

**Exploring business model innovation in response to
exogenous crises – a multiple case study of small and medium sized
manufacturers in KwaZulu Natal, South Africa**

Student number: 22010778

A research project submitted to the Gordon Institute of Business Science,
University of Pretoria, in partial fulfilment of the requirements
for the degree of Master of Business Administration.

05 March 2024

ABSTRACT

Small and medium-sized enterprises (SMEs) form the backbone of the South African economy. Their survival is essential to protect the livelihoods of the people they employ, and the customers and communities they serve. In an era, where the threat of disruptive exogenous crisis events are a constant reality, SMEs need to be able to respond fast and effectively in order to survive and even grow. When disruptive events prevent SMEs from trading according to their traditional business models, they can respond to such crises by applying business model innovation. Business model innovation is a proactive response to crisis and enables SMEs to introduce new ways to either create, deliver, or capture value in current or new markets.

This empirical qualitative study explores how business model innovation is adopted as a response to crises by SMEs using a multiple case study approach. It focuses on six SMEs trading within highly competitive sub-sectors within the manufacturing sector in KwaZulu-Natal (KZN), South Africa. Since the severe impact of the Covid-19 pandemic, KZN has also been subjected to multiple exogenous crises that severely impacted the South African economy. All six case study SMEs were exposed to crisis events that caused major disruption to their traditional business models. This led them to resort to dynamic capabilities to sense and seize opportunities to transform their business models in an attempt to survive and then grow, following the crises they experienced. This study therefore explored those dynamic capabilities that were antecedents for the success of their business model innovations.

This study contributes to the limited literature available on crisis management and business model innovation for SMEs. It connects the capabilities of a proactive crisis management strategy with the dynamic capabilities for innovation of SMEs. It identifies 12 dynamic capabilities that were most prevalent in enabling business model innovations that helped SMEs to survive and/or subsequently grow their businesses in response to crises. This study consequently presents a proposed dynamic capabilities framework for business model innovation in response to crises.

Keywords: Business model innovation, crises, proactive crisis response, SMEs, dynamic capabilities

DECLARATION

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

Name

05 March 2024

LIST OF FIGURES

- Figure 1: Effect of exogenous crises shocks on the South African economy compared to advanced countries
- Figure 2: Roadmap of literature review
- Figure 3: Research framework
- Figure 4: New categories generated per transcript
- Figure 5: Thematic analysis process
- Figure 6: Sensing dynamic capabilities
- Figure 7: Seizing dynamic capabilities
- Figure 8: Transforming dynamic capabilities
- Figure 9: Proposed dynamic capabilities framework for SME business model innovation is response to crises

LIST OF TABLES

- Table 1: SME capabilities for a proactive crisis response
- Table 2: SME sensing capabilities
- Table3: SME seizing capabilities
- Table 4: SME transforming capabilities
- Table 5: Description of participating case studies and their representatives
- Table 6: Cross case analysis
- Table 7: Cross case analysis of dynamic capabilities

ABBREVIATIONS

BM:	Business model
BMI:	Business model innovation
CEO:	Chief executive officer
DC:	Dynamic capability
DC Theory:	Dynamic Capability Theory
DJ:	Disk jockey
ECD:	Early childhood development
GDP:	Gross domestic product
GIBS:	Gordon Institute of Business Science
KZN:	KwaZulu Natal
PPE:	Personal protective equipment
R&D:	Research and development
RBV:	Resource-based view
RBV Theory:	Resource-Based View Theory
SEDA:	Small Enterprise Development Agency
SME:	Small and medium-sized enterprise
Stats SA:	Statistics South Africa
VCap:	Value capture
VCre:	Value creation
VProp:	Value proposition
WEF:	World Economic Forum

CONTENTS

ABSTRACT	i
LIST OF FIGURES	iii
LIST OF TABLES	iii
ABBREVIATIONS.....	iv
CHAPTER 1: INTRODUCTION.....	1
1.1 Background to the research problem	1
1.2 The research problem.....	2
1.2.1 Business relevance of the research problem	2
1.2.2 Theoretical relevance of the research problem	5
1.3 Research questions	7
1.4 Research purpose	7
1.5 Research contribution.....	8
1.6 Research scope.....	8
1.7 Outline of the research report	9
CHAPTER 2: LITERATURE REVIEW	11
2.1 Introduction.....	11
2.2 Response to crises	11
2.2.1 Exogenous crises and threats to SMEs	11
2.2.2 Crisis response strategies.....	13
2.3 Strategic management theories for competitive advantage	18
2.3.1 Resource-based view theory.....	18
2.3.2 Dynamic capability theory	19
2.4 Business model innovation	20
2.4.1 Business model definition and elements	20
2.4.2 Business model innovation of SMEs in response to crises	23
2.4.3 SME dynamic capabilities for business model innovation	24
2.5 Conclusion.....	29
CHAPTER 3: RESEARCH QUESTIONS	31
3.1 Introduction.....	31
3.2 Research problem and primary research question	31
3.3 Secondary research questions	31
3.3.1 Research sub-question 1	31
3.3.2 Research sub-question 2	32

3.3.3	Research sub-question 3	32
CHAPTER 4: RESEARCH METHODOLOGY		34
4.1	Introduction.....	34
4.2	Research design.....	34
4.2.1	Research philosophical paradigm	34
4.2.2	Research approach.....	35
4.2.3	Methodological choice	36
4.2.4	Research strategy.....	36
4.2.5	Time horizon	37
4.3	Population.....	38
4.4	Unit of analysis	38
4.5	Case selection criteria, sample, and sample size	38
4.6	Research and measurement instrument	41
4.7	Data collection	41
4.8	Data analysis	42
4.9	Data quality.....	45
4.10	Ethical considerations	46
4.11	Limitations of the study.....	47
CHAPTER 5: FINDINGS		49
5.1	Introduction.....	49
5.2	Within-case analysis	49
5.2.1	ClothingCo's within-case analysis	49
5.2.2	PackagingCo's within-case analysis	51
5.2.3	BoardCo's within-case analysis	54
5.2.4	DenimCo's within-case analysis.....	56
5.2.5	BeltCo within-case analysis	60
5.2.6	ProcureCo's within-case analysis.....	64
5.3	Cross-case analysis.....	67
5.3.1	Crisis response strategies adopted by SMEs.....	67
5.3.2	Business model innovations implemented by SMEs	72
5.4	Thematic analysis: Dynamic capabilities.....	73
5.4.1	Dynamic capabilities: Sensing	73
5.4.2	Dynamic capabilities: Seizing.....	82
5.4.3	Dynamic capabilities: Transforming	93
5.5	Conclusion.....	96
CHAPTER 6: DISCUSSION		97

6.1 Discussion of research sub-question 1	97
6.2 Discussion of research sub-question 2	99
6.3 Discussion of research sub-question 3	100
6.3.1 Discussion of research sub-question 3.1	101
6.3.2 Discussion of research sub-question 3.2	107
6.3.3 Discussion of research sub-question 3.3	112
6.4 Primary research question	115
CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS	117
7.1 Introduction	117
7.2 Research findings	117
7.2.1 Conclusion of research sub-question 1	118
7.2.2 Conclusion of research sub-question 2	119
7.2.3 Conclusion of research sub-question 3	120
7.2.4 Conclusion of primary research question	125
7.3 Theoretical research contributions	125
7.4 Implications for management	127
7.5 Limitations of the research	128
7.6 Recommendations for future research	129
REFERENCES	130
APPENDIX A: CONSISTENCY MATRIX	141
APPENDIX B: SEMI-STRUCTURED INTERVIEW GUIDE	142
APPENDIX C: THEMATIC ANALYSIS OF CODIFIED DATA	143
APPENDIX D: GIBS ETHICAL CLEARANCE APPROVAL	146
APPENDIX E: CONSENT LETTER REQUESTING PARTICIPATION IN INTERVIEW	147
APPENDIX F: PERMISSION LETTER TO CONDUCT RESEARCH ABOUT AN ORGANISATION	148

CHAPTER 1: INTRODUCTION

1.1 Background to the research problem

Exogenous crisis events are becoming increasingly frequent, severe, and disruptive to social, environmental, and economic activities across the world. In the recent past, multiple exogenous crises, such as the Covid-19 pandemic, climate change, global conflict, and socio-economic polarisation have occurred at an unprecedented pace in the turbulent era of globalisation and vast technological change (Martin et al., 2022). These crises trigger economic shocks that disrupt businesses and their business models (BMs), often placing firms in a precarious fight for survival (Miklian & Hoelscher, 2022).

Exogenous crisis events have a disproportionately harmful impact on SMEs' BMs as they hold a weaker competitive advantage due to the limitations of their size and their ability to access additional resources. This makes it more difficult for SMEs to respond to sudden economic shocks (Miklian & Hoelscher, 2022; Wenzel et al., 2020). This is concerning as SMEs are the lifeblood of the global economy (Eggers, 2020). They create employment, reduce income and social inequalities, and are an accelerator for innovation and economic growth (Alves et al., 2020; Eggers, 2020; Fubah & Moos, 2022; Handley et al., 2021). They play a particularly important role in emerging economies such as South Africa, a country that faces a plethora of socio-economic challenges (Fubah & Moos, 2022; Mundhree & Beharry-Ramraj, 2022). Since 2020, exogenous crisis events, such as Covid-19, mass civil unrest, social polarisation, and natural disasters, have had a detrimental impact on the KZN Province of South Africa, which also slowed down the entire South African economy (Mundhree & Beharry-Ramraj, 2022). These events negatively transformed the inherent fragility of SMEs and caused many of them to shut down indefinitely, leading to job losses and growing social polarity (Small Enterprise Development Agency [SEDA], 2023).

Therefore, it is imperative that SMEs establish BMs that are capable of enabling SMEs to withstand, adapt, and even grow through periods of multiple exogenous crises. Recent literature points towards business model innovation (BMI) as an effective crisis management response strategy and an opportunity for post-crisis growth (Buntić et al., 2023; Clauss et al., 2022; Cucculelli & Peruzzi, 2020; Millar et

al., 2018). BMI is seen as a flexible, yet strategic stance on managing crises and seizing the opportunities that often emanate from them (Clauss et al., 2022; Cucculelli & Peruzzi, 2020; Müller, 2019). If SMEs are dynamic enough to sense changes brought about by crises and are able to seize opportunities and transform their BMs accordingly, they may then be better positioned to survive and outlast exogenous crises events that otherwise could have destroyed them. However, as BMI in response to SME crises in emerging economies is understudied in literature, a defined framework does not yet exist to guide SMEs on how to implement effective BMs. Therefore, many SMEs follow a trial and error approach (Chesbrough, 2010; Doern, 2021; Eggers, 2020; Filser et al., 2021). There is thus an opportunity to learn through a case study approach from the experiences of SMEs that have survived and/or grown through applying a process of BMI in response to crises.

1.2 The research problem

1.2.1 Business relevance of the research problem

The onset of the Covid-19 pandemic in 2020 was the first global crisis of its severity and magnitude since the global financial crisis of 2008 (Martin et al., 2022). The unravelling of these previously dubbed 'once in a century' crisis events led to business owners having to face an era of multiple, disruptive, and overlapping exogenous crisis events (Martin et al., 2022, p.4). In their 2024 Global Risks Report, the World Economic Forum [WEF] (2024) raises concerns about severe crises that are likely to disrupt the fabric of our socio-economic way of life in the next two to 10 years. They specifically highlight the risk of exogenous crises arising from climate change, technological disruption, social polarisation, and interstate armed conflict (WEF, 2024). As Covid-19 demonstrated, severe exogenous crisis events disrupt demand and supply chains and have a cascading impact on the economy and on BMs across all industries. However, the rate of global de-industrialisation, following the 2008 global financial crisis, provides alarming evidence of the manufacturing sector's exposure to exogenous crises (Mnguni & Simbanegavi, 2020). Juergensen et al. (2020) also emphasise that crisis-induced demand and supply shocks have a severe impact on the manufacturing sector and pose a particularly detrimental risk to their BMs due to their dependencies on reliable demand and supply chains.

SMEs account for a significant portion of economic activity across the world. They are particularly important for developing economies such as South Africa as they support the livelihoods of the communities that surround them (Meyer et al., 2018). However, since 2020, SMEs located in the KZN Province of South Africa have faced a series of crises. It began with the announcement of the first Covid-19 case in March 2020, which was followed by a government-mandated nationwide lockdown. The pandemic's economic impact exacerbated political tensions and social polarisation challenges, such as poverty, unemployment, and inequality, which led to a violent civil unrest movement in KZN. This civil unrest spread to other parts of the country in July 2021. Between the start of Covid-19 and the civil unrest, over 250 000 SMEs closed down in South Africa (Mundhree & Beharry-Ramraj, 2022). Only nine months after the civil unrest, the KZN Province experienced a major flood disaster in April 2022. The flooding damaged infrastructure and disrupted value chains across multiple KZN industries (Hattingh, 2022). This resulted in over 17 000 more SMEs closing down in KZN (SEDA, 2023). These closures led to mass job losses and social degradation as SMEs contribute 59% of total employment in South Africa (SEDA, 2023). These facts are of relevance as South Africa's unemployment rate of 32,9% is one of the highest in the world (Statistics South Africa [Stats SA], 2023a).

Beyond the impact by these crises, South Africa continues to experience challenges related to infrastructure, which exacerbated the country's persistent energy and transport crisis (SEDA, 2023). A combination of these crises has had the effect of severely slowing down the South African economy since 2019 (SEDA, 2023). As the KZN Province is the second largest contributor to South Africa's total gross domestic product (GDP), the demand and supply shocks experienced in KZN had a ripple effect throughout the South African economy (SEDA, 2023; Stats SA, 2023b). The KZN Provincial Government (2024) emphasises that prolonged periods of exogenous shocks had the greatest impact on KZN's manufacturing sector. Prolonged periods of crises create setbacks for emerging economies and make them less competitive compared to advanced economies (SEDA, 2023). The effect of the abovementioned exogenous crises on South Africa's economy compared to advanced countries are graphically presented in **Figure 1** below. Unlike advanced economies, recent history shows that the South African economy took substantially longer to return to pre-crisis levels due to disruptions caused by multiple exogenous crises.

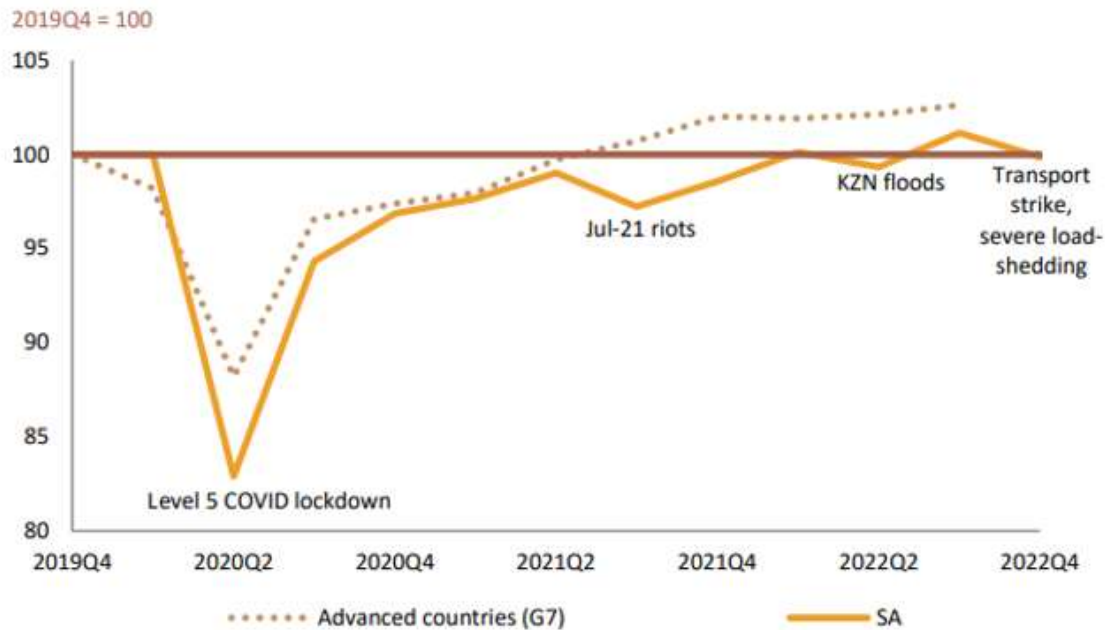


Figure 1: Effect of exogenous crises shocks on the South African economy compared to advanced countries (SEDA, 2023)

As multiple exogenous crises have a harmful and potentially long-lasting impact on SMEs and consequently on the economy, it is essential to understand how SMEs can respond to, withstand, adapt, or even grow during such periods. Key is identifying how SMEs can help facilitate economic recovery (Kalidas et al., 2020). The WEF (2022) suggest that in a period of crisis-induced disruption, it is no longer sufficient to optimise current BMs and wait until conditions stabilise. Instead, periods of crisis create multiple innovative, entrepreneurial opportunities as customers rapidly seek value from new products, services, or other offerings (Buntić et al., 2023; Filser et al., 2021; Fubah & Moos, 2022; Teece, 2018; Wenzel et al., 2020).

Using the early 2000s' examples of Uber and Airbnb, Teece (2018) explains how these firms sensed and seized the disruptive pace of technological advancement to innovate their BMs and transform the traditional taxi and lodging industries. The process of sensing, seizing, and transforming are the dynamic capabilities (DCs) that underpin successful BMs that firms have implemented to respond to disruptive conditions, such as exogenous crises (Miklian & Hoelscher, 2022). SMEs have an important role to play in this regard as although they have several limitations compared to their larger counterparts, they also tend to be more flexible, adaptive, and entrepreneurial (Alves et al., 2020; Clauss et al., 2022; Handley et al., 2021;

Miklian & Hoelscher, 2022). This give SMEs an advantage to sense and seize new market opportunities fast and transform their BMs to meet changing market needs (Buntić et al., 2023; Clauss et al., 2022). Despite these advantages linked to their small size, 75% of South African SMEs fail in the first five years of their establishment and many more fail after experiencing crises (Khoza et al., 2022). It is therefore important to understand SMEs' BMI in response to crises from a South African perspective as key learnings could enable more SMEs to survive and grow beyond such increasingly frequent challenging events.

1.2.2 Theoretical relevance of the research problem

The global and rapid shock of the Covid-19 pandemic and consequential economic impact has invited much research on the crisis from a crisis management lens (Miklian & Hoelscher, 2022). However, several countries across the world have experienced other exogenous crisis shocks related to financial crises, natural disasters, armed conflict, and social polarisation, which overlapped and extended the negative impacts of the Covid-19 crisis (Miklian & Hoelscher, 2022). The disruptive and seismic nature of these events has spurred a rapid need for research that broadens the literature on crisis management responses (Handley et al., 2021; Miklian & Hoelscher, 2022). However, it is evident that research on business responses to exogenous crises thus far has mainly focused on large organisations, including multinational corporations (Alves et al., 2020; Juergensen et al., 2020; Miklian & Hoelscher, 2022). Although multiple recent studies have considered SMEs' response to the Covid-19 pandemic, this has lagged the mounting research focusing on large organisations (Alves et al., 2020; Clauss et al., 2022; Handley et al., 2021; Juergensen et al., 2020). SME studies that are undertaken from a developing economy perspective are scarce (Eggers, 2020; Fubah & Moos, 2022; Reddy & Mamabolo, 2023). In stable economic environments, SMEs create the necessary stimulus in emerging economies that enables opportunities for employment creation and economic growth. So, it is important that they are not neglected in the crisis management literature (Fubah & Moos, 2022; Reddy & Mamabolo, 2023).

This paper explores the construct of SMEs' BMI as a response to multiple exogenous crises. The interest in BMI has grown steadily over the last 20 years in relation to technology shifts, which have become a more prominent disruptor of 'business-as-usual' practices (Foss & Saebi, 2017; Teece, 2018). As exogenous crises also disrupt

'business-as-usual', recent studies have begun to point towards BMI as an effective response to crises (Clauss et al., 2022; Filser et al, 2021; Hosseinzadeh & Nematollahi, 2020). However, SMEs also remain largely underrepresented in this field of research (Clauss et al., 2022; Müller, 2019), especially those in emerging economies (Eggers, 2020; Hosseinzadeh & Nematollahi, 2020). Dynamic Capability Theory (DC Theory) is commonly used to underpin studies concerning innovation and often refers to the need for sensing, seizing, and transforming capabilities that enable innovation (Teece, 2018). However, these terms are broadly explained in the literature and do not practically explain how SMEs adopt such sensing, seizing, and transforming capabilities (Buntić et al., 2023; Engelmann, 2023).

Saunila (2020) argues that an SME's ability to innovate their BM is central to gaining a competitive advantage over larger organisations. Clauss et al. (2022) support this view, stating that BMI is not only valuable but sometimes a necessity as severe crisis could render traditional BMs obsolete. While Miklian and Hoelscher (2022) do not disregard the need for BMI in response to exogenous crises, they caution that innovation in areas outside of an SME's core competencies may be risky, counterintuitive, and costly. Eggers (2020) pointed out that taking bigger risks during a crisis may therefore lead to undesirable outcomes for SMEs. Given the lack of resources and increased vulnerability of SMEs, Wenzel et al. (2020) also refer to other viable responses to crises, including retrenchment of employees and the sale of assets, preservation of existing BMs, or exiting the business altogether. These options are less risky and can also be successful responses when faced with crises. A post-Covid-19 study by Handley et al. (2021) on SMEs called for further research on how BMs have been innovated in response to exogenous crises. They also propose that a deeper understanding of the DCs that enable SMEs to sense and seize opportunities to transform and innovate their BMs is needed (Handley et al., 2021).

In summary, despite the recent literature on crisis management responses regarding Covid-19 and exogenous disruptions, and the growing body of knowledge on BMI, these two constructs have rarely been studied in conjunction with each other. Additionally, studies that address these constructs very rarely provide contextual insight covering SMEs and more specifically, SMEs in emerging economies. The research on DC for innovation also does not reflect practicality for implementation for

SMEs. This study therefore endeavours to bridge the identified research gaps and contribute to the literature on SMEs' crisis management and BMI in emerging economies. The recent crises in KZN offer a watershed time to unpack lessons from SMEs' lived experiences. As a few years have passed since the onset of Covid-19, the KZN civil unrests and floods, conducting the study at this stage provided the opportunity for reflective insight on SMEs' BMIs that were implemented.

1.3 Research questions

The overarching question explored in this study is: *How do SMEs implement BMIs in response to crises that result in survival and/or growth?*

The primary research question was unpacked into three sub-questions. Research question 1 concerns the SMEs response to crises. Research question 2 concerns the SMEs BMIs in response to crises. Research question 3 concerns the DCs that supported SMEs to adopt BMIs in response to crises and is split into three parts.

RQ 1: How did SMEs strategically respond to crises?

RQ 2: How did SMEs pursue BMI as part of their crisis response strategy to enable survival and/or growth?

RQ 3: With regards to the capabilities that enabled SMEs to implement BMIs:

RQ 3.1: How did SMEs sense the threats and opportunities arising from crises?

RQ 3.2: How did SMEs seize opportunities to innovate and mitigate threats arising from crises?

RQ 3.3: How did SMEs transform their BMs to enable survival and/or growth?

1.4 Research purpose

Although many SMEs have succumbed to recent exogenous crises and closed, some have successfully responded through innovation. The purpose of this study is to explore how SMEs adopted BMI to respond to exogenous crises and how this enabled them to survive and/or grow despite the crises. It further aims to understand what the antecedent DCs are for BMIs that enabled the survival and growth of these SMEs. Using case studies of South African SMEs, the study aims to add perspectives

as seen through an SME's lens and an emerging economies context. Both perspectives are currently underrepresented in the existing literature.

1.5 Research contribution

This study aims to contribute to the limited literature available combining the disciplines of crisis management and BMI. It does so through a DC theoretical framework, by aiming to shed light on the topic within an SME's and emerging economy context. The use of case studies contributes to academia and the small business sector with learnings gathered from the lived experiences of South African SMEs that have survived and/or grown through particularly challenging crises events.

1.6 Research scope

Miklian and Hoelscher (2022) note that SMEs in developed economies have an advantage when responding to crises as they have easy access to several resources, which are not available to SMEs in developing nations. Despite this local disadvantage, SMEs in emerging economies remain underrepresented in the crisis management (Fubah & Moos, 2022) and BMI literature (Eggers, 2020). Consequentially, it was considered valuable for this study to focus on SMEs in South Africa, especially since South African SMEs have faced unique crises. For instance, the KZN Province in South Africa experienced multiple, severe, exogenous crises events in the recent past that had caused major business disruption and forced many SMEs to shut down (Khoza et al., 2022; Mundhree & Beharry-Ramraj, 2022). Among those SMEs that were severely affected were several manufacturing firms as the demand and supply shocks caused by exogenous crises upended their value chains (Fubah & Moos, 2022; Khoza et al., 2022; Mnguni & Simbanegavi, 2020; Mundhree & Beharry-Ramraj, 2022; KZN Provincial Government, 2024).

To elaborate, in March 2020, KZN manufacturers experienced disrupted demand and supply channels arising from the Covid-19 lockdown restrictions (Fubah & Moos, 2022). Following the onset of the global Covid-19 crisis, in July 2021, socio-political civil unrest began in the KZN Province, resulting in businesses being looted and set alight, roads and railways being blocked, and the lives of civilians being put at risk (Elumalai et al., 2022; Khoza et al., 2022; Mundhree & Beharry-Ramraj, 2022). Transport and logistics disruptions prevented goods and services from being

delivered to businesses and prevented employees from travelling to work (Khoza et al., 2022). In April 2022, KZN experienced catastrophic floods that resulted in substantial loss of life, destroyed the homes of thousands and wrecked infrastructure supplying necessities, such as electricity and water, to homes and businesses (Hattingh, 2022). Further transportation and logistics challenges exacerbated the demand and supply shocks at the time. In conjunction with global crises, such as Covid-19 and the Russia-Ukraine war, these localised crises placed enormous pressure on KZN SMEs (Elumalai et al., 2022; Hattingh, 2022; Khoza et al., 2022; Mundhree & Beharry-Ramraj, 2022). The extended nature of each crisis resulted in lost revenues, disrupted supply chains and an inaccessible labour force, which rendered many SME BMs unfeasible for at least a period of time (Hattingh, 2022; Mundhree & Beharry-Ramraj, 2022).

