ITEM-TOTAL STATISTICS FOR STRATEGIC ORIENTATION
CONSTRUCT

Table 5. 61 : Item-Total Statistics for Prospector Orientation Construct

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SOP1	20.35	5.247	.293	.356	.540
SOP2	20.28	5.459	.307	.400	.534
SOP3	20.15	5.139	.329	.141	.524
SOP4	20.26	5.418	.261	.200	.554
SOP5	20.24	5.104	.417	.276	.487
SOP6	20.19	5.416	.283	.179	.544

APPENDIX XI: ITEM-TOTAL STATISTICS FOR DEFENDER, ANALYSER AND REACTOR ORIENTATION

Table 5. 62: Item-Total Statistics for defender, analyser and reactor orientation

Variable	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Defender					
SOD1	22.33	6.541	0.115	0.301	-.050 ^a
SOD2	21.04	8.466	-0.01	0.057	0.084
SOD3	21.14	6.667	0.239	0.263	-.150 ^a
SOD4	20.56	8.963	-0.095	0.224	0.142
SOD5	21.5	8.53	-0.116	0.156	0.198
SOD6	20.84	9.428	-0.177	0.216	0.197
SOD7	21.46	6.528	0.22	0.246	-.146 ^a
Analyser					
SOA1	23.17	7.385	0.261	0.204	0.402
SOA2	23.19	7.994	0.312	0.165	0.392
SOA3	22.9	7.863	0.263	0.148	0.405
SOA4	23.2	9.055	-0.034	0.112	0.542
SOA5	23.24	7.312	0.349	0.137	0.361
SOA6	23.22	7.838	0.283	0.152	0.397
SOA7	23.66	7.492	0.171	0.172	0.455
Reactor					
SOR1	20.29	9.278	-0.036	0.09	0.254
SOR2	20.5	7.991	0.182	0.186	0.104
SOR3	21.12	7.359	0.175	0.207	0.092
SOR4	21.38	8.446	0.016	0.134	0.231
SOR5	20.43	7.546	0.203	0.074	0.077
SOR6	20.25	9.04	0.034	0.25	0.206
SOR7	20.38	9.056	-0.012	0.223	0.241

APPENDIX XII: ITEM-TOTAL STATISTICS FOR PERFORMANCE OPTIMISATION

Table 5.63: Item-Total Statistics for performance optimisation

Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Customers					
PERC1	25.47	8.904	0.236	0.121	0.723
PERC2	25.49	8.004	0.482	0.342	0.664
PERC3	25.64	7.736	0.485	0.253	0.662
PERC4	25.45	7.981	0.524	0.334	0.655
PERC5	25.64	8.005	0.405	0.24	0.683
PERC6	25.64	8.113	0.442	0.226	0.674
PERC7	25.78	8.082	0.396	0.253	0.686
Efficiency					
PERE1	18.89	23.939	0.713	0.565	0.824
PERE2	18.74	24.083	0.727	0.632	0.822
PERE3	18.51	25.023	0.713	0.597	0.825
PERE4	18.58	27.186	0.516	0.346	0.852
PERE5	18.93	24.574	0.688	0.516	0.828
PERE6	18.8	25.202	0.619	0.489	0.838
PERE7	18.2	29.357	0.374	0.175	0.867
Productivity					
PERP1	20.77	20.478	0.534	0.443	0.769
PERP2	20.66	21.617	0.436	0.375	0.786
PERP3	21.14	20.866	0.467	0.303	0.781
PERP4	20.92	20.883	0.475	0.346	0.78
PERP5	21.08	18.674	0.697	0.514	0.736
PERP6	21.08	18.475	0.59	0.404	0.758
PERP7	20.63	21.636	0.495	0.26	0.777
Finance					
PERF1	19.11	30.067	0.677	0.483	0.846
PERF2	19.44	31.653	0.581	0.396	0.859
PERF3	19.49	30.053	0.722	0.537	0.84
PERF4	19.12	30.841	0.632	0.449	0.852
PERF5	19.16	30.662	0.647	0.462	0.85
PERF6	19.18	29.675	0.719	0.524	0.84
PERF7	18.74	33.063	0.53	0.319	0.865

APPENDIX XIII: ROTATED MATRIX FOR ORGANISATIONAL RESILIENCE

Rotated Component Matrix^a

	Component			
	1	2	3	4
RC1	.701			
RC2	.579			
RC3		.716		
RC4		.635		
RC5			.630	
RC6				.614
RC7				.695
RA1	.700			
RA2	.710			
RA3	.569			
RA4		.593		
RA5		.503		
RA6			.696	
RA7				.700

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 12 iterations.