In 2020, the South African Reserve Bank released a report, highlighting that Covid-19-induced demand and supply shocks had a significant impact on the country's manufacturing sector, which was already in a stage of de-industrialisation following the 2008 financial crisis (Mnguni & Simbanegavi, 2020). This is re-iterated by the KZN Provincial Government's (2024) recent socio-economic review, which reflects on the loss of income, value-add and jobs that were attributed to the sector's exposure to crises. The review highlights that manufacturing sub-sectors, such as textiles, clothing, leather goods, and wood and paper products, were more severely impacted by crises (KZN Provincial Government, 2024). These labour-intensive sub-sectors tend to hold weaker competitive advantages and are consequently, more vulnerable to crises as they produce goods that are easily replaced with local substitutes or inexpensive imports (KZN Provincial Government, 2024; Mnguni and Simbanegavi, 2020; SEDA, 2023). Due to the severity of the exogenous crises impacting the sector, this study only selected case studies operating within the KZN manufacturing sector, with a focus on highly competitive sub-sectors.

1.7 Outline of the research report

This exploratory study comprises seven chapters. Chapter 1 outlines the business relevance and theoretical need to explore SMEs' BMI as a response to exogenous crises. It explains the research purpose, contribution, and the scope of this study to focus on case studies of small and medium-sized manufacturers, operating in highly competitive sub-sectors within the KZN Province of South Africa. Chapter 2 follows

with a comprehensive literature review on crisis management and BMI. Both the 'response to crises' and 'business model innovation' constructs are unpacked further within an SME context. The literature review also unpacks the related theoretical frameworks on competitive advantage strategies and explains why the DC Theory is a suitable theoretical framework for the study. Chapter 3 presents the research questions that were derived from the literature review. Chapter 4 discusses the research methodology used to explore the research questions. Chapter 5 presents the findings and results of the research in a within-case and cross-case analysis of the six cases included in the study. Thematic analysis was used to identify common themes that explain the DCs that enabled SMEs to implement BMI as an effective response to crises. Chapter 6 discusses the findings in relation to the research questions and literature, while Chapter 7 concludes by summarising key findings, presenting recommendations, exploring the managerial implications and limitations of the study, and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter unpacks the extant literature on crisis management and BMI, as well as in the context of SMEs. The chapter also identifies the Resource-Based View Theory (RBV Theory) and DC Theory as relevant competitive advantage theoretical frameworks that apply, based on previous studies of a related nature. BMI as a crisis management response is then discussed in relation to the DC Theory. A roadmap of the literature review is presented in **Figure 2** below.

2.2 Response to crisis
Exogenous crises and threats to SMEs Crises response strategies <ul style="list-style-type: none">- Reactive crises response strategies- Proactive crises response strategies- SME capabilities for proactive crisis response strategies
2.3 Strategic management theories for competitive strategies
Resource-based view theory Dynamic capability theory
2.4 Business model innovation
Business model innovation definition and elements SME dynamic capabilities for business model innovation <ul style="list-style-type: none">- Dynamic capabilities: Sensing- Dynamic capabilities: Seizing- Dynamic capabilities: Transforming
2.5 Business model innovation of SMEs in response to crises
2.6 Conclusion

Figure 2: Roadmap of literature review (Author's compilation)

2.2 Response to crises

2.2.1 Exogenous crises and threats to SMEs

Salamzadeh and Dana. (2022) define crisis as “an unexpected or unpredictable low probability-event, which is extreme with high impact” (p.39). In their crisis management review, Bundy et al. (2017) also highlight that crises are harmful and threatening for organisations and therefore require a quick and effective response.

Although crises in a broad sense can arise from unpredictable internal or external circumstances, Sornette (2006) made a distinction between the endogenous and exogenous origins of crises. Both endogenous and exogenous crises have an impact on the economy, but endogenous shocks arise from within the control of the economic system, whereas exogenous shocks arise from outside the economic system but still have a sudden, drastic, and unpredictable impact on macroeconomic activity as well as on individual businesses (Reddy & Mamabolo, 2023; Sornette, 2006). These include events such as pandemics, natural disasters, social unrest, social revolutions, and armed conflict, among others (Sornette, 2006). The direct business implications of exogenous crises include demand and supply disruptions, financial loss, a high risk of lending and borrowing, morale issues and the potential for business closure (Miklian & Hoelscher, 2022).

Severe exogenous crises affect all businesses in some way, and they are often more detrimental and have a longer lasting impact on SMEs (Miklian & Hoelscher, 2022). For the purposes of this study, SMEs are broadly defined as any business permanently employing less than 250 people (Department of Small Business Development, 2020). Recent studies have pointed out that SMEs are particularly vulnerable to crisis as they have limited access to funding and resources, and most of them lack crisis management preparedness (Alves et al., 2020; Clauss et al., 2022; Eggers, 2020; Handley et al., 2021; Miklian & Hoelscher, 2022). Furthermore, they tend to operate simplistic, undiversified BMs, which means that they are more exposed to demand constraints and stifled sales revenues when crises occur (Alves et al., 2020; Clauss et al., 2022; Miklian & Hoelscher, 2022; Müller, 2019). Due to their vulnerability, SMEs are more likely to suffer from financial losses, cash flow constraints and an inability to meet their financial obligations, inevitably causing many SMEs to close (Alves et al., 2020; Khoza et al., 2022). For this reason, financial institutions tend to assign a higher risk profile to SMEs, which further limits their access to debt financing during crises (Clauss et al., 2022; Eggers, 2020; Fubah & Moos, 2022; Miklian & Hoelscher, 2022; Terziowski, 2010).

Researchers have found that in South Africa, SMEs face further entrepreneurial challenges owing to a lack of skilled employees, managerial and government support, low levels of research and development (R&D), outdated information technology, a culture of striking, high labour costs, and a lack of the

owners/managers' self-confidence (Fubah & Moos, 2022; Khoza et al., 2022). These challenges place a greater burden on the SME's leader during times of crises as a significant amount of time is spent on the day-to-day running of the business. This impedes their ability to actively engage in strategic crisis management, despite the fact that the leader has a critical role to play in managing crises effectively (Alves et al., 2020; Handley et al., 2021). It is therefore necessary to understand the crisis management responses available to SME leaders to strategically position their SMEs to become more resilient against the threat to their businesses by exogenous crises.

2.2.2 Crisis response strategies

The crisis management literature points towards the implementation of strategies that enable business leaders to address the crisis events and take rapid steps towards recovery and stabilisation (Salamzadeh & Dana, 2022). As Bundy et al. (2017) explain, the crisis management process traditionally runs through three phases, namely pre-crisis planning and prevention, crisis management, and post-crisis outcomes. However, as Doern (2021) suggests, crisis management is not linear but rather an iterative and continuous process in the case of exogenous crises. Recent events have shown, exogenous crises cannot be prevented and should rather be anticipated. Crisis response strategies are therefore outlined under the headings of reactive crisis management response strategies and proactive response strategies to explain the various strategies that SMEs can adopt when facing crises.

2.2.2.1 Reactive crisis response strategies

Vašíčková (2019) explains that reactive crisis responses often begin with an identification and awareness of the crisis and are usually employed, where levels of exposure are uncertain and financial losses need to be curbed. In their study on strategic responses to crises, Wenzel et al. (2020) highlight three reactive crisis response strategies, namely retrenchment, preservation, and exit, each of which are further discussed here.

Retrenchment entails the retirement (or sale) of assets and employee downsizing, as well as other cost saving measures to limit any financial leakage during a time of crisis (Buntić et al., 2023). This response is reactive in that it is a defensive measure against crises and is considered necessary in the short term (Wenzel et al., 2020), especially when market demand and revenue streams are disrupted. Retrenchment

is therefore a perceived enabler for survival in response to sudden and uncertain exogenous crisis events (Hosseinzadeh & Nematollahi, 2022). However, when crises persist over the longer term, retrenchment can result in the erosion of the firm's BM (Wenzel et al., 2020). Retrenchment also has a negative impact on employees' morale and productivity, and it can be a counterintuitive response to crises (Wenzel et al., 2020).

Preservation is a response strategy used to sustain the BM and wait out a crisis until some form of normalisation resumes (Wenzel et al., 2020). A firm might become irrelevant to its clients or customers by waiting out a crisis, but it may be an effective strategy in the medium term, where they are dependent on a past value proposition offered by the business (Clauss et al., 2022; Wenzel et al., 2020). *Exit* is a strategy aimed at cutting a firm's losses by discontinuing its operations. It is seen as a last resort response to crisis (Clauss et al., 2022; Wenzel et al., 2020).

While reactive crisis response strategies tend to focus on creating stability, it is becoming increasingly unsustainable in an environment, where the effects of crises continue to prevail and new crises tend to emerge (Buntić et al., 2023). As a result, the proponents for proactive crisis response strategies are increasing. Buntić et al. (2023) further suggest that it is not uncommon for SMEs to adopt a combination of reactive and proactive post-crises measures.

2.2.2.2 Proactive crisis response strategies

During periods of crisis, SMEs may pursue a proactive strategic response by seeking out opportunities to create value outside of or in addition to their traditional BMs. Exploring and exploiting new opportunities can enable businesses to not only survive but to grow because of the crisis (Bundy et al., 2017). The crisis management scholars refer to this as a *pivoting, renewal, or innovation strategy* (Bundy et al., 2017; Clauss et al., 2022; Miklian & Hoelscher, 2022; Wenzel et al., 2020). History suggests that businesses that pivoted towards innovation through the 2008 global financial crisis were able to outperform the market by up to 10% during the crisis and 30% in the three to five years after the crisis (Am et al., 2020).

Fasth et al. (2022) argued that, while crisis management studies in the past have focused heavily on proactive pre-crisis planning and risk management, these are not

activities that are commonly found in SMEs' unstructured environments. Despite a lack of crisis preparedness, many SMEs have experienced post-crisis success (Fasth et al., 2022). Crisis management practitioners have therefore called for a need to understand the SME capabilities that have enabled their proactive approach to the onset of crises (Bundy et al., 2017; Wenzel et al., 2020).

2.2.2.3 SMEs capabilities for proactive crisis response strategies

In a study of SMEs in times of crisis, Eggers (2020) identifies that SMEs with a posture for innovation and proactivity tend to be enabled to unlock opportunities to grow amidst disruptive crisis periods. Despite their inherent limitations, SMEs were able to employ other capabilities to respond proactively. Sarkar and Clegg's (2021) Covid-19 study reveals that one of the first responses of proactive firms was to engage in *sense-making* by perceiving and interpreting the crisis, accepting that the crisis was beyond their control, and then taking stock of how the SME could potentially respond. Sense-making entails an ongoing analysis of the impacts of a crisis as it unfolds, as well as a concurrent analysis of the SME's strengths and weaknesses (Salamzadeh & Dana, 2022). Sense-making enabled these SMEs to seek out opportunities for survival, renewal and/or growth amidst the crisis (Sarkar & Clegg, 2022).

Proactive firms also demonstrate signs of being very resilient (Doern, 2021, Sarkar & Clegg, 2022). As Doern (2021) explains, in the context of a crisis, *resilience* denotes the ability to endure a crisis and emerge stronger on the other side of it. Doern (2021) states that in the case of SMEs, resilience also infers the SME leader's self-efficacy during a crisis and the need to regulate emotions. A key determinant of resilience tends to be the experience of having survived previous crises (Doern, 2021). Similarly, when Miklian and Hoelscher (2022) studied SMEs and exogenous crises, they identified that the more SMEs encounter crises, the more they gravitate towards proactive crisis response strategies and away from reactive ones. SMEs are therefore more poised for innovation after having survived multiple crises. Further resilience mechanisms of SMEs include their core competencies, and access to resources which help them to bounce back and start trading after a crisis occurs (Clauss et al., 2022; Miklian & Hoelscher, 2022).

Bundy et al. (2017) highlight the importance of *effective communication* in supporting leaders to share information and frame a crisis as an opportunity as opposed to a threat. Framing crises in a positive way enables the leader to rally the support of employees and stakeholders to proactively pursue opportunities arising from them in Alves et al.'s (2020) study. Crisis-framing has been found to be more effective when the leader has a positive attitude towards facing a crisis (Weaven et al., 2021). Bundy et al. (2017) also stress that an effective communication strategy in the immediate response to a crisis is essential due to the emotional instability that initially ensues among employees and stakeholders. Communication that conveys transparency to employees and stakeholders helps to foster a sense of community and togetherness during a crisis and to further its sensemaking activities (Vašíčková, 2019).

Previous studies have identified that a trusted *support network* is needed during a crisis (Alves et al., 2020; Bundy et al., 2017; Clauss et al., 2022; Doern, 2021; Miklian & Hoelscher, 2022). SME support networks typically include supportive customer partnerships, supplier and network partnerships, communities, and government support. Effective communication helps to build a relationship of trust with network partners and also helps to learn from them (Alves et al., 2020).

Alves et al. (2020) highlight the importance of *dynamic learning*, which entails learning through the experience of a crisis and what it entails to continue responding proactively. As the impacts of exogenous crises start to unfold, it begins to shed light on crisis management gaps within the business that need to be addressed (Doern, 2019). Alves et al.'s (2020) Covid-19 study reveals that SMEs that were more open to learning about their crisis management weaknesses were subsequently more proactive in taking swift corrective actions.

Crisis planning activities have appeared regularly in the crisis management literature as a proactive capability (Coombs & Laufer, 2018; Fasth et al., 2022; Salamzadeh & Dana, 2022). Bundy et al. (2017) indicate that firms that plan for the eventuality of crises are more capable of handling them effectively and preventing potential harm caused by them. Crisis planning activities usually encompass risk management, scenario planning, holding emergency cash reserves, disaster recovery planning, crisis communication planning, and the establishment of crisis response teams

(Coombs & Laufer, 2018; Salamzadeh & Dana, 2022). Ideally these activities occur prior to a crisis, but they tend to be extremely limited in SMEs (Fasth et al., 2022).

Many studies have deduced that the innovation strategy of SMEs is enabled by the *entrepreneurial orientation* of the leader (Clauss et al., 2022; Doern, 2019; Eggers, 2020; Handley et al., 2021; Miklian & Hoelscher, 2022). Entrepreneurial orientation encompasses the ability to identify opportunities, take risks and exploit opportunities arising from crises (Eggers, 2020). Salamzadeh and Dana (2022) refer to the phrase “disaster entrepreneurship” to explain the exploitation of crises to generate alternative business opportunities (p.38). Due to lower levels of bureaucracy, and higher degrees of flexibility, speed of action, and adaptability, SMEs are more entrepreneurial and able to make agile decisions that enable innovation during a crisis (Clauss et al., 2022; Miklian & Hoelscher, 2022; Wenzel et al., 2020). Their flexibility and adaptability of manoeuvring through the changes in the physical, regulatory, and business environment during a crisis enhances their entrepreneurial capacity (Miklian & Hoelscher, 2022). The SME capabilities for proactive crisis responses commonly identified in prior studies have been summarised in **Table 1**.

Table 1: SME capabilities for a proactive crisis response

Capabilities	Reference
<i>Sensemaking</i>	Salamzadeh & Dana, 2022; Sarkar & Clegg, 2022;
<i>Resilience (including core competencies and resources)</i>	Clauss et al., 2022; Doern, 2021; Miklian & Hoelscher, 2022; Sarkar & Clegg, 2022
<i>Effective communication</i>	Alves et al., 2020; Bundy et al., 2017; Vašíčková, 2019; Weaven et al., 2021
<i>Support network</i>	Alves et al., 2020; Bundy et al., 2017; Clauss et al., 2022; Doern, 2021; Miklian & Hoelscher, 2022
<i>Dynamic learning</i>	Alves et al., 2020; Doern, 2021
<i>Crisis planning</i>	Bundy et al., 2017; Coombs & Laufer, 2018; Fasth et al., 2022; Salamzadeh & Dana, 2022
<i>Entrepreneurial orientation</i>	Clauss et al., 2022; Doern, 2019; Eggers, 2020; Handley et al., 2021; Miklian & Hoelscher, 2022; Salamzadeh & Dana, 2022; Wenzel et al., 2020

Source: Author’s compilation

2.3 Strategic management theories for competitive advantage

2.3.1 Resource-based view theory

The RBV Theory is a strategic management theory that garnered the attention of researchers in the 1980s and early 1990s, when management scholars began to look at the strategic influence of a firm's internal resources and how it enabled businesses to gain a sustainable competitive advantage. RBV theory postulates that all firms are heterogenous, meaning that in a given industry, no two firms are alike. Therefore, they are able to compete based on their unique core competencies (Chumphong et al., 2020; Rodrigues et al., 2021; Teece et al., 1997). Core competencies include any tangible or intangible internal resource that is valuable, rare, inimitable, and non-transferable that, consequently, gives the business a competitive advantage (Chumphong et al., 2020, p.132). These resources may include internal competencies and resources such as strategic planning, leadership and managerial capacity, entrepreneurship and innovation orientation, human resources, networks and partnerships, and financing (Rodrigues et al., 2021; Terziovski, 2010), reputation and core assets (Teece et al., 1997).

RBV theory is aimed at strategically aligning a firm's core competencies and internal resources to achieve improved performance by creating superior products, boosting productivity of resources, and improving operational efficiencies (Chumphong et al., 2020; Teece et al., 1997). It is therefore important that businesses spend time identifying which core competencies and internal resources are truly distinctive and then mastering them to obtain and retain a competitive advantage (Teece et al., 1997). Acquiring a competitive advantage attracts sustainable financial returns and therefore enables businesses to grow (Buntić et al., 2023). RBV theory is therefore important for SMEs, given their inherent survival challenges.

Fubah and Moos (2022) adopted the RBV theory in their study, exploring Covid-19 challenges and the coping mechanisms of SMEs in the South African entrepreneurial ecosystem. The theory was selected upon the basis that in times of crises, scarce internal resources and capabilities need to be redistributed to different departments that require more attention during the period of crisis. However, this approach may not always be feasible as SMEs tend to have simplified BMs and hence, fewer departments among which internal resources can be spread. The RBV theory also

suggests that future decisions should be strategically inferred, based on past decisions regarding a firm's chosen competencies (Teece et al., 1997). Wenzel et al. (2020) suggest that the RBV theory is appropriate for a preservation strategy in response to crises in the short term, but that it is less valuable when an SME chooses to innovate. Additionally, when disruptive changes occur in the external environment, it may not be feasible to rely solely on existing internal competencies and resources (Teece et al., 1997; Weaven et al., 2021). Resources are generally limited for SMEs and the ability to access and optimise them becomes even more difficult during a crisis (Weaven et al., 2021). Instead, capabilities that go beyond efficiency and optimisation competencies are needed to innovate an SME's BM. This is where the DC theory is useful as it builds on the RBV theory and posits the view that in addition to core competencies and internal resources, new resources and core competencies need to be derived from changes in a rapidly changing external environment to sustain and grow through innovation (Teece et al., 1997).

2.3.2 Dynamic capability theory

DC theory is a strategic management theory that originated amidst the dot com bubble, which signalled an era of disruption brought about by rapid technological change (Teece et al., 1997). In their seminal citation, Teece et al. (1997) referred to DC as "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (p.516). Rodrigues et al. (2021) separated DC into its constituent components, explaining that the term 'dynamic' refers to the ability to be consistently responsive to enable reconfiguration or innovation. 'Capabilities' refers to the ability to integrate, learn and reconfigure resources that ultimately enable a firm to distinguish itself among competitors (Rodrigues et al., 2021). DC therefore explains the ability of a business to adapt, innovate, and renew itself to establish new forms of competitive advantage in response to an environment of change and disruption (Vu, 2020). DC Theory is therefore of significance for firms that experience disruption due to severe crises and seek out alternate forms of competitive advantage for renewal.

Although previous studies have referred to DC as a vague concept, Eisenhardt and Martin (2000) attempted to simplify DCs by explaining that they are the underlying processes, past experience, skills, and routines of a firm from which it derives a competitive advantage. They use examples of product development routines,

strategic decision-making routines, and knowledge creation routines, among many others (Eisenhardt & Martin, 2000). DC theory suggests that businesses accumulate a competitive advantage by consistently offering something unique, and something that is difficult for rivals to replicate (Teece, 2018).

Engelmann (2023) adds to the DC literature from an SME perspective noting that competencies are not merely built by ostensive routine as previous literature suggests but are rather performative and emerge as part of day-to-day business activities and engagements with people and the business environment. For example, capabilities such as entrepreneurial orientation, creativity, imagination and learning usually arise from non-routine activities that SMEs perform (Engelmann, 2023). Since SMEs are more unstructured with their approach to strategy, they tend to leverage DCs in a more interactive and informal manner (Engelmann, 2023).

The DC theory is regularly cited as the foundational theory for BMI (Foss & Saebi, 2017). The DC framework for BMI entails the process of sensing and seizing opportunities, and transforming the BM in a manner that gives the firm a competitive advantage (Teece, 2018). Teece (2018) refers to sensing, seizing, and transforming as first-order DCs that overarch and aggregate second-order DCs. Schilke (2014) clarified that second-order capabilities more specifically explain the routines, skills, and attributes that underly the sensing, seizing, and transforming capabilities that generate a competitive advantage. Whilst many studies discuss first-order DCs at length, very few highlight the underlying second-order DCs that explain the attributes, skills, and routines of firms that lead to superior performance (Schilke, 2014).

2.4 Business model innovation

2.4.1 Business model definition and elements

Business model innovation is a modern form of innovation that has attracted the attention of scholars since the early 2000s as it is a concept used to explain the disruption of traditional industries as we know it (Foss & Saebi, 2017; Teece, 2010). Teece (2018) demonstrates that Uber and Airbnb were able to disrupt the traditional taxi and lodging industries by innovatively modelling their start-ups on the sharing economy rather than on the ownership of physical assets. These 'out-of-the-box' businesses that challenged the status quo have invited wide interest in the concept

of BMI, particularly with regard to disruption (Foss & Saebi, 2017). Foss and Saebi (2017) define BMI as “designed, novel, nontrivial changes to the key elements of a firm’s BM and/or the architecture linking these elements” (p.202).

To unpack ‘business model innovation’ or BMI, it is important to first understand the concept of a ‘*business model*’. A BM refers to the way a business is configured to deliver, create, and capture value (Foss & Saebi, 2017). It is the way a business provides valuable products and services to customers, exchanges that value for payment, and yields a profit from that exchange (Teece, 2018). While management researchers have found various ways of conceptualising the different elements that concisely describe a BM, many agree that the three key elements are its value proposition, value creation methods and value capture mechanisms (Clauss et al., 2022; Filser et al., 2021; Geissdoerfer et al., 2018; Heider et al., 2020; Müller, 2019; Teece, 2018).

Value proposition encompasses the value delivered through the core product or service offered to a customer. The value created entices a customer to purchase products and services from a business, if it offers benefits that meet the customer’s needs more successfully than those from other competitors (Heider et al., 2020; Müller, 2019; Teece, 2018). *Value creation* explains the process and boundaries by which a business fulfils customers’ requirements by meeting their needs and expectations. It refers largely to the firm’s internal resources and capabilities, key activities, and value chain network (Heider et al., 2020; Müller, 2019; Teece, 2018). *Value capture* refers to the strategies and mechanisms a business employs to generate revenue and extract value from the market (Clauss et al., 2022; Heider et al., 2020). This includes all activities related to the generation of revenue for the business (Teece, 2018).

Chesbrough (2010) suggested that the value proposition, value creation and value capture elements of the BM should reflect the competitive strategy by which the firm distinguishes itself in the marketplace, so that it can own a competitive advantage over other firms. This is reinforced by Teece (2018), who proposes that the effectiveness of the BM’s design depends on the business’s capabilities and how closely these align with the competitive strategy. However, Müller’s (2019) view is that when external conditions change drastically, the BM must also be adapted or

replaced to ensure long-term profitability. Adaptations to external conditions give rise to BMI. Heider et al. (2017) argue that successful BMIs usually entail the adjustment of more than one component of the BM to be successful. Consequently, BMI could result in radical change that could pose a high risk or could offer a long-term competitive advantage that secures lasting economic rewards (Teece, 2010). Thus, BMI provides SMEs with an opportunity for creating a sustainable, long-term, competitive advantage, if and when there are signals of a changing external environment and businesses are forced to adapt to changing conditions. Several strategic management scholars have recommended a BMI that leverages a combination of existing and new capabilities as a direction for strategic renewal and growth, following periods of disruption (Chesbrough, 2010; Cucculelli & Peruzzi, 2021; Handley et al., 2021).

Despite the increasing evidence of BMI successes, businesses have experienced several challenges with effectuating them (Chesbrough, 2010; Geissdoerfer et al., 2018). This is mainly due to businesses missing the signals of changing external environments, when they are unable to act fast enough to identify the appropriate BMIs that are needed (Geissdoerfer et al., 2018). Second, establishing a BM takes a significant amount of organisational and entrepreneurial time and effort. Therefore, letting go of old BMs is not easy to do (and not popular by others in the business) when time and resources have been invested into a BM that has proven to be successful in the past (Chesbrough, 2010; Geissdoerfer et al., 2018). Third, a new BM bears significant risk as it is not certain that the BMI will be successful; mistakes during implementation and failures of the innovated BM may impair the reputation of the existing BM (Chesbrough, 2010). Lastly, BMI is a firm-specific strategic exercise, meaning that there is no prescribed process that will work equally well for all businesses (Girotra & Netessine, 2014). This implies that even when firms are able to identify the signals for BMI and can conceptually design or envision what the innovated BM would or should look like, actually implementing it with the appropriate configuration of resources and capabilities is a process of trial and error (Chesbrough, 2010). Geissdoerfer et al. (2018) refer to this as the design-implementation gap of BMI.

2.4.2 Business model innovation of SMEs in response to crises

As SMEs tend to operate simplified BMs, mostly because of their limited resources and capabilities, their BMs are inherently more vulnerable to exogenous crises than are larger businesses. However, exogenous crises also present opportunities for the development of new products, the identification and targeting of new market segments, and new BMs to emerge, which could be advantageous for SMEs. It is therefore imperative that SMEs take the appropriate strategic actions to respond to crises by mitigating the potential threats and/or seizing the potential opportunities. SMEs are presented with the options of either employing reactive or proactive crisis response strategies. Both strategies can be advantageous for SMEs under specific circumstances, but only a proactive crisis response strategy is understood to unlock new opportunities for growth by employing a 'pivoting' or 'innovation' strategy (Wenzel et al., 2020).

Several researchers point towards BMI as an avenue for the growth of SMEs as a response to crises (Alves et al., 2020, Clauss et al., 2022, Handley et al., 2021; Miklian & Hoelscher, 2022; Wenzel et al., 2020). Many studies have demonstrated that disruptive crisis conditions can act as a catalyst for SMEs to explore new possibilities and BMs (Clauss et al., 2022; Fubah & Moos, 2022; Miklian & Hoelscher, 2022; Wenzel et al., 2020). However, Eggers' (2020) study on SMEs in crisis states that SMEs that proactively pursued market opportunities for strategic growth were more likely to survive and grow during a crisis than those that pursued innovation as a necessity.

BMI presents more unique challenges and opportunities for SMEs. BMI is a strategic intervention that requires the dedicated effort of the leader/owner to drive it (Chesbrough, 2010). The process can be especially taxing on the owner, who might not have the time and capability to innovate in addition to running the business (Chesbrough, 2010; Rodrigues et al., 2021), especially when facing a crisis. Although BMI can be implemented incrementally, the introduction of new products, processes or new market segments will require access to new skills and financial resources, which are normally limited for SMEs (Müller, 2019). BMI may also necessitate multi-skilled employees and access to technological resources, which also are not easily available to SMEs (Müller, 2019), and less accessible to SMEs in emerging economies (Meyer et al., 2018). Despite these challenges, BMI has been

found to have a positive effect on the survival and growth of SMEs, if and when they have been implemented effectively (Clauss et al., 2022; Filser et al., 2021).

While BMI has its inherent challenges and risks, exogenous crises tend to act as an opportunity to experiment with BMI (Cucculelli & Peruzzi, 2020). Although analysing and planning for BMI is important, Chesbrough (2010) suggested that experimenting with BMI was necessary to escape 'analysis paralysis' as valuable data and learnings come about from the experimentation process, which can help to enhance the BMI's success. Clauss et al. (2022) also state that temporary BMI can be employed by SMEs to respond to crises for a limited period of time. Their study reports that temporary BMIs can help to sustain a business during times of crisis, without bearing the risk of dismantling existing BMs or making significant irreversible investments into new BMs (Clauss et al., 2022). According to Clauss et al. (2022) temporary BMIs have been found to be most successful and lead to long-term prospects when they align with the SME's competitive strategy and core competencies. However, as BMI lacks a prescribed process, scholars have leaned on the DC theory in an attempt to study the unique attributes, capabilities and competencies of SMEs that lead to successful BMIs (Bundy et al., 2017; Chumphong et al., 2020; Engelmann, 2023; Filser et al., 2021; Heider et al., 2020; Rodrigues et al., 2021; Weaven et al., 2021).

2.4.3 SME dynamic capabilities for business model innovation

DC theory is a perspective that scholars are increasingly leaning towards to deal with disruption (Buntić et al., 2023). This is attributed to its practicality in respect of dealing with change and finding innovative ways to remain competitive (Chumphong et al., 2020; Filser et al., 2021; Handley et al., 2021; Miklian & Hoelscher, 2022; Millar et al., 2018; Rodrigues et al., 2021; Teece, 2018). Importantly, dynamic capabilities have been found to support innovation (Chesbrough, 2010; Engelmann, 2023; Filser et al., 2021; Weaven et al., 2021). Teece et al.'s (1997) framework of sensing, seizing, and transforming DCs is commonly used to explain SMEs' unique DCs. In the case of SMEs, DCs for innovation tend to be less structured (Engelmann, 2023). However, researchers have attempted to identify the underlying second-order DCs that enable the effectiveness of the first-order DCs of sensing, seizing, and transforming.

2.4.3.1 Dynamic capabilities: Sensing

Sensing capabilities entail the recognition of threats and opportunities for innovation in the external environment and connecting them with the firm's abilities and resources (Teece, 2018). Ibarra et al. (2020) elaborate on sensing, explaining that it encompasses *sense-making capabilities*, such as scanning and interpreting market patterns for changing customer needs, emerging industry trends, and staying up to date with technological advancements that could be leveraged or pose a risk. Sense-making requires knowledge and information gathering to explore potential opportunities and threats. Weaven et al. (2021) state that knowledge and information can be sourced from business networks, industry peers, customers, and strategic business partners to aid the sense-making process. They suggest that collaborating with network partners enables the sharing of experiences, and gaining more market knowledge, thereby becoming better at 'doing business' (Weaven et al., 2021). Engelmann (2023) asserts that with SMEs, sensing occurs performatively in engagements with people and the business environment.

Communication is an important aspect of sensing as it enables the comprehension of shared experiences and collaboration during particularly disruptive conditions (Weaven et al., 2021). Engelmann's (2023) multiple-cases study re-iterates that the sensing process is aided by communication with key individuals who can add value by problem-solving, critiquing, giving feedback, or challenging potential decisions. Open, transparent communication leads to a better ideas generation that in turn, leads to a more thorough decision-making process (Engelmann, 2023).

Rodrigues et al. (2021) state that sensing is also enhanced through the ability to engage in *strategic planning* by exploring alternatives based on uncertain possibilities. Ibarra et al.'s (2020) study on established SMEs emphasises the critical need to plan for BMI and carefully consider conflicting aspects of traditional BMs. They claim that a BMI strategy should align with the SME's growth strategy (Ibarra et al., 2020). With SMEs, the leader is at the epicentre of sensing the need for strategic changes. Their interpretations of changing environmental conditions are largely influenced by their personal attributes, experiences, and values (Rodrigues et al., 2021). Saunila (2020) corroborates the importance of top *leadership's capabilities* in driving innovation. Sensing activities mostly reflect the leader's short-

term strategic goals (Rodrigues et al., 2021). The identified sensing capabilities for SMEs are summarised in **Table 2**.

Table 2: SME sensing capabilities

Capabilities	Reference
<i>Sensemaking</i>	Engelmann, 2023; Ibarra et al., 2020; Weaven et al., 2021
<i>Communication</i>	Engelmann, 2023; Weaven et al., 2021
<i>Strategic planning</i>	Ibarra et al., 2020; Rodrigues et al., 2021
<i>Leadership capability</i>	Rodrigues et al., 2021; Saunila, 2020

Source: Author's compilation

2.4.3.2 Dynamic capabilities: Seizing

Teece (2018) explains that *seizing* capabilities refers to the agility with which a firm can quickly make strategic decisions on identified opportunities by deploying resources, reconfiguring processes, or entering new markets. Weaven et al., (2021) mention that an important element of 'seizing' lies in the effectiveness of the *decision-making* process. Since the leader of the SME is usually the owner, strategic decisions tend to be more informed and can be made with agility (Chesbrough, 2010; Eggers, 2020). The leader's involvement also ensures that swift actions are taken to mobilise BMIs (Chesbrough, 2010; Eggers, 2020). Seizing encompasses decisions about which products to take into or out of the market, which segments the firms wishes to participate in and what investments the firm wishes to make in response to a changing business environment (Buntić et al., 2023).

Saunila (2020) states that *entrepreneurial orientation* is a determinant of innovation in SMEs. It encompasses the ability to be flexible, adaptable and to possess the willingness to take risks (Rodrigues et al., 2021; Teece et al., 1997). SMEs have an advantage over larger firms when it comes to BMIs as they tend to be more entrepreneurial, fast and flexible, adaptable, and agile when making strategic decisions due to their smaller size and lower levels of bureaucracy (Alves et al., 2020; Clauss et al., 2022; Handley et al., 2021; Miklian & Hoelscher, 2022). As a result, SMEs are well positioned to either exploit opportunities or mitigate threats through BMIs (Miklian & Hoelscher, 2022). Entrepreneurial orientation was also found to involve higher levels of risk-taking when pursuing opportunities because the outcomes of decisions made are far from certain in volatile environments (Rodrigues et al., 2021). In addition to risk-taking, Ibarra et al. (2020) refer to SMEs' experimental capability to generate rough ideas and trial them as business opportunities.

Rodrigues et al. (2021) identify *employees and human resource practices*, such as training and skills development, as key capabilities for success. Their study asserts the view that employees' knowledge and skills are intrinsic to an SME's success and that these result in a superior competitive advantage as they are less visible to and imitable by competitors (Rodrigues et al., 2021). Chumphong et al. (2020) elaborate that it is not only employees but the employees' talent that serves as a capability that offers a competitive advantage.

In addition to employees, external networks and partnerships have also been found to be a potential source of a competitive advantage in several SME studies (Rodrigues et al., 2021; Saunila, 2020; Weaven et al., 2021). Ibarra et al. (2020) demonstrate that SMEs' *collaboration capability* is critical as they may open up access to new products, markets, and other valuable synergies. SMEs have a collaborative capability advantage as they tend to have trusted, closer, supportive, and often individualised relationships with customers and industry peers. These assist them with effectuating BMIs and garnering support for new lines of business (Alves et al., 2020; Eggers, 2020). Weaven et al. (2021) therefore place emphasis on SMEs nurturing relationships with customers, suppliers and networks through communication and trust building to enable collaboration. The identified sensing capabilities for SMEs are summarised in **Table 3**.

Table 3: SME seizing capabilities

Capabilities	Reference
<i>Decision-making capability</i>	BuntiĆ et al., 2023; Chesbrough, 2010; Eggers, 2020; Teece, 2018; Vu, 2020; Weaven et al., 2021
<i>Entrepreneurial orientation</i>	Alves et al., 2020; Clauss et al., 2022; Handley et al., 2021; Ibarra et al., 2020; Miklian & Hoelscher, 2022; Rodrigues et al., 2021; Saunila, 2020; Teece et al., 1997
<i>Employees and human resource practices</i>	Chumphong et al., 2020; Rodrigues et al., 2021
<i>Collaboration capability</i>	Alves et al., 2020; Eggers, 2020; Engelmann, 2023; Ibarra et al., 2020; Rodrigues et al., 2021; Saunila, 2020; Weaven et al., 2021

Source: Author's compilation

2.4.3.3 Dynamic capabilities: Transforming

Transforming capabilities entails the redesign and realignment of the resources, operations, structure and the culture of the firm to fit a new BM (Teece, 2018). Engelmann (2023) illustrates that transformation is enabled by activities that anchor changes in the BM. This generally requires the *physical reconfiguration and design of a firm's resources* (Teece, 2018). Engelmann (2023) elaborates on the need for communication to be effective and for decisions made to be anchored in visible changes that demonstrate that a transformation has taken place. This is illustrated by the physical reconfiguration and design of firm's asset structure and changes in employees' roles (Teece, 2018). Engelmann's (2020) study of SMEs in Australia revealed that due to the co-ordination of people and processes, transforming was more effective with formalised project management techniques.

As BMI infers a significant variation from old BMs, Weaven et al. (2021) observed that the realignment of the *organisational culture* is important as it influences employees to align their behaviour with the new BM. Rodrigues et al. (2021) noted that company culture reinforced the human resource practices of firms which improved labour productivity in previous SME studies. Teece et al. (1997) attested that 'soft' transforming capabilities such as a firm's values and culture offer a competitive advantage as they need to be built from within and are therefore not easy to imitate (p.528). According to Weaven et al. (2021), *continuous individual and organisational learning* follows on from BMI as expertise begins to develop under a new business paradigm for employees, leaders, and the business itself. The importance of knowledge management as an innovation capability is similarly presented in Saunila's (2020) SME study. Other studies identify that learning is reinforced by R&D activities (Engelmann, 2023; Rodrigues et al., 2023; Weaven et al., 2021). These learnings are then fed back into the business for continuous learning and further development of the firm's dynamic capabilities (Teece, 2018). The identified transforming capabilities for SMEs are summarised in **Table 4**.

Table 4: SME transforming capabilities

Capabilities	Reference
<i>Reconfiguration and design of resources</i>	Engelmann, 2023; Teece, 2018; Vu, 2020
<i>Culture</i>	Rodrigues et al., 2023; Teece et al., 1997; Weaven et al., 2021
<i>Continuous learning</i>	Engelmann, 2023; Rodrigues et al., 2023; Teece, 2018; Weaven et al., 2021

Source: Author's compilation

2.5 Conclusion

This chapter presented an overview of the literature on strategic responses to crises. Reactive and proactive response strategies were identified as the main strategic responses available to businesses when faced with a crisis. SMEs capabilities for proactive crisis response strategies were identified based on prior studies. Two strategic management theories for competitive advantage (RBV theory and DC theory) were unpacked, with the DC theory put forward as the most relevant theory to underpin this study as it builds on the resource-based perspective. A literature review on BMI was also presented, explaining the definitions and elements of a BM which are relevant to this study. This chapter also highlights the views of some recent studies indicating that SME BMI is a viable response to the potentially detrimental impact of exogenous crises. Finally, the first-order and underlying second-order DCs for BMI were identified based on prior studies. The SME capabilities of a proactive crisis response strategy are strikingly similar to the DCs that have been found to enable innovation. **Figure 3** below presents the related research framework and research questions that this study seeks to explore in the next chapter.

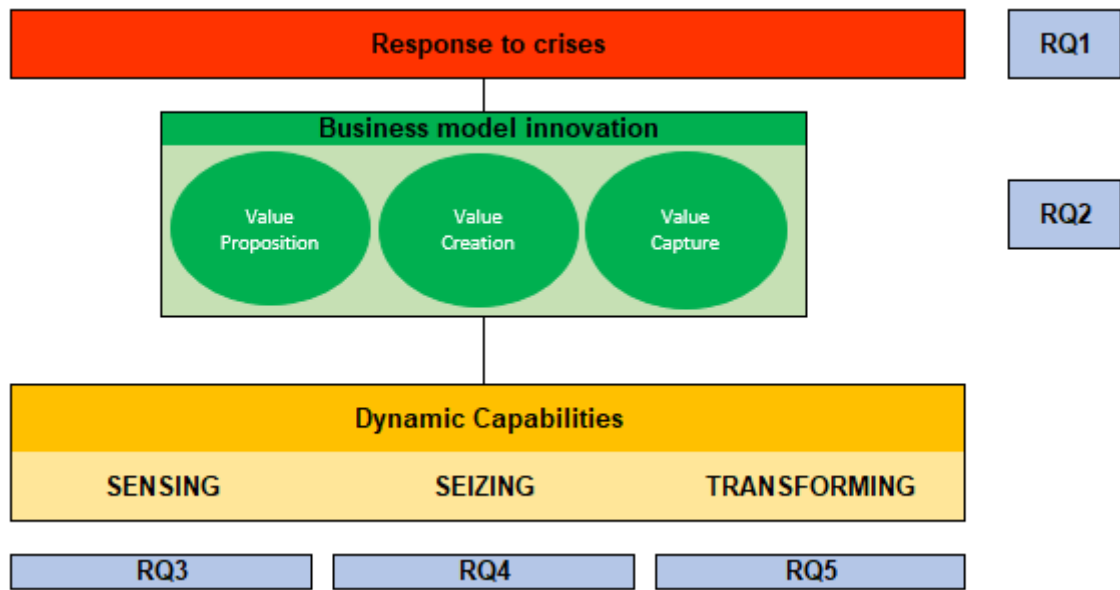


Figure 3: Research framework (Author's compilation)

CHAPTER 3: RESEARCH QUESTIONS

3.1 Introduction

The literature review revealed the need for BMI among SMEs in response to exogenous crises. It identified that a gap existed in terms of how BMI is implemented in practice, given that SMEs have unique attributes that could hinder or enhance the success of such BMIs. The research questions were formed from the identified research gaps and were summarised in a consistency matrix (see **Appendix A**).

3.2 Research problem and primary research question

The research problem is concerned with exploring BMI of SMEs as a response to exogenous crises. Proponents of BMI suggest that SMEs should leverage their advantages of flexibility, adaptability, entrepreneurial orientation, and agile decision-making to innovate the way they create, deliver and/or capture value (Clauss et al., 2022, Eggers, 2020; Filser et al., 2021; Ibarra et al., 2020; Müller, 2019). However, other researchers caution that BMI is a risky response to a crisis and SMEs should err on the side of caution when it comes to BMI as it could lead to costly mistakes further down the post-crisis path (Wenzel et al., 2020; Miklian & Hoelscher, 2020). Therefore, the overarching research question explored in this study was:

How do SMEs implement BMI in response to crises that results in survival and/or growth?

3.3 Secondary research questions

Combining the crisis management literature on crisis management responses and using Teece et al.'s (1997) interpretation of DCs, the research questions have been framed to understand how SMEs responded to crises, how they sensed the opportunities and threats in relation to the exogenous crises they experienced, how they seized such opportunities to make changes to their BMs and how they transformed their BMs, post-crises, to enable survival and/or growth. This study aimed to explore the secondary research sub-questions below.

3.3.1 Research sub-question 1

When exogenous crises occur, they often trigger a sense of fear, instability, and uncertainty (Bundy et al., 2017). SMEs can choose to respond reactively or

proactively to crises (Wenzel et al., 2020). However, as this study concerned multiple crises, SMEs may have responded differently to each crisis. Miklian and Hoelscher (2022) also report that the more crises SMEs face, the more proactive they become in responding to later crises. In addition, as this study concerns BMI of SMEs, there is an inherent assumption that SMEs would be predisposed to select proactive responses to crises. Therefore, this research sub-question sought to explore any peculiarities in SMEs' predisposition to proactive innovation response strategies, given the multiple, prolonged, and severe crises that the SMEs suffered, which might otherwise cause other SMEs to act more reactively. The first sub-question broadly explored how SMEs responded to the multiple crises they faced:

RQ 1: How did SMEs strategically respond to crises?

3.3.2 Research sub-question 2

One drawback of BMI for SMEs is that it requires a measure of risk-taking, which many SMEs are not in a position to do, particularly when facing disruptive crisis conditions (Alves et al., 2020; Wenzel et al., 2020). An innovation strategy is the result of a proactive crisis response strategy (Wenzel et al., 2020). SMEs typically operate simplistic BMs that are easily eroded by a crisis (Alves et al., 2020); however, they have the many small business advantages that make them more poised for innovation. The second research sub-question therefore aims to explore how SMEs adopted BMI that positioned them for survival and/or growth in response to crises.

RQ 2: How did SMEs pursue BMI as part of their crisis response strategy to enable survival and/or growth?

3.3.3 Research sub-question 3

Bundy et al. (2017) suggested a DC perspective to understand how some businesses respond innovatively to crisis. Rodrigues et al. (2021) attest that DCs can be used to explain how SMEs go about identifying and pursuing opportunities that support their strategic decisions to innovate. Following Teece et al.'s (1997) framework for innovation that encompasses the capabilities of sensing, seizing, and transforming, the third research sub-question was split into three parts:

3.3.3.1 Research sub-question 3.1

The initial stage of a crisis is a crucial time for SMEs to minimise the risk of unexpected losses and to leverage any opportunities that may arise (Salamzadeh & Dana, 2022). The identification of risks and opportunities falls under the DC of sense-making (Teece, 2018). Sense-making occurs at the initial stages of a crisis and is said to aid the innovation process (Teece, 2018). This sub-question explored sensing activities at the initial stage of crises.

***RQ 3.1:** How did SMEs sense the threats and opportunities arising from crises?*

3.3.3.2 Research sub-question 3.2

One drawback of BMI for SMEs is that it requires a measure of risk-taking, which many SMEs are not in a position to do (Alves et al., 2020; Wenzel et al., 2020). An innovation strategy is the result of a proactive crisis response strategy (Wenzel et al., 2020). Choosing a proactive response strategy follows from a decision-making process that measures the benefits against the risk of innovating (Coombs & Laufer, 2018; Salamzadeh & Dana, 2022). The decision-making process falls under the DC of seizing (Teece, 2018). This sub-question therefore explored seizing activities that led to BMI.

***RQ 3.2:** How did SMEs seize opportunities to innovate and mitigate threats arising from crises?*

3.3.3.3 Research sub-question 3.3

Proponents of BMI suggest that it will lead to a competitive advantage and subsequent growth in profitability (Alves et al., 2020, Clauss et al., 2022, Handley et al., 2021; Filser et al, 2021). However, the risk of reconfiguring an SME's BM could be costly and irreversible (Müller, 2019). Due to their inherent limitations, SMEs may also lack the capabilities to properly transform their BMs and curate a competitive advantage (Müller, 2019). Reconfiguration falls under the DC of transforming (Teece, 2018). This sub-question therefore explored transforming activities that enabled survival and/or growth led by the BMI.

***RQ 3.3:** How did SMEs transform their BM to enable survival or growth?*

The next chapter presents the methodology applied to answer these questions.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter outlines the research design and methodology adopted in this study to answer the research questions presented in Chapter 3. As this study aimed to explore how SMEs implement BMI in response to crises that result in survival and/or growth, it warranted a qualitative approach to gather rich insights from the research participants through semi-structured interviews.

4.2 Research design

4.2.1 Research philosophical paradigm

Guba and Lincoln (1994) explained that the research philosophical paradigm forms the basis of the belief system that guides the researcher to formulate knowledge in the pursuit of academic endeavour. It concerns the researcher's assumptions, worldview, perspectives, beliefs, and attitudes related to their view of reality (Žukauskas et al., 2018). Saunders and Lewis (2018) suggest that the research philosophical paradigm assumptions can be compartmentalised into three main categories, namely: ontological, epistemological, and axiological assumptions.

The ontological assumption concerns the nature of reality (Guba & Lincoln, 1994). As this study was conducted in the context of SMEs operating in the manufacturing sector in KZN, South Africa, it was assumed that reality was dependent on the context of the phenomenon being explored. This study focused on SMEs in this region of the world as these SMEs were believed to have different experiences of exogenous crises and BMI than larger businesses in advanced economies. Data were collected from the owners or leaders of each SME, each of whom fell into diverse demographic criteria, had different cultural backgrounds and varying levels of business experience. The experience of these participants as social actors in the study was expected to be unique as each SME was known to have experienced varying degrees of severity of the exogenous crises that impacted their businesses. It was necessary that the researcher played a key role in interpreting, analysing, and understanding the participants' experiences of exogenous crises and subsequent BMIs.

The epistemological assumption concerns the question of “acceptable, valid and legitimate knowledge and how we can communicate knowledge to others” (Saunders & Lewis, 2018, p.106). The researcher obtained in-depth insights of the participants’ lived experiences to subjectively co-construct knowledge on how these SMEs implemented BMIs in response to exogenous crises that resulted in their SMEs’ survival and/or growth.

The axiological assumption refers to both, the researchers and the research participants’ “values and ethics within the research process” (Saunders & Lewis, 2018, p.107). The researcher’s motivation to pursue this study arose from having experienced the impacts of exogenous crises within a large manufacturing organisation in KZN that pursued a reactive retrenchment response to the crises and continued to experience survival and growth challenges following the crises, such as Covid-19, civil unrest, and the floods in KZN. Having noticed how some SMEs had adopted BMI as a response to these crises, the researcher queried whether there was something to be learned from some SMEs’ ability to innovate in response to crises that can be replicated by large organisations. The leaders of the participating SMEs generally expressed a passion for their businesses and pride in their ability to innovate their BMs during tumultuous periods of crises. It is therefore important to acknowledge the inherent biases of the researcher and research participants that may be present in a study of this nature.

As this study placed an emphasis on understanding the individual experiences and perspectives of SME leaders as social actors, multiple realities were expected to emerge. Additionally, BMI in response to crises remains fragmented from the unique perspective of SMEs (Alves et al., 2020; Clauss et al., 2022; Handley et al., 2021). Consequently, an interpretivist research philosophical paradigm was deemed to be the most suitable for this study as it allowed for the flexibility to synthesise the varied, yet in-depth contextual points of view of the participants involved in the study (Creswell et al., 2007).

4.2.2 Research approach

This study explored how SMEs implemented BMIs in response to crises by collecting data from SME leaders who were willing to share their lived experiences. The study therefore followed an inductive reasoning research approach as it involved the

collection of data for the purpose of making observations of repetitive patterns, behaviours, and occurrences, upon which generalised conclusions were built (Saunders & Lewis, 2018). This implied a “bottom-up” approach (Saunders & Lewis, 2018, p.113) to this study, where emphasis was placed on a contextual understanding of how SMEs pursued innovation, and which DCs were frequently relied upon in order to pursue BMI in response to crises.

4.2.3 Methodological choice

This exploratory study adopted a multi-method qualitative choice. Saunders et al. (2009) explained that exploratory studies offer a valued means of assessing “what is happening, to seek new insights, to ask questions, and to assess phenomena in a new light” (p.139). Since little prior research exists on the specific research topic (Alves et al., 2020; Buntić et al., 2023; Clauss et al., 2022; Handley et al., 2021), the researcher sought to gather new, in-depth insights to understand SMEs’ experiences during periods of exogenous crises and how they implemented BMIs to successfully respond to them. An exploratory study aligns with a qualitative methodological choice as it allows for a comprehensive retelling of the phenomenon being explored (Saunders & Lewis, 2018). Cresswell et al. (2007) argued that a qualitative methodology is suited to open-ended research questions that invite the participants of the study to share their unique perspectives. Žukauskas et al. (2018) indicate that a qualitative methodology naturally follows from an interpretivist research design, where data are collected from the diverse views of the social actors participating in the study. A multi-method qualitative methodology suited this research as it was necessary to gain a detailed understanding of the crises events that had taken place and the BMIs that were implemented.