Noted: 2 COMPONENTS: Adaption (RA1, RA2, RA3, RA4, RA5); Coping (RC1-RC4) .N.B. Detectability was not included since it failed the reliability test. This is the same reasoning for other components. Also component 3 and 4 don't qualify for further analysis as they don't have the minimum number of items (3), thus it defeats logic to attach an interpretation to them.

APPENDIX XIV: ROTATED MATRIX FOR MATRIX FOR STRATEGIC FORESIGHT

Rotated Component Matrix^a

	Component				
	1	2	3	4	5
RFD1	.680	.037	-.126	.229	.146
RFD2	.723	-.013	.371	-.156	-.003
RFD3	.676	.120	.255	-.315	.122
RFD4	.642	.099	-.102	.268	.010
RFD5	.088	.043	.121	.823	.066
RFD6	.038	.380	.311	.458	.281
RFD7	.026	.659	-.188	.352	.143
RFP1	.321	.154	.381	.294	.022
RFD2_A	.075	.797	.175	.014	.065
RFP3	.118	.736	.325	-.064	-.033
RFP4	-.022	.061	.667	.307	-.045
RFP5	.085	.192	.727	-.087	.069
RFP6	.078	.111	.445	.091	.721
RFP7	.120	.051	-.183	.061	.844

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Noted: From the rotated matrix above components 2 and 3 ideally have the same theme, we can take items from 3. Then 4 and 5 don't qualify for any interpretation. In all 2 components are logical here. DISCOVERY (RFD1, RFD2, RFD3, RFD4) and PLANNING (RFP4, RFP5, RFP6).

APPENDIX XV: ROTATED MATRIX FOR MATRIX FOR STRATEGIC ORIENTATION

Rotated Component Matrix^a

	Component									
	1	2	3	4	5	6	7	8	9	10
SOP1	.018	-.016	.035	.900	-.021	.024	-.064	-.039	.071	.109
SOP2	-.035	.053	.047	.749	.064	.308	-.044	.049	-.039	-.157
SOP3	.208	-.071	-.281	.227	.559	.376	-.056	-.094	-.109	-.110
SOP4	.774	.019	-.065	.007	.186	-.222	.059	.030	.008	.070
SOP5	.694	-.057	.124	.123	.099	.176	.065	-.048	.086	.141
SOP6	.408	-.173	-.113	.006	.172	.080	-.069	.180	.467	.059
SOP7	.173	-.027	.163	.007	.022	.082	.022	.761	.128	.014
SOD1	-.221	.599	.162	.126	-.247	.117	.039	-.062	-.042	-.125
SOD2	-.091	-.135	-.026	.293	.100	.047	.074	.271	.660	.069
SOD3	-.246	.219	.557	.120	-.073	.067	-.088	.501	-.090	.037
SOD4	-.092	-.472	.214	.013	.608	-.018	.216	.129	.007	-.139
SOD5	.054	.493	-.065	.073	.155	-.222	.295	-.452	.002	-.112
SOD6	.037	-.731	.080	.125	.072	-.024	.184	.014	.139	-.073
SOD7	-.012	.293	.460	-.022	-.369	.253	.017	.183	-.077	-.172
SOA1	-.030	-.120	.213	.557	.411	.091	-.081	.090	.238	-.018
SOA2	.340	.025	.150	.104	-.173	.186	-.353	-.020	.449	-.299
SOA3	.233	-.090	.046	.073	.693	.180	-.274	-.038	.023	.274
SOA4	.734	-.158	-.143	-.167	-.127	-.010	-.038	.095	-.074	-.066
SOA5	.153	.103	.008	.241	.061	.639	.030	.097	-.031	.043
SOA6	-.181	-.211	.073	.135	.121	.673	.064	.049	.079	.027
SOA7	-.075	.439	.318	-.166	.027	.529	-.085	.118	.208	-.167
SOR1	.095	-.093	-.075	-.012	.055	-.003	-.008	.055	.050	.845
SOR2	.257	-.232	.097	-.020	-.164	.091	.602	-.219	-.012	.310
SOR3	-.023	.065	-.136	-.109	-.038	.048	.817	.022	.082	-.114