4.2.4 Research strategy

A multiple case study design strategy was deemed the most appropriate for the exploratory nature of this qualitative study. A case study attempts to “examine a contemporary phenomenon in its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 1981, p.98). BMI is a contemporary topic that has grown in prominence over recent years (Filser et al., 2021; Foss & Saebi, 2017; Teece, 2018). However, it had rarely been explored in the real-life context of multiple exogenous crises from the SMEs’ perspective (Miklian & Hoelscher, 2022). There had also been no obvious link between BMI and exogenous

crises. This study sought to gain an in-depth understanding of the underlying constructs. Depth of understanding the complex relationship between the underlying constructs can be achieved through a case study strategy, which involves multiple cases (Cresswell et al., 2007).

A case study strategy is appropriate for studies that seek to answer “how” or “why” questions concerning complex problems in real-life scenarios (Yin, 1981, p.10). The research questions and sub-questions discussed in Chapter 3 sought to answer questions related to how SMEs implemented BMIs in response to crises and how they employed DCs to do so. Wirtz and Daiser’s (2018) systematic literature review highlights that BMI studies over the last 20 years needed to be understood through a case study strategy. This reinforced the selection of a case study design strategy for this particular study.

The need for multiple perspectives from different SMEs further warranted a multiple case study design strategy. Multiple representative cases result in richer insights and aid the generalisability and replicability of the research findings (Creswell et al., 2007). This study therefore selected cases that had all implemented BMIs as part of their responses to exogenous crises. Richer insights and in-depth meaning was achieved through data triangulation of the multiple sources of information (Creswell et al., 2007) and the findings were corroborated by using multiple methods combined with primary and secondary sources of data.

4.2.5 Time horizon

A cross-sectional research design was considered to be the most appropriate as this study sought to gain a reflective understanding at a point in time of how BMIs were successfully implemented by SMEs in response to crises. Taking cognisance of the rapid exogenous crisis events that followed Covid-19, this study focused solely on SMEs’ BMIs that had been implemented since the start of the Covid-19 pandemic. This focused the research on recent BMIs that were undertaken in response to crises. A cross-sectional study following recent exogenous crises and BMIs provided detailed information that might not otherwise have been as rich at a later point in time once details of the SMEs’ sensing, seizing and transforming actions may have been forgotten.

4.3 Population

Eisenhardt (1989) points out that “the population defines the set of entities from which the sample is to be drawn” (p.537). A well-defined population helps to define the boundaries for generalising the findings (Eisenhardt, 1989). In this study, the population included all KZN-based SMEs belonging to the manufacturing sector that have experienced multiple exogenous crises in the recent past and that have implemented a form of BMI as a crisis response. Such a population was extremely large and difficult to identify; therefore, the target population was limited to manufacturers in the KZN Province of South Africa, operating in highly competitive sub-sectors, which enabled a narrower research focus.

4.4 Unit of analysis

Sedgwick (2014) explained the unit of analysis being the “who” or “what” for which information is analysed and conclusions are made (p.1). This research was aimed at analysing the SMEs as a collective group that implemented BMI as a response to crises. According to Creswell et al. (2007), the focus of case study research is not on the individual telling the story, but it is rather focused on the individual case selected to gain an understanding of the topic. Consequently, the SME represented the unit of analysis within each case that was studied. The lived experience of the SME leaders acted as proxy for the SMEs.

4.5 Case selection criteria, sample, and sample size

Due to the impracticality of collecting data from the entire population, sampling was used to answer the research questions. In South Africa, SMEs conduct business formally and informally. Due to the nature of South African SMEs and the geographical span of the population across KZN, a sampling frame for this study was not possible. Consequently, the study employed non-probability sampling, which is mostly associated with qualitative studies (Saunders & Lewis, 2018).

A non-probability, purposive, extreme case, criterion sampling technique enabled the selection of a smaller sample of cases to add depth to the exploratory research questions. This also enabled the study to infer logical generalisations from the sample selected (Saunders & Lewis, 2018). A purposive sample was selected from known SMEs operating in highly competitive sub-sectors of the manufacturing sector within the KZN Province of South Africa that met the criteria stated below:

- Criterion 1:** Was the SME located in the KZN Province of South Africa?
- Criterion 2:** Did the SME belong to the manufacturing sector?
- Criterion 3:** Did the SME belong to a highly competitive manufacturing sub-sector?
- Criterion 4:** Did the SME face multiple exogenous crises in the last four years that caused severe unforeseen disruption or threatened its survival?
- Criterion 5:** Did the SME implement a form of BMI in response to crises?
- Criterion 6:** Did the BMI enable the SME to survive or grow beyond the crises that it experienced?

Criteria 1 to 3 indicate that cases were limited to SMEs located in KZN, and that they operated within highly competitive sub-sectors of the manufacturing sector as these SMEs were more exposed to crisis shocks. These specific criteria enhanced the replicability of this study. The logic of replication results in the formation of more robust and generalisable theory building (Creswell et al., 2007; Eisenhardt, 1989). Criterion 4 placed the emphasis on the extreme or severe impact that the exogenous crises had on the SME. Eisenhardt (1989) argued that cases demonstrating extreme circumstances demonstrate the topic of research in a manner that is “transparently observable” (p.537). Extreme cases also offer a richer understanding that can be applied to typical cases (Saunders & Lewis, 2018). Elaborating on Criteria 5 and 6, only those SMEs that had clearly created new value by innovating the value creation, value delivery or value capture elements of the BM were considered to have implemented BMIs that resulted in post-crisis survival or growth. The participating case studies and their representatives have been described in **Table 5**. To enable confidentiality, pseudonyms have been attached to each case, which identifies them by their pre-crisis sub-sectors.

Boddy (2016) states that although qualitative research studies have been criticised for vastly different sample size arguments, sample size decisions are contextually dependent on the study itself and the scientific paradigm under which the study is pursued. Interpretivist studies justify smaller sample sizes as they allow for deep, meaningful, time-conscious qualitative analysis (Boddy, 2016). When making sample size decisions, researchers should therefore consider the scope of the study, the nature of the topic and the time spent with each case study participant (Boddy, 2016). Eisenhardt (1989) reported that cases should stop being added when a point of saturation appeared to be reached. With reference to recent post-Covid-19 studies

on crisis responses, the researcher found that case studies of five to six cases provided sufficient detail and depth to understand the underlying phenomenon (Alves et al., 2020; Clauss et al., 2022). The researcher pursued cases that met criteria 1 to 6 and where the owners/managers were willing to participate in the study. The sample was accessed via the researcher's extended professional and academic networks. Out of the SMEs that the researcher reached out to, six SMEs were willing to participate in the study. A point of coding saturation was visible by the sixth case.

Table 5: Description of participating case studies and their representatives

No.	Case study	Manufacturing sub-sector	Years of experience	Ownership structure	Proxy
1.	ClothingCo	Clothing and textile	5 years	Owner-managed	CEO
2.	PackagingCo	Paper and packaging, then clothing and textile and wood products	9 years	Family-owned	CEO
3.	BoardCo	Paper and packaging	54 years	Family-owned	Director
4.	DenimCo	Clothing and textile	6 years	Owner-managed	CEO
5.	BeltCo	Textile and leather	22 years	Majority owner-managed with equity investor	CEO
6.	ProcureCo	Automotive, then clothing and textile	12 years auto electric, 5 years auto procurement	Owner-managed	CEO

Source: Author's compilation

Yin (1981) suggested that a case study approach should consider the inclusion of key informants/proxies. Understanding each informant's perspectives will enable participant triangulation (Eisenhardt, 1989). However, the literature review highlighted that South African SMEs generally face the challenge of limited skills and a lack of managerial support (Fubah & Moos, 2022). At the same time, the leader plays a critical role in managing the business and performing strategic activities, such as responding to crises and implementing BMIs. Five of the SMEs were therefore represented by the CEO and one was represented by the director. No other senior or managerial employees could inform the strategic perspective of the study

sufficiently. Data and method triangulation was therefore achieved by using multiple qualitative methods, together with primary and secondary sources of data.

4.6 Research and measurement instrument

The research instrument refers to the tool used to collect data in a methodical manner. As semi-structured interviews were used as a primary method of data collection, the semi-structured interview guide was used as the research instrument. It is included in **Appendix B**. Semi-structured interview questions are the recommended measurement instrument for gathering data in qualitative studies, where the goal is to deeply explore a particular phenomenon and gain valuable insights (Saunders & Lewis, 2018). Yin (1981) suggested that semi-structured questions are beneficial to case study research as they enable the research participants to express their attitudes, experiences, and opinions in relation to the underlying phenomenon being studied. As this study concerned the decisions that the SMEs made to respond to crises and implement BMIs, semi-structured interviews were considered to be useful by allowing the researcher to probe the participants' answers and ask for their elaboration on the reasons behind their crisis response and BMI decisions. Another benefit of the semi-structured interviews was that they allowed the researcher the necessary flexibility to ask additional questions related to the topic while remaining guided by the core topic that required coverage in the interview (Saunders et al., 2009).

Following a preliminary literature review on the topic and the determination of the research questions that this study attempted to answer, the researcher designed the semi-structured interview questions, to link back to the literature as only few similar studies have been undertaken in the past. However, where relevant, some of the interview questions were informed by prior studies concerning innovative responses to the Covid-19 crisis (Alves et al., 2020, Clauss et al., 2022). Following guidance from Saunders et al. (2009), the interview questions were open-ended allowing the interview participants to answer complex questions freely and with deep meaning.

4.7 Data collection

Once the semi-structured interview guide was developed, the researcher compiled a list of potential case study participants from known and extended academic and professional networks. The researcher piloted the study with the first SME's CEO

who agreed to participate in the study. The researcher noted that there was a need to clarify the term capabilities in the question: “What were the capabilities that enabled you to innovate during/following this uncertain time?” For the next interviews, ‘capabilities’ was explained as the ‘SME’s key resources, processes, skills, attributes and leaders’ personal traits’. The researcher subsequently remained cognisant of technical or academic jargon that needed to be simplified when interviewing participants. Except for the simplification of terminology, no other changes were made to the interview guide or the manner of questioning. Consequently, as the pilot interview lasted over 100 minutes, during which the participant provided deep and valuable insights, the researcher included the pilot case as part of the final sample. Using the semi-structured interview guide, six face-to-face interviews with the SME leaders were conducted. All interviews were recorded and lasted two hours each on average. Pertinent aspects of the interview were written down in the allocated blank spaces on a pre-printed interview guide.

The researcher conducted four of the interviews with the CEOs at the SMEs’ place of business, where the researcher was also able to participate in unstructured observation of the artefacts that demonstrated that BMIs had been implemented by the participating SMEs. The two remaining SMEs’ preferred to meet at a mutual location where they would encounter less operational disturbance but presented physical samples of their value proposition innovations which were corroborated with video footage of their production facilities, demonstrating the value creation aspect of their innovations. Unstructured observation of the BMIs and their innovated product offerings enabled the researcher to see and corroborate the BMIs described in the interview. Following the interviews, the researcher also analysed secondary sources of data which included illustrative materials available on internet-based platforms such as the SME’s websites, LinkedIn pages, Instagram accounts, Facebook accounts, and WhatsApp business accounts. This further enabled the researcher to triangulate the data collected from the in-depth interviews.

4.8 Data analysis

In order to build on the limited theory available on the topic, the data analysis followed inductive reasoning as prescribed by Eisenhardt (1989). Once the interviews were completed, the researcher began transcribing the interviews. To simplify the process, the researcher made use of the Microsoft Word’s transcription functionality, which

used automatic speech recognition technology to convert the audio files into a time-stamped text document reflecting the dialogue between the interviewer and interviewee. The researcher reviewed the automated transcripts and edited them for accuracy due to certain linguistic misinterpretations by the software. The participants' names and the names of the SMEs were anonymised to protect their identities (Saunders & Lewis, 2018). Each completed transcript was uploaded into Atlas.ti, which is a qualitative data analysis software to begin coding the data. Eisenhardt (1989) emphasised the use of fieldnotes to synthesise multiple forms of data. The researcher referred back to handwritten notes that were taken at the time of the interview and added comments about the physical observations that were made.

The coding process began by analytically reading the transcripts and assigning codes to phrases or paragraphs that provided deeper insight into the questions that were posed to the interview participants. In the interest of time, coding followed the chronological order in which the interviews had taken place. In vivo coding was used as it enabled the authentic voice of the participants' to come through in the analysis and prevented any bias the researcher could have had from influencing the first-order codes that were generated (Elliot, 2018). Due to the length and depth of information gathered during the interviewing process, as well as the use of in vivo coding, a total of 1679 quotations were coded. Coding was simultaneously used to highlight the SMEs' experience of crisis events and their subsequent responses with BMI. After the first interview transcript, 82 categories were identified from 353 in vivo codes. Each subsequent transcript was categorised accordingly and new categories were created, where they did not emerge in previous cases. A total of 174 categories emerged once all transcripts were coded. Saturation was evident from an analysis of the new categories that emerged as the interview transcription analysis progressed, which is demonstrated in **Figure 4**.

The first-order codes and categories were exported into a Microsoft Excel Workbook for further analysis. After a detailed review of the data, thematic analysis was used to identify the dynamic capabilities that enabled the SMEs to pursue BMIs as a response to crises. The thematic analysis yielded 21 sub-themes, which were further aggregated into 12 second-order sensing, seizing, and transforming capabilities that were considered necessary for BMIs to lead to survival and/or growth. The detailed

thematic analysis process is included in **Appendix C** and summarised in **Figure 5** below.

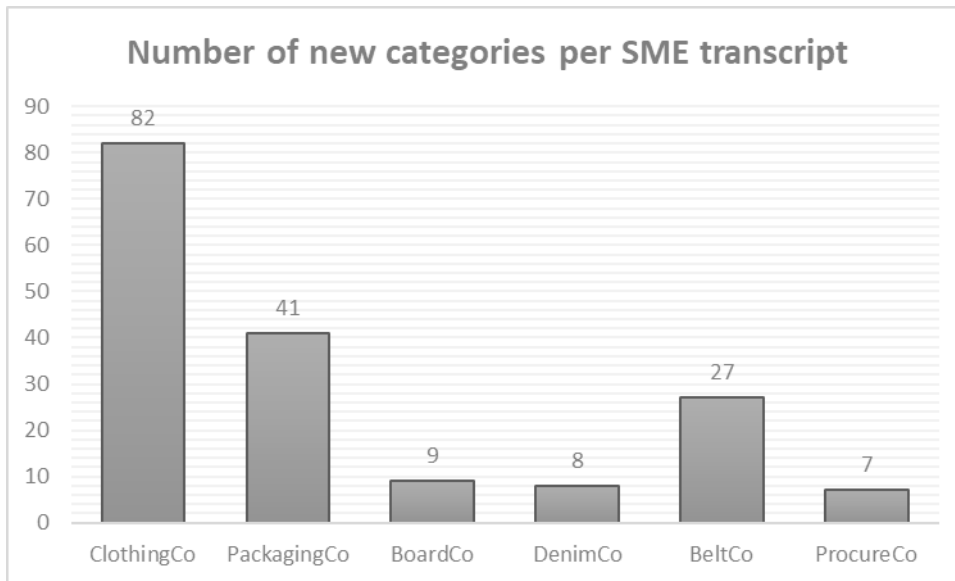


Figure 4: New categories generated per transcript (Author's compilation)

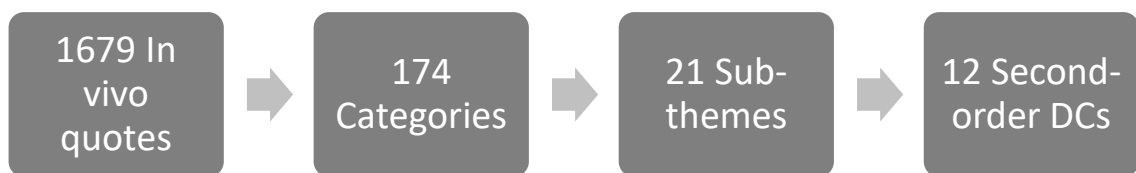


Figure 5: Thematic analysis process (Author's compilation)

Once each transcript was categorised, the data were synthesised and analysed by the researcher. This formed the basis of the within-case analysis, which involved drafting a write-up of each case and summarising the pertinent details to develop an intimate understanding of each case study (Eisenhardt, 1989). Although physical observation and analysis of illustrative materials were also used to gather data, more reliance was placed on the semi-structured interviews as they provided the most detail and depth. The within-case analysis highlighted the background to the SMEs and their pre-crisis BMs, the subsequent experience of crises and how they impacted on the BM and lastly, the BMIs that were implemented in response to crises. The within-in case was followed by a cross-case analysis, which enabled comparison of the similarities and differences between cases (Eisenhardt, 1989; Yin,1981). Microsoft Excel was used to construct a matrix of all cases alongside each other, so

that a logical and analytical comparison of each case could be performed. Finally, the common DCs that enabled SMEs to innovate were analysed using the cross-case analysis and thematic analysis. A summary of how each research sub question was answered is presented in the Consistency Matrix included in **Appendix A**.

4.9 Data quality

Case studies have historically received criticism for lacking rigidity in the process of data collection and analysis (Yin, 1981). However, this can be overcome with an effective case study design and by implementing quality controls in the data collection and data analysis process (Yin, 1981). Eisenhardt (1989) emphasised the importance of selecting a replicable sample of case studies. This study required six criteria demonstrating relevance to the topic of exploration to be met in order for a case study to be eligible to participate. The logic of replication enhanced the generalisability of the study. It also enhanced the ability for nuanced findings to emerge through the cross-case analysis (Eisenhardt, 1989). The use of extreme cases provided a rich, thick description of the impact of crises. Subsequent BMIs were directly observable from the evidence obtained rather than the researcher's perception or bias.

The credibility and dependability (Lincoln & Guba, 1994) of the data collected was enhanced through triangulation of data collection methods and sources that included semi-structured interviews, physical observation of artefacts, and analysis of illustrative online material. A preliminary literature review of mostly high quality, peer reviewed articles, including seminal literature, informed the research questions and the semi-structured interview questions (Saunders & Lewis, 2018). The literature review ensured that the researcher was sufficiently knowledgeable on the topic before engaging with the interview participants. A semi-structured interview guide was used consistently in all six interviews to ensure that the underlying phenomena were sufficiently discussed, even though the study was exploratory in nature. The interview was piloted to assess the suitability of the semi-structured interview questions, the manner of interviewing and whether it yielded the evidence that related with the study. It was also checked whether it allowed for new themes to emerge in line with the inductive nature of the study. Interviews were confirmed with the participants via calendar diary invitations, and email or text messages, with the

participants confirming their availability to meet at the agreed-upon dates, times, and locations.

Fieldnotes were also maintained to help the researcher comprehend and synthesise the data collected from the interviews and to corroborate key points with other forms of data collected (Eisenhardt, 1989). The interviews were recorded and lasted 120 minutes on average, which is an indication of the rigour and depth of the information gathered from the interview participants. The interviews were transcribed verbatim, using an automated speech recognition software tool which is reportedly 80% to 90% accurate (Aorinka, 2024). The transcripts were edited to correct linguistic errors and to protect the participants' anonymity. Interview transcripts were also coded in vivo, which preserved the participants' voice (Elliot, 2018), and data saturation was evident (Eisenhardt, 1989) from categorisation of the in vivo codes, which enhanced the replicability of the study.

4.10 Ethical considerations

The consideration of ethics is intrinsic to interpretivist studies as its methods of inquiry, such as semi-structured interviews, have a deep interpersonal element and consider the values of the participant in the study (Lincoln & Guba, 1994). It was important that the researcher considered the research design carefully and assessed any potential for participants to be subjected to harm or embarrassment of disadvantage as a consequence of participating in the study (Saunders et al., 2009). As this study concerned the experience of exogenous crisis events, the researcher remained cognisant that the study required participants' to reflect on particularly difficult times in their personal and professional lives. The researcher therefore followed interviewing guidelines from Saunders and Lewis (2018) to ensure that the researcher was respectful at all times, actively listened to the participants, expressed appreciation to the participants' for their time and insights, and that the interview was carried out in a professional manner.

The researcher followed an ethical clearance process prior to contacting any of the research participants. This entailed a requirement to follow the Gordon Institute of Business Science (GIBS) ethics guidelines and gain approval from the GIBS ethics committee before collecting any data (see **Appendix D**). Once ethical clearance was obtained, the researcher contacted potential participants via email and/or LinkedIn

to explain the purpose and background of the study and to invite their participation. The researcher furnished participants with consent letters requesting their formal consent to participate in an interview (see **Appendix E**) and to conduct research about their organisations (see **Appendix F**). Once the participants agreed, the researcher set up face-to-face meetings at the participants' convenience. Lincoln and Guba (1994) also highlighted the ethical issue of confidentiality and anonymity in qualitative studies. The researcher assured all participants of the confidentiality and anonymity of the participants and their businesses. The researcher obtained consent from each participant to record the interviews and take notes. Pseudonyms were used in the interview transcripts to maintain the confidentiality and anonymity of participants.

4.11 Limitations of the study

Although this study was open to SMEs in any highly competitive manufacturing sub-sector to enhance the heterogeneity of the sample and generalisability of the study, the participating case studies were concentrated in the paper and packaging, and clothing and textile manufacturing industries and were mostly owner-managed. The researcher attempted to source case studies in the other sub-sectors but found that many SMEs were unwilling to participate in a study of this nature due to the fear of exposing the secrets to their BMI success.

Elements of subjectivity were naturally embedded in the study due to its qualitative, interpretivist nature. The researcher therefore employed the quality controls discussed in section 4.9. As this study was exploratory in nature, it yielded some broad categories and themes that may have been outliers in the sub-groups that they were allocated to and were subsequently not discussed at length in this study. Cresswell et al. (2007) recommended that due to the depth of data gathered in a case study approach and the potential for a researcher's bias to occur, a research team should assign different team members for data gathering and data analysis purposes. However, as this study was undertaken as an individual research project, all data collection and data analysis activities were conducted by a single researcher.

The definitions of 'business model innovation' and 'dynamic capabilities' are defined differently by many scholars (Chumphong, 2020; Filser et al., 2021; Foss & Saebi, 2017; Teece, 2018; Teece et al., 1997; Weaven et al., 2021). Research participants

therefore may not have developed an understanding of the academic concepts that this study entailed and at times, leaned on the researcher's interpretation to be able to answer the interview questions.

As this study pertained to SMEs, the leader/owners were the only individuals capable of providing the level of depth needed to understand the SMEs experience of crises, the BMIs implemented in response to crises, and the DCs that enabled their BMI successes. Despite the length and depth of the semi-structured interviews, participant triangulation could not be achieved given the lack of managerial support that was evident in the participating cases.

Data collection triangulation included physical observation of artefacts present at the SMEs' places of business for four SMEs and physical observation of innovated product lines presented during the face-to-face interviews for two SMEs. This demonstrated the BMIs that were implemented for the researcher's understanding. Only two of the SMEs enabled a comprehensive site visit that allowed the researcher to physically observe the BMIs in motion. The rest of the observations were unstructured and brief, and the level of depth and detail they provided to corroborate the data collected from the interviews was limited. This was counteracted by the analysis of other secondary illustrative online material, which was comprehensive as all SMEs had an active online presence, where they had announced and advertised information related to their BMIs.

Further data triangulation would have been achieved if the researcher were to have been given access to financial information that demonstrated the degree to which the business survived or grew following their encounters with exogenous crises. However, as all of the SMEs included in the study were small, private organisations, their financial data was not publicly available and some did not prioritise the need for detailed financial records during the chaotic periods that followed the periods of crises.

The next chapter presents the findings following the methodology and design as has been discussed in this chapter.

CHAPTER 5: FINDINGS

5.1 Introduction

This chapter presents the findings that were generated by following the methodology and design detailed in Chapter 4. This includes a within-case analysis of each case study, explaining the company's background and pre-crisis BM, the SME's experience of the crisis events that it encountered and the BMs that it implemented in response to the crises. This is followed by a cross-case analysis, which identifies the overarching themes and deeper insights that were generated by performing a thematic analysis of the semi-structured interviews conducted. Abbreviations have been used to highlight elements of value proposition (VProp), value creation (VCre) and value capture (VCap) in the descriptions of the SMEs BMs.

5.2 Within-case analysis

5.2.1 ClothingCo's within-case analysis

5.2.1.1 ClothingCo's background and pre-crisis business model

ClothingCo was founded in 2018, as a cut, make and trim (CMT) factory, by its CEO who started the company as a social entrepreneurship venture. The SME adopts the values of *Ubuntu*. It experiences high levels of competition from large CMT factories with greater production capacity. The South African CMT industry also faces the constant threat of inexpensive, imported clothing from China. ClothingCo's pre-crisis BM was simply to sell CMT capacity to any market that required clothing to be manufactured. Its main product lines included corporate uniforms, school uniforms, and fashionwear. It suffered significant financial loss as a result of the Covid-19 crisis and the civil unrest crisis in KZN.

5.2.1.2 ClothingCo's initial experience of crisis events

Covid-19 crisis

Covid-19 lockdown restrictions prevented the SME and its customers from trading. As the primary interest of the ClothingCo was the social wellbeing of its employees, it initially followed a reluctant, yet necessary, temporary retrenchment strategy and placed employees on short time to reduce costs.

Civil unrest crisis

ClothingCo's newly established school uniform store, which contained stock and other assets, was looted during the civil unrest crisis. The SME was forced to close the store indefinitely. Perchance, the SME received a Covid-19 relief grant, which it injected into its manufacturing operation instead of re-opening the uniform store.

The CEO expressed the vulnerability of small businesses like ClothingCo when faced with crisis due to limited financial resources: *You can see things that affects us small guys who come in, we're easily hit and destroyed by anything ... You live off what you make for that week again, we don't have reserves* (CEO, ClothingCo).

5.2.1.3 ClothingCo's business model innovations in response to crises

Personal protective clothing

ClothingCo started producing protective face masks during the Covid-19 lockdown (VProp). It also designed a range of medical scrubs as Covid-19 created an opportunity to capture value from the health sector's increased demand for personal protective clothing (VProp, VCre). However, it was unable to secure a significant market share for medical scrubs as onerous tender processes and existing long-term supplier contracts presented a market entry barrier. ClothingCo therefore innovated the sales channels for face masks as it expanded its market segments to retail outlets, corporate organisations, pharmacies, and direct sales to individuals (VCap). It temporarily innovated its BM from an all-purpose clothing manufacturer to a personal protective clothing manufacturer. While the scrub range has not proved to be successful to date, and it no longer produces face masks, this temporary BMI enabled it to trade during the lockdown, settle operating expenses and consequently survive the Covid-19 crisis.

Niche market segmentation: High-end retail

Prior to Covid-19, ClothingCo sold low volumes of garments to a high-end women's fashion boutique. During the lockdown, the customer launched an online store and aggressively marketed its business on social media. This led to significant growth, which enabled the boutique to expand into a KZN-based retail chain. ClothingCo recognised the customers' growth potential and subsequently strengthened the partnership to position ClothingCo as the best production partner that the customer

could find for its retail requirements (VCre). Based on the strength of the partnership, ClothingCo dedicated 50% of its capacity towards the customer. The nature of the high-end fabrics, the level of complexity of the garment construction, and the high quality required by the customer created a training ground for ClothingCo's employees to develop an advanced level of expertise that was difficult to replicate (VCre). This provided ClothingCo with a competitive advantage in the CMT industry. Leveraging the customer partnership, ClothingCo changed its strategy to create garments in low volumes for high-end retail brands with a requirement for the manufacture of high-complexity and superior quality garments (VCre). This type of BM aligned closely with ClothingCo's core competencies and enabled it to attract higher margins, which supported its post-crisis growth.

In-house tourism brand

Following an international holiday to the United States of America, ClothingCo's CEO observed the popularity of clothing and tourist memorabilia that were branded based on popular cities, such as New York and theme parks, such as Disney World. At the time, the CEO was in search for a high-end retail brand that ClothingCo could partner with. However, upon returning to South Africa, she was inspired to develop an in-house tourism brand that celebrated the city of Durban, where ClothingCo originates. An in-house brand allowed ClothingCo to control its margins and utilise its available capacity. The CEO designed, developed, and patented the fabric design and began producing shirts, hats, dresses, scarves, and fabric bags (VProp, VCre). The brand celebrated the rich culture of the city and the fabric displayed elements that were reminiscent of its popular attractions and culture (VProp). The SME initially sold the products at local markets and opened up a tourist store at a local theme park to attract retail revenue from tourists (VCap). ClothingCo also partnered with local craft vendors to sell a wider variety of souvenirs in the store to attract tourists (VCap). This recent BMI was in line with ClothingCo's core competencies and strategy to produce low volume, high margin garments and has been in operation for a few months.

5.2.2 PackagingCo's within-case analysis

5.2.2.1 PackagingCo's background and pre-crisis business model

PackagingCo was founded in 2014 as a family-run business. Its BM has been to manufacture corrugated cardboard boxes and packaging materials, using recycled

cardboard produced by a paper mill. The manufacture of corrugated cardboard boxes is its core competency. The SME is capital and labour intensive and competes in a market with larger, and significantly more experienced competitors. The SME was established during a period of economic decline. The CEO is highly involved in the business and is an entrepreneur who constantly seeks market opportunities to further his entrepreneurial pursuits by learning, performing research and engaging with networks. The CEO's business philosophy concerns creating convenience for consumers. Prior to Covid-19, PackagingCo experienced significant financial loss from an unsuccessful strategic deal that nearly ended up in the liquidation of the SME, so it was still in a process of recovery by 2020. It was subsequently significantly impacted by three crisis events, namely, the Covid-19 crisis, the civil unrest crisis, and the severe flooding crisis.

5.2.2.2 PackagingCo's initial experience of crisis events

Covid-19 crisis

Coming out of a period of significant financial loss, PackagingCo was severely impacted by the Covid-19 crisis. The national lockdown restrictions prevented the SME from trading under its traditional BM for four months. This placed it in a position to ideate completely new business ideas that were outside of the packaging industry. It restructured the business to sell off properties and vehicles that were not needed and temporarily placed employees on short-time.

Civil unrest crisis

PackagingCo struggled to trade effectively during the civil unrest due to disrupted access to resources, such as warehouses, electricity, transportation, and fuel. The crisis impacted core suppliers, such as the paper mill, and it prevented employees from travelling to work. In addition to these challenges, several customers opted to file for liquidation, having also suffered losses arising from the Covid-19 crisis. This amounted to a significant financial loss to the SME.

Flooding crisis

The flooding crisis caused infrastructural issues, supply chain breakages and labour disruptions. PackagingCo's paper mill supplier shut down for a few weeks due to flood damage. The ripple effect of the natural disaster was that more customers' were

liquidated and the SME was unable to recover the outstanding balances or make up for lost future sales.

The CEO explained that the financial impact of facing multiple crises was significant: *OK, we went through Covid. We went through looting, now we got flooded. So that's it, we're over ... Between Covid and looting, it was a good 11 and a half, maybe 12 [million] we had to write off* (CEO, PackagingCo).

5.2.2.3 PackagingCo's business model innovations in response to crises

Personal protective clothing and PPE

PackagingCo was forced to seek alternate sources of revenue as lockdown restrictions prevented it from trading. The CEO began to write down scenarios and identify market gaps. Having observed the rapid increase in demand for personal protective equipment (PPE), PackagingCo leveraged its strong customer relationships, and intentionally sought out government contracts to sell large volumes of various PPE items (VProp, VCap). Initially, the SME began sourcing various medical gowns from a CMT manufacturer (VCre). It was able to sell the gowns to a hospital at a premium price due to the high demand during Covid-19 (VCap). PackagingCo subsequently established a small CMT operation within its factory to have better control of the new product line, where it added protective face masks to the PPE product mix (VProp, VCre). Other PPE products that PackagingCo sold included face shields, which were manufactured using existing machinery from its packaging plant, and sanitising tunnels, which were used in prison walkways due to the extent of human traffic in prison corridors (VCre). Additionally, PackagingCo imported temperature guns and gloves to add to its PPE offering (VProp). Per the CEO, the diversion towards PPE enabled PackagingCo to survive the Covid-19 crisis. While it represented nearly 100% of its turnover during the initial Covid-19 lockdown period, it shrunk to approximately 10% of its post-crisis BM as its packaging operations subsequently stabilised.

Cardboard coffins and coffin inserts

Leveraging off its expertise with cardboard based products, PackagingCo's CEO designed a coffin insert made out of cardboard. This was in response to the steep rise in Covid-19 related deaths and an unprecedented level of pressure being placed

on funeral parlours. Due to regulations at the time, strict rules were imposed on the handling of Covid-19 related funerals, particularly regarding cremations that needed to be performed with no human contact. This created a gap for PackagingCo to create a human body-sized cardboard box that could be inserted into a coffin and used for cremations, which were sold to funeral parlours in the CEO's network (VProp, VCre VCap). It also experimented with a cardboard-based coffin; however, this concept did not take off as successfully as it did not offer the same visual, prestigious, and emotional appeal as a wooden coffin. The BMI assisted PackagingCo to recover from the Covid-19 crisis to some degree, but it is no longer an active part of its BM.

Export pallet production

Since 2020, PackagingCo sought out opportunities to diversify its BM and revenue streams due to the severe impact of the lockdown. The CEO observed that PackagingCo's customers started to export goods and that the South African export market was growing as there was a high demand for food products from other countries, which created a gap in ancillary products, such as export pallets. PackagingCo then designed and developed wooden export pallets to sell to existing customers (VCre). The new pallet division enabled SME to grow and it contributes to 10% of total turnover.

5.2.3 BoardCo's within-case analysis

5.2.3.1 BoardCo's background and pre-crisis business model

BoardCo was founded in 1969 and transferred to its current owners as part of a management buyout transaction in 2006. It is a family-run business and specialises in the manufacture of corrugated board, which it converts into cartons and boxes according to customers' requirements. The BM is to manufacture high quality corrugated board and boxes for small and medium-sized businesses. It competes with larger corrugated board and box manufacturers in the packaging industry. BoardCo experienced financial losses arising from the Covid-19 and flooding crises and considered closure due to the severity of the crises it faced. To mitigate the financial losses, it implemented fixed cost-saving innovations to control its operating expenses.

5.2.3.2 BoardCo's initial experience of crisis events

Covid-19 crisis

BoardCo could not trade for a month during the Covid-19 lockdown. The rapid loss of sales forced the SME to consider whether it would be more viable to close. However, once it began trading again, BoardCo took measures to rapidly reduce expenses as it continued to incur costs, even though sales had eroded. The SME initially followed a reactive strategy to cut salary and wage costs and retrench some employees. Workstations were also restructured, so that the factory could operate efficiently with a leaner workforce.

Floods crisis

The flooding crisis had a severe impact on BoardCo. The extent of structural damage caused supply chain disruptions and impacted the SME's ability to access the factory for two weeks. Even when BoardCo accessed its factory, the flood damage caused a power outage and a water shortage, which prevented it from manufacturing. Despite having an insurance policy in place, it only recovered 50% of the damages. The business was subsequently able to hire a generator; however, it came at a substantial cost. Since the floods, BoardCo continues to experience an unstable supply of electricity lasting from 12 to 15 hours at a time, up to four times in a month, which resulted in cancelled shifts and a damaged market reputation.

The Director of BoardCo explained that the severity of the sudden disruption caused by crises caused the SME to consider closure: *...we were sitting with a huge deficit in our turnover and our margins ... we had no sales ... it was an eye-opener for us to actually see how we sustain this business. Or do we close this business down?* (Director, BoardCo).

5.2.3.3 BoardCo's business model innovation in response to crises

Self-sustaining factory

The severe crises that BoardCo faced revealed the extent of resources that were necessary to its operations but remained out of its control. BoardCo therefore took steps to build a self-sustaining factory after Covid-19 to protect its core competency of corrugated cardboard manufacturing and box conversions. Due to the financial

impact of Covid-19, BoardCo aimed to cut down on fixed costs to improve the SME's profitability and cash flow. A detailed cost analysis revealed a need to reduce electricity costs. At the time, BoardCo's factory used an electric boiler in the production process, which contributed significantly to its monthly electricity bill. A fuel-fired boiler is typically seen as an outdated piece of machinery; however, the high cost of electricity necessitated its consideration. The detailed cost analysis revealed a potential for saving of 30% to 40% of BoardCo's electricity cost. It therefore replaced the electric boiler with a newly refurbished fuel-powered boiler (VCre). This helped the SME to survive the Covid-19 crisis and reduce its losses.

Following the floods and the frustration with unreliable service delivery from municipalities, BoardCo realised the need to redesign its BM to be self-sufficient. This would improve its reliability and response rate to customers (VCre). It therefore began a journey of implementing more sustainable factory equipment. One of the new equipment items included a water treatment plant that allowed the business to be able to continue to operate when water shortages occurred. It also embarked on a project to power the factory by solar power, which would further reduce its fixed costs. Eventually, the SME aims to own its property rather than leasing it to complete its transition to a self-sustaining factory. While some of these changes are still in progress, it has so far enabled the SME to survive the crises it faced.

5.2.4 DenimCo's within-case analysis

5.2.4.1 DenimCo's background and pre-crisis business model

DenimCo was founded in 2016 as a CMT manufacturer producing fashionwear. As a new market entrant, with no prior CMT experience, it was faced with major challenges competing with experienced CMTs with established market reputations. To differentiate itself, the SME pivoted away from fashionwear and opted to specialise in the complex manufacture of denim jeans and garments as a core competency. This gave DenimCo a competitive advantage in the CMT market, although it faced competition from imports. It later diversified its product mix by manufacturing men's boxer shorts as it is a fast-moving consumer garment. Its diversified BM operates a one-piece-flow production system, meaning that each garment construction operation is completed by an employee who specialises in that operation on the production line. It targets large South African retailers. The SME

operates in the town of Hammarsdale, which is popularly known for social challenges, such as a high crime rate, gang violence, unemployment, and poverty. DenimCo seeks to address the social challenges within the local community through creating a safe working environment for its employees to learn and grow. The SME is driven by a social purpose and fosters an employee-centric culture.

5.2.4.2 DenimCo's initial experience of crisis events

Covid-19 crisis

Prior to Covid-19, one of DenimCo's customers experienced severe financial difficulty and went into business rescue. DenimCo then ceased operations for three months during the initial Covid-19 lockdown. At the time, DenimCo employed 80 people. DenimCo maintained open lines of communication and supported all employees with food hampers for the three months that it could not trade.

Civil unrest crisis

Many of DenimCo's employees joined the KZN civil unrest and participated in the looting of nearby businesses, such as television stores and butcheries. For several days, these employees lived off the items that they had looted before returning to work. Extended absenteeism significantly impacted the SME due to its one-piece-flow production system. This resulted in the loss of some of DenimCo's clients as it was unable to fulfil orders adequately following this period. DenimCo could not sustain all employees after the civil unrest, which led to employees' retrenchments.

Floods crisis

DenimCo's factory sustained significant flood damages, of which only 50% was recoverable from insurance. The impact on employees, their communities, and their ability to commute to work once again led to absenteeism challenges that resulted in cash flow drainage and lost clients.

Xenophobia crisis

A year after the floods, unemployment challenges gave rise to xenophobic attacks in Hammarsdale. The threat was so severe that many foreign employees relocated to safer areas. DenimCo was severely impacted as much of its sophisticated CMT skills rested within its foreign employees. The xenophobic attacks led to the SME losing

32 foreign employees in a short space of time. This came at a time when DenimCo had just won a contract with a large retailer, which was subsequently terminated as its labour challenges prevented it from meeting the retailer's demands. DenimCo also lost other smaller clients in the process. Due to the structure of its production system, the SME was forced to restructure its operations, ultimately leading to the loss of 100 local and foreign employees. The CEO emphasised the challenges of meeting production orders when high levels of absenteeism in one part of the factory created gaps in other areas: *If two people are not there it disrupts the whole line...so...at a minimum absenteeism for me is very, very important, yeah. ...if even a quarter or 10% of your staff is not here, you can't run the factory.* (CEO, DenimCo).

The xenophobic violence consequently had a significant impact on the company, the timing of which was particularly poor: *...xenophobia...bullying, exploitation, that hit me flat because ... we're ... really holding on to getting our denim right. And then boom, this... happened... So, further to us losing the [retailer], I now started losing my normal clients.* (CEO, DenimCo).

5.2.4.3 DenimCo's business model innovations in response to crises

Personal protective clothing

Following the Covid-19 outbreak, DenimCo began receiving inquiries regarding surgical face masks however, these required specialised machinery that DenimCo did not have. Inspired by a dream, the CEO came up with an idea to produce protective face masks out of repurposed fabric offcuts as DenimCo did not have sufficient cash flow to source new fabric. The CEO designed the masks and in line with its social endeavours, the SME committed to donating the initial batches of face masks to surrounding old-age homes and communities (VCre). DenimCo's one-piece-flow production system worked so well that it was capable of producing 40 000 masks in a day (VCre). This allowed it to gain a sizeable market share in the growing market (VCap). The SME's staff complement grew from 80 to 350 people, which could be attributed to the mask production. DenimCo added other personal protective wear to its product mix, such as surgical and theatre gowns and industrial coveralls. This innovation allowed the SME to survive and grow during the Covid-19 crisis. While it no longer produces face masks, it continues to sell personal protective clothing.

Motivation and engagement

Recognising that employees' skills and expertise were a key competency and source of success for DenimCo, the SME started to create a company culture that motivated employees to come to work, be engaged, productive and more efficient (VCre). Using his prior experience in radio broadcasting, the CEO employed a disk jockey (DJ) to play live music and keep employees motivated during each shift. The DJ's platform is also used to communicate to employees.

As absenteeism disrupted the entire production line, the CEO investigated the source of the issues. He recognised that absenteeism often occurred with mothers who 'skipped work' to care for their young children. In response, DenimCo established a children's crèche, which enabled employees to bring their children to work. The crèche later developed into a certified early childhood development (ECD) centre. It resulted in reduced absenteeism and a more engaged workforce.

To improve engagement and alignment with its goals, DenimCo recognised the importance of improving communication, particularly with unskilled employees who did not understand production-specific concepts. This presented an opportunity to innovate by using the appropriate language and communication. Following the civil unrest and looting of butcheries, DenimCo referred to the term "*braai pack*", meaning 'a pack of meat' to explain the concept of a complete one-piece-flow production target. For example, if a customer required a pack of five men's boxer shorts, this would equate to one "*braai pack*". The running daily tally of "*braai packs*" would be visually projected at the front of the factory to communicate the number of units that were completed at any given point. This helped to communicate production targets and motivate employees to achieve the targeted score. Other terminology used included "*river*" to explain the movement of the one-piece-flow production system; planned inventory overflows or buffers were referred to as a "*dam*" and unplanned, excess overflows were referred to as an "*mkaba*", otherwise meaning 'big stomach'. Some terminologies were created by the employees themselves, as they were given the freedom to express their understanding of the production process. DenimCo attributes the efficiency of its one-piece-flow system to the adoption of its invented communication method with employees. Due to its efficiency levels, DenimCo has been able to win large volume orders, which enabled it to survive several crises.

Direct-to-market sales channel

Having experienced volatility with retail customers and the high standards required to maintain long-standing relationships through the series of crises that DenimCo faced, the SME began the search for alternate sales channels for its products. In 2023, a group of elderly women approached DenimCo and asked them to supply them with men's boxer shorts for resale in the informal market. The product sold quickly in the informal market and the elderly women began to purchase large quantities of men's boxer shorts on a weekly basis. DenimCo now refers to this sales channel as "Gogos" meaning 'grannies' and is working on expanding the network of Gogos to drive sales of men's boxer shorts directly to the informal market (VCap). DenimCo began to trial other non-textile products, such as breakfast porridge, that might capture more value in the informal market (VCap). DenimCo also developed a mobile trailer for the informal sector that operates as a mobile factory shop and a training centre for youth to develop sewing skills. These innovations remain in the early stages of implementation; however, they are part of DenimCo's long-term vision and are assisting the SME to explore new channels for growth.

5.2.5 BeltCo within-case analysis

5.2.5.1 BeltCo's background and pre-crisis business model

BeltCo was founded in 2001 by the owner and CEO as a leather belt manufacturing factory. Since its establishment, BeltCo experienced two major crisis events during economic downturns, and the CEO re-mortgaged his home to save the business. Since then, the SME placed significant focus on maintaining a healthy cash flow and a stable emergency fund. As a labour-intensive manufacturing enterprise, BeltCo maintains a culture that is first, employee-centric, and second, customer-centric. The skills, efforts and capabilities of its employees are critical to its core competency of quality belt manufacturing. Employees' skills are the source of its success and this has enabled BeltCo to manufacture to an internationally recognised quality standard. However, BeltCo faces competition from international manufacturers that have significantly more experience and can produce at a lower cost.

After trading for 11 years, an American businessman, with access to major belt factories across the world, approached BeltCo to acquire a small shareholding in its business. This resulted in a mutually beneficial partnership, which gave BeltCo

access to a mentorship opportunity with the business partner and to world-renowned factories, belt designs, sourcing channels, and belt experts. Following the success of belts, the SME added imported wallets to its product mix. BeltCo's sales channels included retail stores that purchased large volumes, and independent stores, which were usually small family-owned shops, that purchased small volumes. Its relationships with employees, customers, suppliers, and advisors have been a significant contributor to the business's growth since inception. In addition to delivering high quality products, BeltCo prides itself of delivering complex logistics services, valuable product insights, and market information that adds value to its distribution channels.

5.2.5.2 BeltCo's initial experience of crisis events

Covid-19 crisis

Lockdown restrictions forced BeltCo to shut down for over a month. Market uncertainty led to customers cancelling existing orders. The reduced revenue caused profitability to regress for the first time since inception. BeltCo continuously monitored and assessed new information about the pandemic as the crisis unfolded. In response, the CEO planned best-case and worst-case scenarios and strategies. The American business partner offered BeltCo valuable information as the crisis impacted America more severely in the early stages of the crisis. The strategic focus of the business was meant merely to survive the crisis with cash in the bank. Its emergency fund provided a sense of stability. However, BeltCo needed to retrench some employees to trim committed costs.

Civil unrest crisis

During the July 2021 civil unrest, retailers were heavily impacted by stores being looted and burnt down. Normally, BeltCo used the months of July to September to plan the next season's optimal production demand with retailers. However, as retailers were focused on their own response to the unrest, BeltCo could not optimise its order book and lost opportunities for growth. Despite having started in KZN, the civil unrest affected retailers across the country, especially also in Gauteng. The civil unrest negatively impacted six months of sales. In addition, BeltCo's imported container of belt buckles, which was in-transit, was burnt down during the unrest, causing a further loss in sales.

Energy crisis

Due to South Africa's unstable electricity supply, retail stores were heavily impacted. Consequently, BeltCo's sales volumes were impacted, particularly when the country experienced higher stages of loadshedding.

The CEO reflected in disbelief on having survived multiple, severe crises over the preceding four years: *...if you'd have told me in 2019 that we were going to face four years of very big and very different crises ... I would not have believed that we can get through and survive ... every business on many fronts were affected but...ours was very impacted by Covid, very impacted by the civil unrest and by the flooding. And this year, the loadshedding...* (CEO, BeltCo).

5.2.5.3 BeltCo's business model innovations in response to crises

Online sales channel

As BeltCo was unable to trade during the Covid-19 lockdown, it used that period as an opportunity to learn how to sell online by signing team members up for online sales courses. The motivation behind this was to understand retail customers' growing online sales environment. This enabled BeltCo to unlock other areas of value that it could provide to its retail customers. The American business partner played a key role in advising the company on international trends in online sales. BeltCo explored areas such as online photography of belts, and appropriate size guides to prevent belts from being returned due to incorrect sizing. These learnings were collected and put together in an online toolbox that it could present to clients to add online product insights to retail customers (VProp).

Using the learned online sales skills, BeltCo also began selling direct to end consumers via online sales platforms (VCap). Leveraging off its complex logistics and fulfilment capabilities that came with picking, packing, and delivering small order quantities for independent stores, it was able to quickly adapt to serving individual consumers (VCre). Once BeltCo's online store started to gain traction, it was approached with an opportunity to partner with an entrepreneur who sold general household items and technology products online during the lockdown, but who was ineffective with logistics and fulfilment capabilities. This partnership created work for BeltCo's employees and allowed them to sharpen their fulfilment skills (VCre). However, when BeltCo recognised that the entrepreneur was experiencing cash flow

challenges, it seized the opportunity to acquire a majority shareholding in his business. This enabled BeltCo to add more products to its online offering, including sunglasses, shampoos, charging cables and other technology-related products (VProp). BeltCo created a dedicated area in the factory, where online sales are fulfilled (VCre). Online sales have enabled BeltCo to grow since 2020 and they account for nearly 10% of its revenue.

Wearable accessories division

Prior to Covid-19, BeltCo only sold belts and wallets as its competitive strategy was to be a niche product category expert to compete effectively in a retail environment. However, it was uncertain about whether wallets were going to attract significant volumes in the future with a rise in cashless transactions. During the pandemic, a large wearable accessories distributor went into business rescue. Consequently, it retrenched several employees who had specialised in procurement, design, and sales of accessories. Some of these employees started a new business venture to serve the retail market; however, they experienced cash flow constraints. Mutual customers introduced the owners of the new business venture to BeltCo to consider the possibility of a partnership. BeltCo proposed the creation of a new division, dedicated to sunglasses and bags, and employed the owners of the business venture to run the new division as they were product experts (VProp, VCre). Following the merger, the SME was cognisant of the potential for a culture disruption and worked with new and existing employees to establish a collaborative culture that the business could henceforth work towards.

Export sales channel

Although BeltCo had access to its American business partner, who sourced belts from multiple countries across the world, it struggled to capture the American market due to the superior level of quality demanded by international standards. The CEO viewed rejection by international buyers as a personal challenge. BeltCo's partnership with its American business partner afforded team members access to the best international belt factories, which BeltCo could learn from and benchmark itself against. It worked relentlessly to solidify the relationship with their foreign associates. Following the floods, the SME invited its foreign associates to South Africa to visit BeltCo's factory and its customers to demonstrate its commitment to quality and customer-centricity. This face-to-face interaction strengthened the relationship and

resulted in BeltCo securing an international order. (VCap) To consistently achieve international standards, BeltCo redesigned the factory floor to create a dedicated export line (VCre). It allocated experienced employees to the export line, whereas junior employees remained on local production lines (VCre). The SME also benchmarked itself to the automotive industry and introduced more pre-production, planning, and quality control activities to improve production efficiency and quality (VCre). It also re-engineered the production process to be price-competitive with Chinese imports, and improved its packaging and logistics process to satisfy international standards (VCre). BeltCo subsequently received monthly international orders that have grown significantly. It helped BeltCo mitigate the lost local sales due to loadshedding. In the latest financial year, export sales were BeltCo's fastest growing revenue stream.

5.2.6 ProcureCo's within-case analysis

5.2.6.1 ProcureCo's background and pre-crisis business model

ProcureCo was originally founded in 2006 as an auto electric company, but it was relaunched in 2018 as the general procurement business, which had a single customer, an automotive original equipment manufacturer (OEM). As part of its enterprise development initiatives, the automotive OEM gave ProcureCo a grant to provide it with procurement services. ProcureCo worked with local manufacturers to source items such as toilet paper, sugar, corporate uniforms, and PPE. The partnership strengthened during Covid-19 when ProcureCo stepped in to rapidly assist the automotive OEM with its procurement needs for face masks and uniforms. ProcureCo recognised the importance of financial discipline and strong partnerships. It strongly embraces a culture of inclusiveness, collaboration, learning and empowerment. It faced two major crises: Covid-19 and the KZN floods.