SOR4	-.130	.559	-.123	.022	-.131	-.205	.277	.106	.111	-.251
SOR5	-.023	.154	.117	-.155	-.172	-.071	.222	-.409	.625	.040
SOR6	.063	-.154	.783	.140	-.084	.002	-.093	-.056	.058	-.149
SOR7	-.084	-.057	.690	.012	.347	.077	-.009	.216	.027	.129

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 19 iterations.

Note: In all 2 components are logical here. PROSPECTOR (SOP4, SOP5, SOP6) and ANALYSER (SOA5, SOA6,SOA7).At the end SO gives a very bad model since all its constructs field the reliability test. See raw output.

APPENDIX XVI: ROTATED MATRIX FOR ABSORTIVE CAPACITY

Rotated Component Matrix^a

	Component			
	1	2	3	4
ACKR1	.284	.174	.757	-.095
ACKR2	-.062	.705	.076	.040
ACKR3	.111	.722	.089	.074
ACKR4	-.091	.125	.034	.756
ACKR5	.045	.075	.711	.339
ACKR6	.159	.182	.511	.507
ACKR7	.216	-.049	.225	.541
ACAPP1	.627	.183	.171	-.187
ACAPP2	.715	.043	.082	.153
ACAPP3	.717	-.116	.053	.117
ACAPP4	.463	.481	.126	.099
ACAPP5	.388	.340	-.350	.486
ACAPP6	.490	.376	.197	.217

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

In this rotation, assimilation construct was dropped due to failure to satisfy the reliability assumptions. Two (2) components are thus viable from this rotation 1 & 4. Four (4) is dropped due to the cross loading with component 3, i.e. Knowledge reconciliation (ACKR1, ACKR5, ACKR6).

APPENDIX XVII: ROTATED COMPONENT MATRIX FOR PERFORMANCE OPTIMIZATION

Rotated Component Matrix^a

	Component								
	1	2	3	4	5	6	7	8	9
PERC1									.725
PERC2			.721						
PERC3								.684	
PERC4			.599						
PERC5								.766	
PERC6			.535						
PERC7			.669						
PERIN1						.720			
PERIN2						.754			
PERIN3			.534						
PERIN4	.649								
PERIN5									
PERIN6									.506
PERIN7					.681				
PERE1	.726								
PERE2	.705								
PERE3	.714								
PERE4									
PERE5	.752								
PERE6	.789								
PERE7					.733				
PERP1				.736					

PERP2				.726				
PERP3							.649	
PERP4							.606	
PERP5								
PERP6	.534	.526						
PERP7								
PERF1		.671						
PERF2		.713						
PERF3		.713						
PERF4		.580						
PERF5		.553						
PERF6		.689						
PERF7		.593						

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 29 iterations.

Note: 3 COMPONENTS: Efficiency (PERE1, PERE2, PERE3, PERE5, PERE6); Finance (PERF1-PERF7) and Customer (PERC2, PERC4, PERC6, PERC7) were extracted.

APPENDIX XVIII: ETHICAL CLEARANCE



08 May 2023

Dr Julius Warren Kule (222127377)
Grad School Of Bus & Leadership
Westville Campus

Dear Dr Kule,

Protocol reference number: HSSREC/00005562/2023

Project title: The strategic impact of resilience on performance optimization of small and medium enterprises in Manzini region, Eswatini.

Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 17 April 2023 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 08 May 2024.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hialele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee

Postal Address: Private Bag X54001, Durban, 4000, South Africa

Telephone: +27 (0)31 260 8350/4557/3587 Email: hssrec@ukzn.ac.za Website: <http://research.ukzn.ac.za/Research-Ethics>

Funding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

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