5.2.6.2 ProcureCo's initial experience of crisis events

Covid-19 crisis

As a small company still in its start-up phase, with little cash and employees to support, ProcureCo was forced to shut down during the initial stage of the national lockdown. Sales reduced as the business was only servicing one customer. However, as the BM entailed sourcing industrial supplies, it generated a partial

revenue from the sale of protective face masks and managed to retain 70% of its employees on a full-time basis. It sold off some assets to reinvest into the business.

Floods crisis

The flooding crisis had a severe impact on the KZN automotive sector to the extent that many automotive and OEMs in the supply chain were forced to shut down, while the industry recuperated from the crisis. For ProcureCo, this meant that its single customer was no longer able to trade for approximately six months and was therefore not able to generate a revenue. This severely threatened its survival, and more importantly for ProcureCo, it could not support employees following the floods disaster: *...the staff paid a big price because they didn't have work ... [Automotive company] got flooded after Covid, so we were hit again ... we just came out of Covid and then ... couldn't supply for six months* (CEO, ProcureCo).

5.2.6.3 ProcureCo's business model innovations in response to crises

From automotive procurement company to CMT manufacturer

ProcureCo was originally sourcing uniforms for its customer from a local CMT manufacturer. However, amidst Covid-19, the customer approached ProcureCo with a request to open their own CMT factory. ProcureCo agreed to take on the challenge and reinvented its BM from a procurement company to a CMT manufacturer (VCre). It purchased second-hand machinery, employed 10 CMT machinists and began to manufacture uniforms for the automotive OEM. This rapid change taught ProcureCo how to be adaptable and remain flexible. It approached its position as a start-up CMT manufacturer with humility and an openness to learning. The SME experienced a steep learning curve with the automotive OEM with regard to material sourcing, production planning, lean production, garment construction, and quality. The CEO worked a day shift and a night shift with the automotive OEM's employees to understand the utilitarian purpose of their uniforms. Design-thinking enabled ProcureCo to provide the customer with insights that they previously did not have, which laid the foundation for a trusting and mutually beneficial partnership. The specialised uniforms attract a high margin. ProcureCo started to produce 10 variations of corporate clothing for the automotive OEM, which employs thousands of people. The partnership has been the foundation for ProcureCo's growth since Covid-19.

Diversified customer base

When the automotive OEM shut down following the flooding crisis, ProcureCo had to find alternative methods to keep the business afloat. Even though it did not have retail experience, it seized the opportunity to pitch its production facility as a reliable partner to a panel of retailers through a clothing and textile business showcase. ProcureCo caught the attention of a sportswear retailer, which subsequently gave it an opportunity to fulfil a trial order. ProcureCo employed design-thinking practices to understand the retailer's pain points and worked to address them. This paved the way for another partnership between ProcureCo and its second customer, a retailer (VCap). While the retailer's garments required a different type of fabric, ProcureCo was able to adapt as its production line was designed to cope with flexibility to respond to change from its experience with the automotive OEM. The local fabric used in production and its skilled employees enabled a fast turnaround time, which the retailer valued (VCre). The retail customer enabled it to diversify its customer base as they ordered high volumes of garments that attracted a low margin. Diversification enabled ProcureCo to grow, despite not producing for its primary customer for six months of that year.

Vertical integration

As part of its design-thinking philosophy, ProcureCo aimed to address the issue of long turnaround times, which led to customers importing garments as opposed to sourcing them locally. As many CMT manufacturers used imported fabrics, turnaround times would be up to eight weeks. Recognising the importance of faster turnaround times, ProcureCo followed a strategy of sourcing all fabric locally and established a reliable partnership with a local fabric mill. When the opportunity arose, ProcureCo changed its BM once again to vertically integrate its value chain by acquiring 30% of the local fabric mill. This gave it a competitive advantage as it was able to easily access fabric and therefore have greater control over the value chain (VCre). ProcureCo's retail customer was so impressed by the fast turnaround time that it opted to stop importing certain complex garments and awarded ProcureCo the opportunity to produce those garments at its local production facility, further supporting the SME's growth.

5.3 Cross-case analysis

The cross-case analysis was facilitated by the completion of a matrix that highlights the key elements of each case study as summarised in **Table 6** below. The matrix begins with a summary of the SMEs' pre-crisis BMs and a summary of the exogenous crises that had a severe impact on them since and including Covid-19. The remainder of the chapter analyses and compares crisis response strategies adopted by the SMEs, the DCs that enabled them to sense and seize BMIs to either survive or grow from the crises, and lastly, the transformed BMIs are unpacked further. Due to the wealth of data collected from the case studies on the DCs that enabled the SMEs to sense, seize and transform BMIs in response to crises, thematic analysis was used to aggregate the common capabilities that emerged from the data gathered.

5.3.1 Crisis response strategies adopted by SMEs

All participating SMEs were severely impacted by the Covid-19 crisis as none of them were permitted to trade during the initial national lockdown, according to the regulations. At first, five SMEs responded with a retrenchment or partial retrenchment strategy in response to Covid-19 and only DenimCo initially responded with a proactive strategy. BoardCo and BeltCo were the only cases that employed a fully reactive retrenchment strategy. BoardCo's director explained the steps that followed its response to Covid-19:

... there was a lot of negotiations going on with suppliers ... directors ... had to give up their salaries ... Unfortunately, we had to go on a retrenchment programme ... we had to cut jobs ... cut salaries and wages by 20% to 30% ... Then we looked at restructuring the business as well and seeing where we can cut heads ... and ... try to downsize (Director, BoardCo).

BeltCo also cut salaries and offered early retirement packages to eligible employees, terminated fixed-term contracts early and formally retrenched a few employees. However, it eventually hired these employees back into the business. On the other extreme, DenimCo initially followed a proactive innovation strategy by framing the crisis positively to employees, and then generating and applying personal income streams to feed the employees as explained by its CEO:

Table 6: Cross case analysis

	ClothingCo	PackagingCo	BoardCo
Pre-crisis business model	CMT clothing factory selling capacity to any market	Manufacture corrugated cardboard boxes and packaging materials	Manufacture corrugated cardboard & convert it into boxes, cartons
Exogenous crises with severe impact	Covid-19: No trading Civil unrest: Uniform store looted	Covid-19: No trading Civil unrest: Supply chain disruption & customer closures Floods: Supply chain disruption & customer closures	Covid-19: No trading Floods: Supply chain disruption & water & electricity outages
Crisis response strategy	First: Partial retrenchment (Covid-19), Second: Innovation (Covid-19) Third: Exit (civil unrest) Fourth: Innovation (subsequent crises)	First: Partial retrenchment (Covid-19), Second: Innovation (Covid-19 & subsequent crises)	First: Retrenchment (Covid-19), Second: Innovation (Covid-19 & subsequent crises)
Business model innovations	<p>Personal protective clothing: Value proposition: Masks & scrubs Value capture: New market segments</p> <p>Niche market segmentation: High-end retail: Value creation: Dedicating capacity to high-end retail brands with a need for complex, quality garments</p> <p>In-house tourism brand: Value proposition: New tourism brand Value creation: Patented design Value capture: Local markets & tourism store</p>	<p>Personal protective clothing and PPE: Value proposition: Gowns, masks, face shields, sanitising tunnels, PPE Value creation: Established CMT, manufactured PPE using core assets Value capture: Government contracts</p> <p>Cardboard coffins and inserts: Value proposition: Coffins and coffin inserts Value creation: Manufactured using core assets Value capture: Funeral parlours</p> <p>Export pallet production: Value proposition: Wooden export pallets Value creation: New pallet division</p>	<p>Self-sustaining factory: Value creation: Implemented a fuel-fired boiler, implemented a water treatment plant, in the process of a solar power installation</p>
Survival/Growth	<p>Personal protective clothing: Survival Niche market segmentation: High-end retail: Growth In-house tourism brand: Start-up phase</p>	<p>Personal protective clothing & PPE: Survival and growth Cardboard coffins and inserts: Survival Export pallet production: Growth</p>	<p>Self-sustaining factory: Survival</p>

Table 6 continued: Cross case analysis

	DenimCo	BeltCo	ProcureCo
Pre-crisis business model	CMT manufacturing denim jeans & garments & boxer shorts for retailers	CMT manufacturing mainly leather belts & importing wallets	Procurement of consumable items from local manufacturers for automotive sector
Exogenous crises with severe impact	Covid-19: No trading Civil unrest: Absenteeism Floods: Factory damage, absenteeism Xenophobia: Lost employees & clients	Covid-19: No trading Civil unrest: Impacted sales, container with raw materials burnt down Energy: Impacted sales volumes	Covid-19: Initially no trading, then partial trading Floods: Impacted only customer, lost revenue
Crisis response strategy	First: Innovation (Covid-19) Second: Retrenchment (unrest) Third: Innovation Fourth: Retrenchment (xenophobia) Fifth: Innovation	First: Retrenchment (Covid-19) Second: Innovation (Covid-19 & subsequent crises)	First: Partial retrenchment (Covid-19) Second: Innovation (Covid-19 & subsequent crises)
Business model innovations	<p>Personal protective clothing: Value proposition: Masks and personal protective clothing Value creation: Efficient production Value capture: Large market share</p> <p>Motivation and engagement: Value creation: DJ, crèche and ECD centre, language & communication</p> <p>Direct-to-market sales channel: Value capture: Gogos, mobile factory shop Value creation: Mobile training centre</p>	<p>Online sales channel: Value proposition: Online toolbox, new products Value creation: Complex packing and logistics, acquisition of partner's business Value capture: Direct to end-consumer.</p> <p>Wearable accessories division: Value proposition: New products Value creation: Employed product experts & created a new division</p> <p>Export sales channel: Value creation: Dedicated export line & new efficiency & quality procedures Value capture: International market</p>	<p>From automotive procurement company to CMT manufacturer: Value proposition: Customised uniforms Value creation: Fast turnaround, high quality</p> <p>Diversified customer base: Value proposition: Retail sportswear Value capture: Onboarded a retailer that demands large volumes and a low margin Value creation: Fast turnaround, high quality</p> <p>Vertical integration: Value creation: Quick turnaround time</p>
Survival/Growth	<p>Personal protective clothing: Growth & survival Motivation and engagement: Growth & survival Direct-to-market sales channel: Start-up phase</p>	<p>Online sales channel: Growth Expanded wearable accessories range: Growth Export sales channel: Growth</p>	<p>From procurement company to CMT manufacturer: Growth Diversified customer base: Growth Vertical integration: Growth</p>

Table 7: Cross case analysis of dynamic capabilities

Dynamic Capabilities	ClothingCo	PackagingCo	BoardCo	DenimCo	BeltCo	ProcureCo
Sensing						
Resilience						
- Resilience experience	√	√	√	√	√	√
- Self-awareness	√	√	√	√	√	√
- Purpose	√	√		√	√	√
Sensemaking						
- Collaboration with others	√	√	√	√	√	√
- Observing patterns and trends	√	√		√	√	√
Communication	√	√		√	√	√
Active learning	√	√		√	√	√
Crisis planning						
- Post-crisis scenario planning	√	√	√		√	√
- Cash reserves and financial discipline	√	√	√		√	√
Seizing						
Decision-making						
- Responsible decision-making	√	√	√	√	√	√
- Agile decision-making	√	√	√	√	√	√
Entrepreneurial orientation						
- Flexibility and adaptability	√	√		√	√	√
- Risk-taking	√	√		√	√	√
Employee centricity						
- Employees' expertise	√	√	√	√	√	√
- Human resource practices	√			√	√	√
Partnerships						
- Customer partnerships	√	√			√	√
- Supplier partnerships	√	√	√		√	√
- Network partnerships	√	√			√	√
Transforming						
Redesign of competitive strategy	√	√	√	√	√	√
Reconfiguration of resources and redesign of asset structure	√	√	√	√	√	√
Culture	√			√	√	√

I went to the staff and I said ... listen, there's a thing called lockdown. The president had just said it ... I don't know what it means, but what I do know is that we've got to close the factory ... but don't despair. I will make a plan. I'll find a way ... I only had 80 staff in that time ... the 80 staff obviously eventually came back to this team ... people at home were getting food hampers ... Nobody was hungry ... I would make money. And then ... they would come and they had hampers (CEO, DenimCo).

All other SMEs followed a partial retrenchment strategy and temporarily placed employees on short time as a necessity due to suspended trading following Covid-19 lockdown regulations. As the SMEs navigated the Covid-19 crisis, they all pivoted towards innovation strategies as Covid-19 regulations created opportunities to commence some form of trading. All SMEs also continued to pursue innovation strategies when they experienced subsequent exogenous crises. ClothingCo, however, reverted to a reactive exit strategy and opted not to reopen its uniform store after it was looted. However, this was arguably part of its decision to completely remove uniforms from its product offering as it realised more value from serving high-end retail brands. DenimCo also reverted to a retrenchment strategy following the civil unrest, after having realised that the BM could not cope with the influx of employees that followed a temporary period of a high demand for protective face masks. DenimCo's CEO stated:

... my problem was that I held on to this for too long, so instead of cutting down and saying I only need 100 or 150 people, I kept it at 350 and said I need more work to feed these people. So that's where I lost a lot of money, and that is just ... the issue of what can I say? Of being too sympathetic. Leading with your heart (CEO, DenimCo).

After having experienced multiple exogenous crises, all SMEs reached a point of pursuing innovation strategies. Four SMEs pursued BMIs in line with their traditional BMs and competencies. PackagingCo and ProcureCo entered completely new industries and learned new competencies to compete. ProcureCo's CEO explained that every crisis they experienced made them stronger, pushed them beyond their comfort zone and enabled them to pursue BMI, which they would not have attempted otherwise:

Every crisis we went through, we actually came out stronger. If Covid didn't hit us, we wouldn't have known what it was like to save or to have a black swan day, we were a small company ... So, if the floods didn't happen, we were too much in the comfort zone ... we would have never ventured out, we would have never known what our strengths were on retail (CEO, ProcureCo).

5.3.2 Business model innovations implemented by SMEs

Table 6 provides a summary of the BMI iterations of each SME alongside each other. Five of the SMEs studied demonstrated multiple BMI iterations that covered the value proposition, value creation and value capture element of the BM. BoardCo was the only SME that exclusively pursued a self-sustaining factory as a value creation BMI.

ClothingCo, PackagingCo and DenimCo took advantage of a temporary spike in the demand for personal protective clothing and equipment, which was the result of the Covid-19 regulations and a rapid increase in demand from the health sector. While DenimCo and ClothingCo pursued these BMIs temporarily, PackagingCo continues to earn revenues from its personal protective clothing and PPE division, even though revenues reduced considerably since it was established in 2020. PackagingCo's cardboard coffin and inserts line was also pursued temporarily during the initial stages of the Covid-19 lockdown and ceased to be an active part of its existing BM.

Four of the cases pursued BMIs that were in line with their traditional BMs, industries, and core competencies. PackagingCo and ProcureCo diverted completely out of their traditional industries of corrugated cardboard packaging and automotive procurement, respectively, and thus, they were required to develop new core competencies to operate their innovated BMs. Similarly, BeltCo had to learn new online sales competencies to develop its online toolbox offering for customers and to take its business online following Covid-19. ClothingCo also had to learn to become more proficient to deliver the level of quality and complexity needed to partner with its high-end retail customer.

Four of the six cases demonstrated that they were able to achieve growth as a result of their BMIs. BoardCo's BMI enabled it to survive the crises it faced; however, it continued to incur losses since the start of the Covid-19 crisis. While DenimCo

experienced periods of survival and growth, it continues to face severe crises and has not been able to fully recover from them. The most severe crisis DenimCo faced was the xenophobia crisis, which occurred a few months prior to their participation in this study. Both SMEs lacked the seizing DC of customer and network partnerships. However, BoardCo also did not display signs of entrepreneurial innovation.

5.4 Thematic analysis: Dynamic capabilities

The SMEs indicated that they leveraged particular capabilities that formed the foundation of their BMIs. Following a process of coding the semi-structured interview transcripts, summarising categories, and aggregating sub-themes, main themes, or rather second-order DCs were identified and grouped under the first-order DCs of sensing, seizing, and transforming. These DCs have been summarised in **Table 7**. These second-order DCs explained how SMEs approached BMI in their response to crises and are discussed further in the remainder of this chapter. The thematic analysis process that resulted in the identified second-order capabilities is included in **Appendix C**.

5.4.1 Dynamic capabilities: Sensing

To respond to crises, the SMEs needed to first sense and understand the threats and potential opportunities that arose from external crisis conditions. The main themes that emerged in relation to sensing DCs are outlined in **Figure 6**. While there was often an overlap between the categorisation of second-order DCs, they were grouped according to the more prominent first-order DCs that they related to.

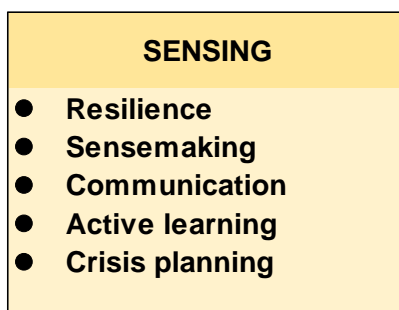


Figure 6: Sensing dynamic capabilities (Author's compilation)

5.4.1.1 Resilience

Resilience emerged as a common theme among all case study participants. This theme centred on the leader's capability to remain resilient throughout the challenging periods that followed sudden exogenous crises. Leaders demonstrated how they were able and willing to be resilient and find solutions amidst the chaos. Resilience capability comprised three sub-themes: resilience experience, self-awareness, and purpose.

Resilience experience

Leaders generally referred to past crisis experiences that made them more resilient. The leaders were driven and self-motivated. They highlighted various challenges that South African SMEs faced, including a lack of financial and non-financial resources, the threat of competition from international organisations and large local companies, a lack of processes and systems, and limited managerial or government support. All SMEs were persistent with their efforts to stabilise and grow their businesses. Despite the pressures that SMEs face in South Africa, ClothingCo's CEO indicated that she was driven by the pressure to pay employees their wages every week and that the challenges that ClothingCo faced enabled them to be better at enterprising:

"...you get a five-day chance every week to make it. If you don't, you fail...if you don't have pressures you can't enterprise...that's my pressure, every Friday I have to pay wages...If there is a disruption, I have to innovate because as long as my staff are at work, then it's not a disruption." (CEO, ClothingCo).

Having experienced multiple severe exogenous crisis events, all SMEs expressed that they have become more resilient with each crisis they had to face. BeltCo's CEO indicated that facing multiple crises every year caused the SME to pre-empt crises and have a positive outlook about it. Similarly, PackagingCo attributed their resilience capability to the past experience of surviving an economic downturn.

... now we go into every year and we say, 'so what's the crisis this year?' and we almost look forward to it (CEO, BeltCo).

... if you've started ... in a difficult economy ... it teaches you something different. It teaches you ... how to how to box better than other people. Like some people will learn that now when we've already been through it. So, it's how to be resilient really, that's what it is (CEO, PackagingCo).

Self-awareness

The leaders of all the included SMEs recalled being self-aware and level-headed to face crises. They alluded to how their personal characteristics helped them to remain in a sound state of mind to synthesise the changes in the environment, which enabled the exploration of potential courses of action before reacting on impulse.

So, it's about your character. For you to go through a difficult time, for you to even have the mental sanity to innovate during a difficult time, you have to be strong personally first ... Maintain your sanity, so that you can be able to see the way out of the crisis (CEO, ClothingCo).

... you got to be very level-headed ... you can't just make irrational decisions ... you've got to take it at one step at a time and not just jump to conclusions ... you got to be patient in certain instances (CEO, BoardCo).

Purpose

SME leaders indicated that a sense of purpose gave them the inspiration and personal motivation to be open to facing crises and finding appropriate solutions. The theme of the leader's purpose emerged strongly in five cases. The leaders with a defined purpose either ran their SMEs to achieve societal good or to achieve a personal goal, or both. Some leaders believed that their leadership positions conferred upon them a higher or divine purpose, and so bestowed upon them a responsibility to make a positive difference, while others believed that small business entrepreneurship conferred a duty to address social challenges in South Africa:

... when you're given this kind of platform, you find your purpose and your direction. With this kind of platform, I'm definitely going to use it to better the people that I have ... So every day making a difference to the people that I have under my control. That would be my purpose (CEO, ProcureCo).

In this day, national duty is starting a small business and creating employment and innovating ... as educated professionals, we are best placed to solve the problems (CEO, ClothingCo).

5.4.1.2 Sensemaking

The SMEs demonstrated a need to identify what the impacts of the crisis were and how it would impact their SMEs. In all cases, leaders demonstrated an inclination toward gathering knowledge and information during each crisis. They explained how they went about gaining more information to make sense of crises.

Collaboration with networks

Sense-making was enabled by observing changes in the external environment and by communicating with trusted advisors, partners in the SME's or the leader's business or personal networks. Some cases also engaged in international benchmarking, which allowed local SMEs to imitate the activities of more advanced, more innovative countries or those that had experienced worse impacts of the crises. BeltCo's CEO highlighted the benefit of listening to their American business partner who offered insights during a global crisis like Covid-19:

We had meetings with him twice a week ... America was roughly two weeks ahead of us in terms of ... lockdowns ... what was retail going to look like ... what was going to be the shift from bricks and mortar to online ... every two or three days, we were meeting with him and he was giving us ... insights into stuff that we hadn't imagined and that hadn't really reached our shores here. But all of it was literally 14 days later, so we felt quite well prepared not necessarily with the solutions, but just opening our minds to what can happen. And ... how crazy this was going to become (CEO, BeltCo).

Sense-making through collaboration also enabled SMEs to identify opportunities for renewal. When ProcureCo's only customer shut down, the CEO engaged with potential customers in an attempt to make sense of their pain points and unmet needs so that the company could seek opportunities to address them. The CEO also highlighted the importance of connecting ProcureCo's strengths and weaknesses to take advantage of the opportunity:

I went back to the drawing board and I said OK, if these are the things they're saying is bad ... I started jotting them down ... there was a lot of ... doing my own theory ... I kind of had the dots joined already in my world for what I wanted for ProcureCo ... I knew these were the weaknesses. This is our strengths. This is how we put them together (CEO, ProcureCo).

Observing patterns and trends

The analysis of the case studies revealed that the leaders played an influential role in making sense of crises, observing patterns and trends, and identifying opportunities and threats. Five of the cases that pursued value capture innovations demonstrated that they were continuously involved in observation and analysis activities. This enabled them to identify trends in the market that created an opportunity to capture more revenue for their businesses. PackagingCo's CEO explained how he noticed a trend of customers that started to export their products. This gave him the idea to start selling export pallets as a new business opportunity:

I saw a gap for people who needed treated pallets because they were exporting ... my customers, they were making products to go overseas (CEO, PackagingCo).

ClothingCo's CEO also related her experience of travelling to Disney World in America and how it resonated with ClothingCo's CMT expertise and her search for an in-house brand. Her chance observations while on vacation resulted in ClothingCo's creation of an in-house tourism brand:

On our way back ... that dropped the pin for me ... they've moved away from being a theme park to being a retailer and to being a brand ... and now I watch this with other interest. I'm like, I'm in this industry ... I like what I'm seeing here. I'm on the market for an in-house brand. How can I benefit seeing what I'm looking at here (CEO, ClothingCo).

5.4.1.3 Communication

Communication featured as a central theme across sensing, seizing, and transforming DCs, although it was more heavily discussed by the participants in

relation to the initial stages of crises when the SMEs were involved in sense-making activities. Communication occurred mainly with employees, customers, suppliers, and network partners, which has been re-iterated under the collaboration of networks as sub-theme of sense-making and under partnerships and employee centricity which were identified to be seizing capabilities.

Communication with employees was a common theme among the four CMT manufacturing SMEs. These SMEs were cognisant of the personal impact of crises in employees' lives. In these cases, the leaders communicated extensively with employees through periods of crisis and engaged in positive crisis framing. They included employees in the business decisions that impacted them, such as retrenchments and salary cuts, and in the manner that BMIs would change their roles and duties. This gave employees the opportunity to share their views and help leaders make decisions. DenimCo described the discussion with employees when the SME had to incur costs to relocate its factory that was without electricity, shortly after the xenophobia crisis:

I went to the staff, and I said ... 'We've got a choice, we can either move and we'll have power, we'll be able to manufacture, but this is how long it's going to take, this is how much it's going to cost me. So, we need to negotiate on our wage, where we will pay a percentage that we are able to afford. And if you're OK with it, we can do the move. If you see that you can't do it and it's going to impact you too much, then tell me. Then you're more than welcome to go look for another job. And when we're back on our feet, you come back or you bite the bullet with us and we'll do percentages and as soon as I'm back on my feet, I'll back-pay you.' The staff agreed (CEO, DenimCo).

BeltCo similarly involved employees in the difficult decisions that the business needed to make and also noted that employees appreciated being informed during crises. Transparent communication also fostered teamwork when employees needed to participate in responding to a crisis:

People would rather have bad news communicated than no news ... Everybody was very understanding ... I can't even begin to explain how

blessed we were that our staff pulled together like they did. And I think it's probably because of the open communication (CEO, BeltCo).

ProcureCo was equally emphasising transparent communication and explained that open communication played a role in changing the culture of the SME, which was important for ProcureCo to prove that they could be a reliable supplier to a potential new client:

... we had a culture of striking if things weren't working out ... so ... what we did was ... we communicated anything and everything and no matter how small or how big. Every single thing ... I stopped the factory if I needed to say something ... I don't keep anything away from the staff (CEO, ProcureCo).

Effective communication with customers was also one of the key levers of identifying opportunities during a crisis. SMEs demonstrated that they kept customers closely informed during periods of crisis and collaborated on finding solutions for them. BeltCo's CEO highlighted that direct, regular communication with customers heightened the SME's access to decision-makers, unlocking more opportunities for BeltCo:

... one of the good things coming out of Covid was we had much more frequent and direct communications with very senior people that we wouldn't normally talk to ... we got all their WhatsApp numbers, which they hadn't previously done ... we were talking a lot (CEO, BeltCo).

In addition to employees and customers, SMEs tended to engage with suppliers and network partners to solicit support and guidance during periods of crises.

5.4.1.4 Active learning

All cases demonstrated an openness to learning. However, five cases highlighted that the active pursuit of learning and acquiring new knowledge and information was essential to their post-crisis survival and growth strategies. Active learning was aided by R&D activities, which actively enabled the thinking process and led to the generation of new ideas to be pursued and opportunities to be exploited. The SMEs regularly made use of internet searches to find out more information on crises and to

look for ideas on how to respond. PackagingCo's CEO actively engaged in reading and research to learn from the way China was dealing with Covid-19:

... whatever you read and whatever you research, I would always research first with China ... because they always ... in a crisis ... like 5 months ahead of everyone ... So I obviously research what was happening and how they were getting things done (CEO, PackagingCo).

BeltCo's CEO elaborated on research, completing online courses, investing in product development, and experimenting with sampling new designs. R&D enabled the generation of new ideas and designs:

When we had our first lockdown in March, I took ... people in the product development team ... we said to them ... you have to start understanding online ... do the courses, Google it ... We still invested in developing a lot of new products ... we overspend on sampling and new ideas ... That's become part of our culture and that is innovation, because you're stretched to think, stretched to come up with new designs (CEO, BeltCo).

ProcureCo's CEO also explained that she would physically visit her customers' retail stores and meticulously study their products, so that these learnings could be fed back to ProcureCo's factory, ensuring that customers' needs were met.

I do a lot of homework ... monitoring the customer and understanding its demands ... I'm always checking what sells ... which fabric, which colour ... what is the biggest seller. I do a lot of background checks ... I'm always in the store checking my garments to see the quality (CEO, ProcureCo).

ProcureCo's CEO also studied foreign competitors' products that were displayed in stores and approached the customers to allow the SME an opportunity to produce garments that were being imported, which brought in more sales for ProcureCo. BeltCo followed a similar approach to benchmarking their products and fed their learnings back to customers, which also enhanced their customers' learnings.

5.4.1.5 Crisis planning

While the SMEs indicated that they did not have the time and capability to work on pre-crisis planning activities, most of the SMEs realised the value of post-crisis planning and appreciated the importance of cash reserves and financial discipline

Post-crisis scenario planning

Through learning and analysing new knowledge and information, the SMEs were able to start identifying threats to be mitigated and opportunities to be pursued. By connecting their learnings with the strengths and weaknesses of their SMEs, new ideas were generated. This formed the foundation for the CEOs to start playing out various scenarios that paved the way for decisions to be taken. Five of the SME leaders noted the importance of writing down or mapping out their scenarios. BeltCo described their scenario planning process, which included a worst-case and best-case scenario to mitigate the risk of running out of cash, following the Covid-19 crisis, as well as the assumptions that they were based on:

... we had two scenarios ... worst case and best case. Worst case, which was two months no invoicing and then 70% of the size of the business ... I mapped those two scenarios in terms of the staff we would need. We analysed our cash burn. How much cash would we have? We analysed which of our customers were likely to survive and pay us (CEO, BeltCo).

Other SMEs followed a similar approach to BeltCo, trimming down overheads during crises. PackagingCo expressed how their scenario planning process involved an internet search. This allowed it to ideate scenarios and identify market opportunities:

I'm just on the computer and google this and that ... And I just said we need to find an option. So, I just wrote a lot of scenarios down and said what we can do, where is the gap? (CEO, PackagingCo).

Cash reserves and financial discipline

While the SMEs did not engage extensively in pre-crisis planning activities prior to the onset of Covid-19, BeltCo was the only SME that maintained healthy cash reserves as a result of having experienced financial crises in the past. All other SMEs stressed that limited cash resources presented significant concerns about how to handle the Covid-19 crisis. BeltCo's CEO indicated that a large emergency fund

helped it to remain more capacitated to look out for opportunities that might emerge from crises, such as a chance to acquire a competitor in distress. It maintained an emergency fund of approximately three months of overheads, which the CEO explained, created stability for the SME to consider a wider range of opportunities:

I nearly lost my house twice and so I have an aversion to debt and ... to not having a big emergency fund ... had we not had that, we couldn't have got through it as well as we did ... we wouldn't have been able to pay our staff. We would have had morale issues. We wouldn't have been able to invest in sampling and new designs when things looked tough (CEO, BeltCo).

PackagingCo and ProcureCo's CEO noted that they established an emergency fund only after experiencing the Covid-19 crisis. ProcureCo secured cash resources from financial institutions in the event of future crises. BeltCo, PackagingCo and ProcureCo stressed the importance of financial discipline to establish a healthy cash reserve:

... no one's prepared for black swan days ... but discipline with finance is very important for a business. Whether it's small or big, it's important to have discipline. It's important to keep a healthy cash flow (CEO, ProcureCo).

ClothingCo and BoardCo increased financial discipline, following the Covid-19 crisis to start building up cash reserves. Although DenimCo recognised the importance of building up a healthy cash reserve, the extent of crises that it continued to experience prevented it from doing so up to now.

5.4.2 Dynamic capabilities: Seizing

Case study participants elaborated on the capabilities that propelled them towards an innovative stance on their response to crises. These capabilities were categorised as seizing capabilities. Thematic analysis highlighted the main themes related to the seizing DC, which have been outlined in **Figure 7**.

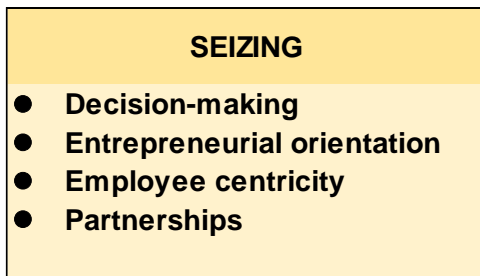


Figure 7: Seizing dynamic capabilities (Author’s compilation).

5.4.2.1 Decision-making

A main theme that emerged was SMEs’ decision-making capabilities. Given the potentially detrimental impact of crises on the SME and importantly, its employees, the SMEs were driven to make quick, yet responsible decisions.

Agile decision-making

After synthesising the impact of crises and having sensed opportunities and threats, the SME leaders quickly engaged in decision-making regarding the survival and future of their businesses. BeltCo explained that even difficult decisions needed to be made with agility. Due to the uncertainty of Covid-19, BeltCo made difficult decisions related to people; however, these decisions were carefully considered:

... we had too many staff, so we did retrench straight away ... retrenchments were all well considered ... as sad as that was it ... People is always your toughest decision (CEO, BeltCo).

All SMEs demonstrated that decisions needed to be made quickly to sustain their businesses in response to crises. After sensing the opportunity to supply personal protective clothing, following Covid-19, DenimCo, ClothingCo and PackagingCo described their quick decision to jump on the PPE bandwagon:

We did jump on that PPE bandwagon ... because ... we have to sustain ourselves (CEO, PackagingCo).

The fact that most SME leaders were deeply involved in managing the business and making strategic decisions led to more agile decisions being made. Five out of the six interviewed SME leaders indicated that they were highly involved in the running

of the business and the execution of work. Only BoardCo's director did not indicate a significant level of involvement in the day-to-day running of the business. The remaining five leaders indicated that spending time on the factory floor, working with employees and understanding their challenges enabled them to make better informed and agile decisions. PackagingCo's CEO noted that being close to the business operations helped him to give informed answers to customers:

I like all the elements to be with me. So, I can control everything, so I can give an informed answer (CEO, PackagingCo)

ProcureCo's CEO had an aversion to bureaucracy and believed decisions were best made on the factory floor:

I'm very hands-on. Very, very hands-on. I think let's meet less at the board room, more on the floor (CEO, ProcureCo).

Responsible decision-making

All SMEs demonstrated a need to make responsible decisions in the interest of sustaining the business and considering the impact on employees. ProcureCo stressed the importance of leaders' responsibility and accountability when it came to making strategic crisis response decisions:

... as a leader, you are the one that makes the final decision. So, the company goes down, you gotta take responsibility ... if you're making that kind of decision ... They should have been checked from all angles; every kind of scenario should have been played out before the decision is taken. It's got to be a responsible decision at all times (CEO, ProcureCo).

The five SMEs that engaged in scenario planning also followed a more structured and analytical decision-making process. ClothingCo followed a process of an elimination approach, whereas for BoardCo, this entailed completing a pros and cons analysis on their identified BMI, which also considered the environmental impact of their decisions:

... we did our research into the fuel boiler and ... looked at the pros and cons of it. The pro is that ... it's cheaper to run. Cheaper to buy the fuel than to pay for electricity ... more efficient in your production lines ... you're not losing steam all the time ... it's a much more efficient boiler to run than running your electric boiler. And then the cons ... it's not very environmentally friendly because of the fumes that it gives off (Director, BoardCo).

5.4.2.2 Entrepreneurial orientation

The entrepreneurial orientation of leaders emerged as a common theme as five leaders displayed a tendency to actively seek out market opportunities and were flexible, adaptable, and willing to take risks to generate more revenues for their businesses.

Flexibility and adaptability

Five out of the six cases indicated that being flexible and adaptable aided their ability to be responsive and innovate, following the crises they experienced. Only BoardCo, a company that focused solely on value delivery innovations did not highlight flexibility and adaptability as an essential capability. DenimCo's CEO highlighted the need for adaptability, following the Covid-19 crisis, so that employees could understand the need to switch from making denim garments to masks:

I call it the year of the chameleon. And I told the staff 'Adapt or you die'. You have to adapt or you're going to be dead. So ... let's now just move totally into masks and that's what we were doing (CEO, DenimCo).

BeltCo's CEO explained that flexibility was necessary due to supply chain disruptions caused by the civil unrest:

... we went to customers and we said, 'Listen, there's broken supply chains, we can offer you this. It's OK, it's good enough. You'll have something on shelf. We can't offer you this material. We can offer this material.' And there was a lot of flexibility ... we managed to ... find substitute products, where supply chains were broken (CEO, BeltCo).

ProcureCo CEO highlighted that flexibility and adaptability were considered in the way the factory was designed. They deliberately used local suppliers, which helped them to be more responsive. This helped ProcureCo to adapt to the retailers' needs, even though they had been accustomed to working with an automotive OEM customer:

The factory was built to adapt and to change if things have to change. It is ... very adaptable and you have to be very flexible and ... a quick turnaround time. So, when we joined [Retailer], it was quick to change the line to whatever they wanted because we were ... running the ... local fabric ... all our fabric is local (CEO, ProcureCo).

Risk-taking

All SMEs were exposed to a level of risk with the strategic decisions they made due to the level of uncertainty that followed periods of exogenous crises, with some demonstrating aggressive risk-taking behaviours. PackagingCo's CEO explained their approach to taking risks with introducing new products to the market, which fell outside of its core business offering:

I think in business you have to be a cowboy. You have to take a challenge ... the risk that nobody else will take. You can't always look at the risk and say ... it's too risky because you do have to lose sometime or you're never going to win (CEO, PackagingCo).

ProcureCo's CEO explained how they justified their risk-taking approach after being contacted by a retailer at a clothing and textile showcasing event, even though they did not have experience in a retail environment:

But at that time, we had no idea that we could do retail. We've never done retail before, but we thought how hard could it be? We're sewing golfers. Almost 10 000 / 20000 thousand golfers ... We're doing pants ... overalls ... a jacket, OK, it's corporate, but this is retail. I'm sure we could be able to pull this off ... I was chosen by one of the directors at [Retailer] ... So immediately I came back ... I looked at it. Can I do it? Can't I? And we had no work ... I wrote to her and ... everything was history (ProcureCo).

Risk-taking SMEs demonstrated that they were also open to experimenting with ideas that could have led to BMIs. Experimentation overlapped with the theme of 'Active Learning' but has been included here as the direct intention was to generate new income streams through these experiments. These SMEs were willing to fail or make mistakes in the process. They also learned more by reflecting on the reasons for failure. They demonstrated that they actioned ideas, even when there was no guarantee that those ideas would succeed:

I focused very hard in Covid on more sustainable raw materials, so ... we've got innovators in New York ... to test products with them ... I have failed to take one of those amazing bio-based or recycled products and get the market in South Africa or retail excited about it (CEO, BeltCo).

I tried to do a recyclable mask ... Everything was certified ... we did the tests ... we will pick it up, we will wash it, repackage it ... It did take off at certain places ... but then it failed (CEO, PackagingCo).

5.4.2.3 Employee centricity

Employees' expertise

As labour-intensive manufacturing businesses, all SMEs noted the important role employees played in responding to a crisis. The SMEs were highly reliant on their employees' skills, experience and expertise, which laid the foundation of each SME's core competencies. Each SME viewed their skilled workforce as a competitive advantage as employees developed their unique skills over time, on the job or through skills development and training initiatives. ClothingCo explained that employees' competencies differentiated the SME from other CMT manufacturers. Its skilled workforce enabled it to start their in-house tourism brand:

I wanted to build the expertise that I felt the South African markets lacks ... we lack the intricacies of attention to detail and complexity in our clothing industry ... how I chose to differentiate myself is ... to do high quality, complex garments, of low volumes. And my staff make sure they are acquainted with that and they're cemented in it ... this competence that we have nurtured and

built and using [high-end retailer] as a training ground can now start doing other things that we can sell to the market (CEO, ClothingCo).

ProcureCo highlighted that their competitive advantage is derived largely from their fast turnaround offering to customers, which is an outcome of the skills and efficiency of its employees. Employees have also been trained to be multi-skilled, which creates more flexibility in the production process:

Our factory is also very, very skilled when it comes to their machinery work. Their turnaround time is unbelievable ... each line can pull out close to 1300 a day ... and that's not even a complete line (CEO, ProcureCo).

Almost 80% of our staff is ... upskilled, meaning that they know more than one job ... I could take anybody from the bottom and bring them down to the cutting room ... So I rotate a lot (CEO, ProcureCo).

PackagingCo demonstrated that the flexibility of their employees and their ability to learn helped the business to explore new sources of income, following the crises it had faced. The CEO was also directly involved in teaching employees:

I just started to create the other avenues and then ... I said, OK, we don't know this, but you try and go there. You try and go there and they will just rotate ... I would ... show them and just teach them (CEO, PackagingCo).

In addition to employees' skills and experience, employees' attitudes, personal attributes, willingness to support the leader to face crises and work as a team also enabled the SMEs to overcome these crises. BeltCo noted that their biggest post-crisis learning was about the pivotal role the team played in getting the SME through multiple crises:

... my biggest learning is our people ... I didn't give my staff enough credit for how resilient they were. How they could carry the burden with me, if I spoke to them. How creative they were with coming up with ideas. Or how tough they would be. And I mean, I can't believe how motivated they were. Our absenteeism rate is very low in the business, under 4% (CEO, BeltCo).

Human resource practices

Recognising the important role that employees played, all SMEs were conscious of how the employees were treated and they made efforts to take care of them, particularly during periods of crisis. Elements of a culture of the African philosophy of *Ubuntu*, meaning “I am because you are” were evident in the SMEs human resource practices as ClothingCo’s CEO explained:

“My business is built on the values of the uBuntu, the foundation of... leaving people better than you found them... I like mentoring people. I like finding people that I can move from point A to a higher point B.” (CEO, Clothing Co)

The SME leaders indicated that they aimed to keep short time at a minimum. DenimCo supported employees with food hampers during Covid-19 and established a crèche to ensure that parents could come to work with peace of mind, knowing that their children were cared for. In South Africa, where unemployment levels are rife, there was a strong motivation by all SME leaders to ensure that they were able to create continuous work for employees to earn an income, and to train, motivate and grow employees. SME leaders also recognised that employees were often the sole income earner in their households; therefore, employment practices bore consideration of employees’ families as BoardCo’s director explained:

This business employs 90 people. That's 90 people, plus families ... you got to think about that all the time ... about what's actually happening to the social economics of the company ... you got to ... give them a consistent income all the time ... People are very important in this business and because we are so hands-on based ... Their skills are required on a daily basis ... we're here to bring you in ... nurture you, to make sure that you got sufficient training and skills that you need to do your job and also to motivate them to make sure they grow in the business (Director, BoardCo).

5.4.2.4 Partnerships

The presence of partnerships was dominant in four cases that experienced post-crises growth. Partnerships were less prominent in BoardCo, and not evident in DenimCo, who have managed to survive crises. Partnerships were grouped into customer partnerships, supplier partnerships and network partnerships.

Customer partnerships

ClothingCo, PackagingCo, BeltCo and ProcureCo emphasised that strong customer partnerships enabled them to seize market opportunities for BMI. As a result, these SMEs placed strong emphasis on building and strengthening their relationships with their key customers. ClothingCo's innovated BM, which focused on value delivery to high-end retail customers, was founded on the strength of its relationship with one customer:

I have a very understanding ... and I come along well with my main customer ... [High-end retailer] is understanding and the support ... has gone a long way ... They've been very understanding and patient and tolerant with us, with me as the owner ... they aggressively ... just grew during ... the past three years ... That's why focusing on them has helped us get more business from them (CEO, ClothingCo).

PackagingCo leveraged the strength of existing customer relationships to enter the market for personal protective clothing and equipment during the Covid-19 crisis. It remained flexible to negotiations with customers to secure new streams of income:

I said my customers need to support me ... I went to those customers that I have got a very good relationship with and I said 'If you don't support me, I'm going to close. So, you bought boxes from me. You need to buy everything ... I will supply the price. You tell me I'm getting this price. And I'll match it.' ... And then that's how the other sources of income came in (CEO, PackagingCo).

One of BeltCo's strategies for building trusted relationships with its customers was to ensure that it is a market expert in their product categories. BeltCo therefore invested in having a deep understanding of their products and how they ranked against competitors, so that they can offer a richer engagement with their retail customers to address their needs. They also communicated extensively and served customers' needs well during periods of crisis, which solidified their partnerships:

... they depended on us, they always had, but they don't realise it. Now they needed us. And since Covid, that relationship is better. It's more of a partnership, I think it was reinforced again by the civil unrest, it was reinforced again by the flooding. It's been reinforced again by load shedding (CEO, BeltCo).

ProcureCo similarly placed emphasis on having an intimate understanding of their customers and their needs and to align the SMEs offerings to those needs:

... to know your partner is very, very important ... you cannot build your business not ... knowing their demand, what their needs are, it's going to be very hard to give them what they want. We had to align ProcureCo ... with [Automotive OEM], it took me about two and a half years to actually align ... We ran a day shift and a night shift and we fit every staff of theirs and we spent time with them to see how the factory runs ... Once we understood the need, it was easier then to produce a garment that would match the need (CEO, ProcureCo).

Even though customer partnerships did not feature as a capability for BMI in DenimCo's case, the CEO noted that strong customer relationships were needed to seize new opportunities; however, the SME lost many customers as a result of the crises they experienced, which led them to start targeting sales through the unknown informal market. BoardCo, which focused solely on value delivery innovations, did not highlight customer partnerships as a capability for BMI.

Supplier partnerships

In addition to customer partnerships, five out of the six cases noted the importance of having supportive supplier partnerships during crisis periods. BeltCo expressed that supportive suppliers have been as essential to their business as their customers:

We have good supplier relations. It's a key foundation of our business ... we've always had a philosophy in this business, if the customer is king, the supplier is queen because one without the others is pointless. So, we treat our suppliers very well (CEO, BeltCo).

Due to the constraints that crisis periods placed on cash resources, BoardCo's director explained that the SME needed to reach out to suppliers to renegotiate settlement terms as financial institutions were unable to provide the financial support that was needed:

The main thing is those suppliers that stood by you is somebody you need to really be in the good books with ... I think suppliers did ... more for us than ... bankers (Director, BoardCo).

ProcureCo demonstrated that not only did strong supplier partnerships provide stability during periods of crisis, but they also helped the SME to innovate and improve its value offering of a fast turnaround time to customers. ProcureCo likened its relationship with suppliers to a marriage worth investing in. Their need to reinforce a strong partnership with the local fabric mill gave rise to its vertical integration innovation:

ProcureCo own 30% of it ... That was a recent partnership, but a very good partnership ... we're a company that likes marriages. We don't do one-night stands (CEO, ProcureCo).

Network partnerships

The importance of network partnerships, such as business associations, mentors, as well as supportive competitors emerged in four cases. Generally, network partnerships provided support and guidance to the SMEs when they experienced crises, although BeltCo was able to leverage its networks to pursue BMI. BeltCo's CEO also explained that building network relationships with foreign buyers, through their relationship with their American business partner, was highly instrumental in enabling access to the export market, which allowed it to increase its revenue streams:

They were very scared to come to South Africa, so ... I said 'I'll pay for you. You can come here for two weeks; I'll show you the factory ... We'll go and visit our buckle factory and our tanneries and you'll see what it's about.' They were blown away by South Africa. They couldn't believe everything they saw

here. They loved the factory, and from that point they said, OK, we are going to start engaging (CEO, BeltCo).

5.4.3 Dynamic capabilities: Transforming

The SMEs explained how they went about anchoring their BMIs into new, more permanent structure of their BMs. These capabilities were grouped into transforming DCs which have been outlined in **Figure 8**.

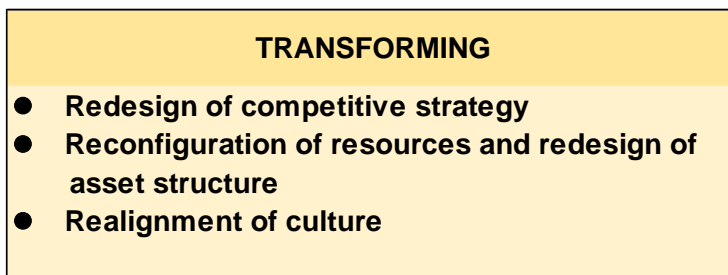


Figure 8: Transforming dynamic capabilities (Author's compilation).

5.4.3.1 Redesign of competitive strategy

The SME leaders demonstrated how surviving several crises experiences led them to consider the viability and relevance of their competitive strategies. They indicated that their survival challenges caused them to redesign the competitive strategy of their businesses to generate sustainable economic returns. Post-crisis learnings caused them to envision a competitive strategy that would make them more resilient to crises, and consequently more competitive so that they could generate long term economic returns. DenimCo's CEO referred to this long-term view as its 100-year vision which incorporated a reliable value chain and sustainability of its materials:

... the bigger picture ... the 100-year vision basically comes in with so many different aspects ... I need to have the foundations right ... One of them is the value chain ... the other one ... is sustainability (CEO, DenimCo).

ClothingCo's CEO similarly explained that the thinking behind the establishment of an in-house brand was part of the SME's long-term strategy:

...at the top of the list is, how do I make [ClothingCo] sustainable ... One of the things that will make my business sustainable is if I have an in-house

brand ... Once I build that brand and I strengthen it, then I'm going to come back and I'm going to feed all these orders in the same factory ... So, it's that long-term strategy (CEO, ClothingCo).

In all cases, the leaders of the SMEs diversified or expressed a plan to diversify their BMs to reduce their vulnerability during crisis periods. The BMs that changed the value proposition of the SME's value capture element of the BMs enabled them to diversify their revenue streams and/or their customer segments, which made them less vulnerable to demand shocks as a result of exogenous crises. PackagingCo's CEO explained the thinking behind the diversification he was trying to achieve with PackagingCo's BM:

... in our industry, we have quiet periods and busy periods ... I want to separate the business into three different sectors ... So, whatever's busy in January, February, March, April. Find out what's pumping? Is it export is import? Is it Citrus? Is it Agri? Is it Clothing? ... then I went to the next. So, May, June, July, August what's busy then? ... I'm trying to get the business to a point, where it's always turning over and meeting budget ... trying to diversify in terms of my customers as well (CEO, PackagingCo).

5.4.3.2 Reconfiguration of resources and redesign of asset structure

In all six cases, the SMEs reconfigured the set-up of their facilities, particularly where the value delivery aspect of their BMs was innovated. This required considerable thought to plan and design either the architectural layout of the factory, its production processes, or how production assets would be utilised optimally. For the specialised nature of its export sales channel, BeltCo set up a separate export production line, allocated more skilled employees to the production line and introduced more pre-production activities and quality controls, similar to the automotive industry:

We've redesigned our factory floor to be more efficient to put in the export dedicated line. We've got ... more pre-production activities happening ... like the car industry. More quality control up the line as opposed to in production (CEO, BeltCo).

Despite the effort required to make structural changes, the SME leaders indicated that they occurred relatively quickly. PackagingCo established a separate division dedicated to manufacturing pallets for its export pallet BMI:

I started a pallet division, which ... I make some export pallets (CEO, PackagingCo).

ClothingCo's decision to target high-end retail customers required it to dedicate 50% of its production capacity to a single customer. It also set up a tourism store at a popular tourist location to access its target market, which is tourists. DenimCo's BMI of improved motivation and engagement processes involved the establishment of a children's crèche and an ECD centre that reduced its absenteeism rate. BoardCo's self-sustaining BMI encompassed the replacement of its electric boiler with a fuel-fired boiler and the implementation of a water treatment plant. ProcureCo invested in a partnership with a fabric mill to ensure easy access to fabric, so that it could offer customers a fast turnaround time. It also adapted its production line to enable flexibility between change-overs with its corporate client and its retail client.

5.4.3.3 Realignment of culture

Elements of the principles of *Ubuntu* were prevalent in all SMEs company cultures, but four cases placed significant emphasis on the importance of realigning the inclusive and collaborative corporate culture of their businesses especially after radical changes, such as their BMIs took place. BeltCo's CEO appreciated the need for a culture change when it expanded its wearable accessories range by employing several people from a different start-up company to establish BeltCo's wearable accessories division. The new employees were located in the Western Cape Province and largely came from a sales background, which added further complexity to the merger with BeltCo located in the KZN Province and working in a factory environment:

Our sales team was only about 10 people, so adding seven people to 10, you got to watch the company culture ... we had some workshops ... we said, listen, guys, you come from different companies, but you've all worked together at these companies before and we have worked very hard to build our corporate culture ... A manufacturing site culture is different to a

showroom sales site. So, we had two things against us [Western Cape City] and an office versus [KZN City] and the factory environment ... So we said to them ... tell us what your best experiences were, culture-wise at all your companies you worked for. Tell us ... your worst experiences ... let's take some of the good and add it to ours and let's see your bad ones. Have we got any of those? Let's try and get rid of them ... they worked very, very hard to drive this merger of the cultures (CEO, BeltCo).

ProcureCo noted that there was a culture of striking when employees were unhappy. Therefore, it had to be intentional about creating a collaborative culture and focused on becoming more employee-centric. Similarly to BeltCo, it worked to address its culture when it diversified its customer base to ensure that the team was capable of delivering on the large volumes that the customer required.

5.5 Conclusion

This chapter presented the findings that arose from the data collected on the six participating case studies and their response to crises through the implementation of BMIs. The findings were presented in the form of a within-case analysis of each case, and a cross-case analysis comparing and finding commonalities across the cases.

This chapter presented the findings of SMEs crisis response strategies demonstrating that although their responses differed, SMEs tended to be more reactive at first and subsequently adopted more innovative approaches. The findings of the BMIs also revealed the tendency of some SMEs to have more BMI iterations than others. The observations on temporary BMIs and the exploration of BMIs outside of SMEs core competencies were also discussed. This chapter also highlighted that four of the SMEs were able to grow their businesses as a result of the BMIs while two were able to survive. Finally, this chapter presented the 12 second-order DCs that emerged from conducting a thematic analysis on the coded interview data. The DCs were grouped under the overarching sensing, seizing, and transforming DCs in line with the DC theoretical backdrop of this study.

The following chapter discusses the results of the findings highlighted in this chapter in connection with the relevant literature.

CHAPTER 6: DISCUSSION

This chapter analyses the research findings presented in Chapter 5 in relation to the literature review presented in Chapter 2. The data were collected from the semi-structured interviews conducted with the leaders of six participating cases. The discussion is presented in accordance with the research questions and collectively seeks to explore the overarching research question:

How do SMEs implement business model innovation that results in survival and/or growth in response to crises?

6.1 Discussion of research sub-question 1

RQ 1: How did SMEs strategically respond to crises?

Research sub-question 1 aimed to understand how the SMEs strategically responded to crises, given that the crisis management literature demonstrates the options of reactive and proactive crisis response strategies. As this study was conducted post the event of prolonged and multiple exogenous crises, research sub-question 1 sought to explore SMEs' strategic responses as they all experienced sudden, severe crises that could have forced them to close their companies or lean toward reactive responses. The crisis response strategies described in the within-case and cross-case analyses were relevant to this sub-question.

Although this study focused on BMI, which links to a proactive innovation strategy, all participating SMEs employed a combination of reactive and proactive crisis responses which Buntić et al. (2023) suggest is not uncommon for SMEs. Five SMEs demonstrated that they took essential retrenchment and cost-saving steps during the initial stages of Covid-19 and the announcement of lockdown restrictions to ensure their SMEs' stability, while they had to take stock and sense opportunities for innovation. This supported Wenzel et al.'s (2020) view that reactive responses are necessary in the short term to re-stabilise a business when the crisis had not been expected and the business had thus, not been able to prepare for its consequences.

An interesting observation that emerged in this study, and in line with the interpretivist nature of it, was that all SME leaders expressed a feeling of guilt when they

discussed employee retrenchment practices. Whilst Wenzel et al. (2020) referred to the negative impact of retrenchment strategy on employee morale and productivity, leader's guilt seemed to emanate from a moral obligation to take care of employees. This was also evident in DenimCo's motivation to pursue a proactive crisis response strategy following Covid-19 to ensure that employees would not go hungry during the lockdown even though it meant the CEO having to inject personal funds into the business. This sentiment was echoed after the civil unrest crisis when DenimCo should have retrenched part of its large workforce but did not due to the CEO's sympathetic interests in the wellbeing of DenimCo's employees. The duty of responsibility to employees is perhaps connected to the cultural integration of the African philosophy of *Ubuntu* into the SMEs' business philosophies which is perhaps an area for future research from a South African perspective.

Even though all participating SMEs explained that they needed to employ a retrenchment strategy to some degree; three cases emphasised that the South African labour market allows for flexible labour arrangements and this enabled SMEs to employ a 'partial retrenchment strategy' in response to Covid-19 by temporarily placing employees on short time. They did this when the factories did not have enough work for all employees or when they were not allowed to trade under the lockdown restrictions. The enhanced flexibility of a 'partial retrenchment strategy' is an adaptation to the literature from a South African perspective as it conveyed the short-term nature of the retrenchment strategy applied to employees without the significant loss in morale that would have ensued if a complete retrenchment strategy had been adopted, as explained by Wenzel et al. (2020).

Depending on the nature and severity of the crisis and its impact, two SMEs oscillated between retrenchment, exit and innovation responses, supporting Doern's (2021) findings that responding to a crisis is not linear, but an iterative and continuous process with assessments and re-assessments taking place as the crisis endures. All other SMEs adopted variations of retrenchment strategies in the initial Covid-19 crisis phase, but they became predisposed to selecting proactive innovation strategies later on, once more information on the Covid-19 crisis was available and for all subsequent crises thereafter. At the time of this study, all six SMEs were pursuing innovation strategies, which illustrated that the SMEs became more predisposed towards adopting proactive and innovative crisis response strategies as

they gained more experience during the crisis, which supports Miklian and Hoelscher's (2022) recent findings.

6.2 Discussion of research sub-question 2

***RQ 2:** How did SMEs pursue BMI as part of their crisis response strategy to enable survival and/or growth?*

Embedded in the SMEs' proactive crisis response strategies was the strategic choice to innovate their BMs in response to a crisis. This study supports the views of several studies that report that crises trigger the innovation of SMEs' BMs (Clauss et al., 2022; Fubah & Moos, 2022; Miklian & Hoelscher, 2022; Wenzel et al., 2020). As ProcureCo's CEO explained, prior to the crises, the SME found itself in a 'comfort zone', but experiencing multiple crises caused it to 'venture out' and explore new markets. As the SMEs began to sense opportunities, they began to respond to the crises through BMI. The SMEs' BMs varied widely and included the manufacture and launch of new products, new sales channels, new or refined target markets, vertical integration, new or improved internal processes and the market entry into new industries.

Five SMEs demonstrated three different BMs over the four-year period covered by this study, and also demonstrated innovation of the value proposition, value capture and value creation elements of their BMs. This presented a new finding as this study demonstrated that the more crises an SME faced, the more BMs it pursued. This has not been reported in prior studies. These SMEs were considered to be more innovative than BoardCo. BoardCo solely innovated the value creation element of its BM and although it managed to survive several crises, it did not indicate signs of growth. Upon further analysis, BoardCo did not display that the sensing capabilities of communication and active learning, and the seizing capability of entrepreneurial orientation, as was evident by the other five cases. The importance of entrepreneurial orientation was further reinforced as all other SMEs were able to pursue market opportunities and expand their revenue generation capabilities. They demonstrated a wider source of revenue from additional products, or additional customers and customer segments. This aligned with Egger's (2020) study that found that SMEs that pursued market opportunities were more likely to grow during a crisis. Similarly,

SMEs that innovated more than one component of the BMI were found to be more successful (Heider et al, 2017).

In addition to entrepreneurial orientation, BoardCo and DenimCo which were the only SMEs to still be in a state of survival at the time of this study did not demonstrate the DC of customer and network partnerships. Ibarra et al. (2020) has emphasised the importance of SMEs collaboration capability to access new products, markets or leverage other synergies. The absence of customer and network partnerships in BoardCo's and DenimCo's cases, and their inability to achieve stable post-crisis growth supports the view of many researchers that have identified supportive partnerships to also be a source of competitive advantage for SMEs (Rodrigues et al., 2021; Saunila, 2020; Weaven et al., 2021).

In support of many researcher's views on experimenting with temporary BMIs (Chesbrough, 2010; Clauss et al., 2022; Cucculelli & Peruzzi, 2020), innovations such as the manufacture of protective face masks, scrubs, coffins, and coffin inserts, which took advantage of short-term peaks in demand spikes, created a faster route to BMI. Temporary BMIs helped SMEs to sustain themselves during crisis and for PackagingCo, created an avenue for growth.

Contrary to Clauss et al.'s (2022) observation, SMEs in this study did not necessarily need to pursue BMIs closer to their traditional BMs, or core competencies to achieve long-term growth. PackagingCo, BeltCo and ProcureCo entered different industries that were not part of their traditional BMs but were able to combine new and existing competencies for strategic renewals and growth as suggested by various researchers (Chesbrough, 2010; Cucculelli & Peruzzi, 2021; Handley et al., 2021) to be successful in new industries.

6.3 Discussion of research sub-question 3

Rodrigues et al. (2021) suggest that DC can be used to explain how SMEs go about identifying potential opportunities and threats that will affect their strategic decisions. Following the DC theory that underpins this study, research sub-questions 3.1 to 3.3 explores the capabilities that helped SMEs to sense threats and opportunities arising from crises and to seize innovative solutions and transform their BMs to overcome the crises.

6.3.1 Discussion of research sub-question 3.1

RQ 3.1: How did SMEs sense the threats and opportunities arising from crises?

A thematic analysis identified sensing capabilities as enabling the SMEs to acquire knowledge and information to make sense of crises and then consider viable paths for the way forward (Weaven et al., 2021). The capabilities for proactive crisis response strategies and DC for sensing activities bore a noteworthy resemblance to each other. Many of them emerged interwoven in this study and are discussed further below.

6.3.1.1 Resilience

Along with other studies (Doern, 2021, Sarkar & Clegg, 2022), SMEs' resilience capability emerged strongly. Resilience capabilities centred on the SME leaders and their ongoing and unwavering willingness and motivation to face crises and find solutions. Resilience was identified as an enabler for proactive crisis responses. The leaders' resilience capability was largely influenced by their personal characteristics, experiences, and values as suggested by Doern. (2021).

Resilience experience

SME leaders developed resilience by working within a challenging small business environment characterised by a lack of skills, resources, or support (Clauss et al., 2022; Eggers, 2020; Fubah & Moos, 2022). This study also found that in all cases, the leaders were driven and self-motivated, particularly due to the nature of the pressures they continuously experience. The study also indicated that leaders and their SMEs became more resilient from having experienced an economic downturn in the past, or more recently, having experienced multiple exogenous crises in quick succession of each other. This corroborated Doern's (2021) findings. The SMEs demonstrated that the more crises they experienced, the more proactive they were in responding to them, which supports Miklian and Hoelscher's (2022) finding. SME leaders who achieved growth in their businesses during the crises reflected on how crises made their businesses stronger and made them feel optimistic about the next crisis. During the face-to-face interviews, all leaders expressed their positive outlook on being able to cope with crises.

Self-awareness

As a facet of resilience, the case study participants demonstrated that self-awareness enabled them to be fully aware of their own strengths and weaknesses, which was a necessary prerequisite for the resilience to respond to the severe crises their SMEs faced. By being self-aware, the SME leaders were able to remain calm, level-headed, and patient instead of making reactive, irrational decisions. Similarly, Doern's (2021) study found that it was important for SME leaders to regulate their emotions. While Doern's (2021) noted the importance of the leaders' self-efficacy in a crisis, other studies on SMEs in crisis did not discuss self-awareness as a prerequisite to pause and reflect in order to withstand and face crises. The need for SME leaders' self-awareness as an aspect of resilience therefore extends Doern's (2021) findings.

Purpose

The study revealed that periods of crises heightened the leaders' sense of purpose to either achieve societal good or a personal goal, particularly with regard to taking care of their employees. By attaching a deeper meaning to their role as SME leaders and owners, five leaders indicated that they became more invested in their fight for survival because they needed to take care of their employees. Through their businesses, they were able to achieve goals or make a difference to employees, which created an inner drive that enabled their continued resilience throughout the crises. This was a new finding that emerged and is possibly a consequence of leaders' recognition of the harsh socio-economic challenges faced by employees in South Africa, which were worsened by the recent crises.

6.3.1.2 Sensemaking

A sense-making capability emerged as a theme concerning the acquisition of knowledge and information to understand the cause and the consequences of the crises and how this could impact the SME, either positively or negatively. SMEs generally gathered information through collaboration and observation of market patterns and trends.

Collaboration with others

Many crisis management studies have highlighted the importance of collaboration with networks as a support and resilience mechanism (Clauss et al., 2022; Doern,

2021; Miklian & Hoelscher, 2022). In this study, however, collaboration with networks emerged more prominently as a sense-making capability. This study highlighted the importance of collaborating with networks during the initial stages of a crisis to understand it and comprehend the threats it could pose to the SMEs. Networks typically included customers, suppliers, landlords, financiers, consultants, strategic business partners and mentors who were generally knowledgeable and experienced individuals as pointed out in Weaven et al.'s (2021) DC and crisis management study. The SMEs leaned on their extended networks for support during crises. They also shared experiences, which helped the SMEs to generate more informed scenarios of how they could be impacted by the various crises. As suggested by Sarkar and Clegg (2022) and Weaven et al. (2021), through collaboration, SMEs were also able to seek out market opportunities for renewal by sensing the need for new products or observing customers with unmet needs. Several SMEs placed an emphasis on the importance of listening, emphasising the importance of communication. Listening implied an openness to the learning new information in responding to crises and innovating.

Observing patterns and trends

In this study, five SMEs demonstrated a skill for engaging in unstructured market observations and analyses. Similar to Ibarra et al.'s (2020) study, SMEs observed changes in customers' trends and behaviours, and they scanned the market for gaps and trends. They also observed how other companies were surviving and achieving post-crisis growth. These leaders were able to identify market gaps and connect them with their SMEs' expertise or range of skills, which created new market opportunities for BMI. Feeding off their observations, these five leaders were able to identify and pursue value proposition and value capture innovations. This study therefore supported Salamzadeh & Dana's (2022) view that proactive crisis sense-making involved a concurrent analysis of an SME's strengths and weaknesses and Teece's (2018) DCs view that the observation of changing market patterns and trends creates opportunities for innovation. In line with Engelmann's (2023) findings, SMEs' observations of market patterns and trends occurred performatively in the course of business activities, engagement with customers, and even completely out of the business environment, on vacation, as one of the cases explained.

6.3.1.3 Communication

Communication played out across the sensing, seizing, and transforming DCs, but it was more prominently connected to sensing capabilities. As Engelmann's (2023) study explained, communication was essential for problem-solving, critiquing, giving feedback and challenging ideas and decisions. Through communication with employees, customers, suppliers and network partners, SMEs were able to generate more ideas and make better informed decisions, and garner support and guidance during difficult crisis periods.

In line with the literature, communication with employees played an essential role in framing crisis in a positive light and managing the emotional instability that came with severe exogenous crises (Alves et al., 2020; Bundy et al., 2017). Similarly, in this study, communication with employees was found to serve as a tool for demonstrating empathy as it considered the crisis impact on people. Employees were personally dealing with the trauma of crises, such as the death of family members, or the loss of basic necessities such as water and electricity; damage to or the total loss of homes, and their fear of travelling to work following the Covid-19, the civil unrest, flooding, and xenophobia crises. As part of such interactive communication, employees were given opportunities to share their views and provide feedback. The SMEs also involved employees in making decisions that were both strategic and operational. As Vašíčková (2019) suggested, frequent and transparent communication during and after crises enhances teamwork, which helped the SMEs form a more co-ordinated response to crises. Interestingly, communication with employees was more prominent among the four core CMT manufacturers, which was possibly due to their operations being significantly more labour intensive and dependent on employees' skills. These employees are highly involved in the production operations such as cutting, sewing, and trimming. This observation was not highlighted in prior studies, perhaps due to only limited studies having been conducted on SMEs in the manufacturing sector.

In support of Alves et al. (2020) and Bundy et al. (2017), effective communication also led to the identification of opportunities. The more SMEs engaged with customers and networks during the crises, the closer relationships they established. Those engagements created the opportunity for trusted connections to form. When

SMEs communicated with customers, their networks and suppliers more frequently, they were subsequently better able to address customers' pain points.

6.3.1.4 Active learning

Learning features within the sensing, seizing, and transforming DCs was part of the extant literature (Rodrigues et al., 2021). However, in this study, the theme of active learning or dynamic learning (Alves et al., 2020) was most prominent in the SMEs' search for post-crisis opportunities, hence the 'active learning' theme was created. All SMEs demonstrated an openness to learning, although five cases were deliberate and intentional about how they went about actively learning new information that was essential to their post-crises and growth strategies.

Contrary to studies indicating that South African SMEs engage in low levels of R&D (Fubah & Moos, 2022; Khoza et al., 2022), five cases in this study demonstrated their active involvement in R&D activities and they provided examples of more practical and inexpensive ways in which they went about actively learning new information and new ways of producing products. This supports many other studies that have recommended a need for R&D and for SMEs to innovate (Engelmann, 2023; Rodrigues et al., 2023; Weaven et al., 2021). Only BeltCo demonstrated more formalised R&D practices; however, they also engaged in practical, inexpensive learning activities. Some SMEs conducted research by performing internet searches to become more informed on how business in other countries were responding to Covid-19; others used the internet to learn more about their customers and how to improve their products or enter new markets. The SMEs also invested in product development and sampling of new product designs. The process of design and development helped the SMEs take new and improved products to the market.

Other approaches of active learning involved physically visiting customer's retail stores, meticulously observing and understanding the role of their products, and benchmarking them against competitors' products. The SMEs' leaders also shared these market learnings with their factories and with their customers, thereby contributing to organisational learnings as recommended in other studies (Teece, 2018). By doing so, they were able to manufacture better products and capture more sales from customers.

6.3.1.5 Crisis planning

Similar to Fasth et al.'s (2022) study, the SMEs in this study originally engaged in limited crisis planning activities. However, that tended to be the case only prior to the Covid-19 pandemic as five SMEs became more predisposed towards crisis planning activities since then. In support of Doern's (2021) Covid-19 study, the SMEs demonstrated that crises offered SMEs an opportunity to actively learn where their crisis management gaps were, which emerged under the theme of 'crisis planning'. The SMEs became more involved in scenario planning and made a greater effort to hold cash reserves, which were two crisis planning activities highlighted by Bundy et al. (2017).

Post-crisis scenario planning

The SMEs that performed scenario planning placed the emphasis on the process of deliberately writing down or mapping out alternate scenarios. For one SME, this involved performing a best-case and worst-case scenario, which helped it to plan how much cash it would need to survive a crisis. Other SMEs also used scenario planning to generate ideas, explore market opportunities, to problem-solve, cut costs, and subsequently make relevant strategic decisions. Contrary to Chesbrough's (2010) view that experimentation was necessary to escape 'analysis paralysis', in the context of exogenous crises, the SMEs that followed more detailed, structured scenario planning processes demonstrated that their initial scenarios translated into decisions being taken and actions being followed through. These initial actions also formed the basis for their chosen BMIs.

Cash reserves and financial discipline

SMEs typically have limited financial resources (Alves et al., 2020; Khoza et al., 2022). However, one of the participating SMEs consistently maintained a larger emergency fund after the leader and owner invested personal funds and assets to prevent the business from failing several times in the past. After experiencing multiple crises, other SMEs also worked to build up their cash reserves in the event of future crises. They again demonstrated Miklian and Hoelscher's (2022) point that the more encounters SMEs had with crises, the more they worked to increase their crisis preparedness. As a post-crisis learning, SMEs that had not yet built up stable reserves indicated that they introduced more financial discipline into their businesses. While many studies highlight that SMEs have limited finance resources

and access to funding, they do not shed light on the tendency for SMEs to become more disciplined with managing their finances, particularly after experiencing a crisis.

In summary, thematic analyses revealed overarching capabilities that helped SMEs to sense the threats and opportunities that informed their response to crises. Although they often overlapped and enhanced each other, these capabilities were grouped into five overarching sensing capabilities: 1) resilience; 2) sensemaking; 3) communication; 4) active learning; and 5) crisis planning. It is of interest to note that these capabilities were prevalent in both, the crisis management literature and overlapped with sensing capabilities in the DC literature but this study connected them here.

6.3.2 Discussion of research sub-question 3.2

How did SMEs seize opportunities to innovate and mitigate threats arising from crises?

In line with the DC theory adopted for this study, research sub-question 3.2 aimed to explore those capabilities that allowed SMEs to seize the opportunity to innovate and mitigate the threats posed by multiple crises. As seizing capabilities refer to the agility of firms' decisions to act on identified opportunities, the question sought to explore those underlying capabilities that propelled SMEs in the direction of BMI.

6.3.2.1 Decision-making

Decision-making emerged as a main theme highlighting some of the main crisis responses and BMI decisions that the SMEs needed to take with relative speed. However, more than agility of their decisions, SMEs displayed a propensity to make responsible decisions as leaders knew that they would be accountable for their decisions.

Agile decision-making

In line with the DC literature, the SMEs demonstrated that it was necessary to make fast and agile decisions (Teece, 2018) when faced with a crisis, even when they related to difficult decisions about retrenching people or risky decisions about entering new markets. The fact that five SME leaders were highly involved in

managing their businesses and were also the key decision-makers, their structures displayed low levels of bureaucracy, making them more agile with making high-risk decisions. This supported Chesbrough's (2010) and Eggers' (2020) studies that explain the benefit of SMEs' flat leadership structures.

Responsible decision-making

The sub-theme of responsible decision-making emerged as all SMEs regularly considered the social and environmental impact of their decisions, having special regard to the impact of decisions on employees. This added to the literature as other studies related to BMI in response to a crisis predominantly highlighted the need for decisions to be agile (Teece, 2018; Weaven et al., 2021). Filser et al. (2021) highlights a trend for BMI to focus on socially, environmentally, and economically sustainable outcomes, but this was beyond the scope of this study. Five of the interviewed SMEs followed more structured and analytical processes to make decisions, which included scenario planning, lists of all the pros and cons, and processes of elimination. This demonstrated that their decisions were based on assessments, judgements and thorough information, which made the decisions justifiable. The decision-makers knew that they had to take responsible decisions as they would be held accountable for them.

6.3.2.2 Entrepreneurial orientation

Entrepreneurial orientation often featured in the literature as a proactive crisis response capability (Doern, 2019; Eggers, 2020; Handley et al., 2021; Miklian & Hoelscher, 2022) and as a DC (Rodrigues et al., 2021; Teece et al., 1997) for seizing market opportunities. Crises led to opportunities being seized and for "disaster entrepreneurship" among five SMEs, as Salamzadeh and Dana (2022) suggest (p.38). The more entrepreneurial the SMEs were, the more they tended to seek out revenue generating BMIs, and experience growth, which supports Saunila's (2020) view that entrepreneurial orientation is a determinant of innovation for SMEs. The five entrepreneurially oriented leaders actively searched for market opportunities by remaining flexible, adaptable, and willing to take risks.

Flexibility and adaptability

In line with various studies (Clauss et al., 2022; Miklian & Hoelscher, 2022; Rodrigues et al., 2021; Teece et al., 1997; Wenzel et al., 2020), five SMEs demonstrated that

flexibility and adaptability were important facets of their entrepreneurial skills. Some of the ways that the SMEs demonstrated flexibility and adaptability included the ease with which they could manufacture new products, the coordination of employees and suppliers, the substitution of materials when supply chains were disrupted, and the manner in which they serviced different customer segments. Flexibility and adaptability supported the SMEs' entrepreneurial orientation as their customers were similarly affected by the multiple crises that KZN experienced, and therefore needed their suppliers to be responsive.

Risk-taking

In support of Rodrigues et al.'s (2021) findings, five of the cases demonstrated that they were prone to risk-taking, with some SMEs demonstrating surprisingly aggressive risk-taking behaviour. The risks that the SMEs took predominantly related to designing, creating, and taking new products to market. Entrepreneurial SMEs were also open to experimenting with BMIs as trials, as Ibarra et al. (2020) observe. Even though some experiments were trialled but subsequently failed, the SMEs were still able to reflect and learn from their failures, which supports Chesbrough's (2010) take on learning from experimentation.

6.3.2.3 Employee centricity

The DC Theory talks extensively of core competencies, which are the unique skills or value that a business offers its customers (Engelmann, 2023; Teece et al., 1997). As this study focused on SMEs in highly competitive and labour intensive manufacturing sub-sectors, the SMEs' core competencies largely rested within their employees. Chumphong et al. (2020) and Rodrigues et al. (2021) argue that employees' knowledge, talent, skills, and human resource practices offer SMEs a competitive advantage as they are less visible and imitable by competitors. This study corroborated these views. Employees' commitment to BMI was important as the SME placed significant reliance on their skills and talent.

Employees' expertise

The SMEs in this study were highly dependent on their employees being able to deliver on the SMEs' core product offerings. This was particularly evident among SMEs in the CMT industry as their BMs centred on the unique quality, complexity, or ability to efficiently deliver the required volumes to different market segments. For

example, the impact of the xenophobia crisis on DenimCo highlighted the detrimental impact on the SME due to absenteeism and the erosion of skills. Their employees' expertise was therefore a valuable, rare, and less imitable source of the competitive advantage, but it was vulnerable to absenteeism. This study supported Chumphong et al.'s (2020) and Rodrigues et al.'s (2021) views indicating that employees' skills, experience and expertise created a competitive advantage for all the participating SMEs.

Human resource practices

Human resource practices, such as training was performative rather than ostensive. Employees were trained to develop multiple skills as the SMEs innovated their BMs. As employees were generally trained in-house, sometimes by the leaders themselves, and they often learned by doing, their skills were developed to specialise and align with the SMEs' BM. The leaders often expressed their consideration of the socio-economic challenges in South Africa and how these impacted employees. DenimCo offered employees the non-monetary benefit of a crèche and ECD centre for employees' children. Leaders were conscious that employees were often the sole breadwinner in their households and therefore needed a steady income to support their families. They attempted to limit short-time working hours during crisis periods and continued to retain or even create employment.

Human resource practices were unique in this study as they tended to link to the leaders' social purposes for operating their businesses. Therefore, all SMEs embraced employment practices that created a unique, safe place for their employees to work and that demonstrated that employees were valued. This enhanced the companies' employee centricity as a capability and resulted in more committed, motivated, and loyal employees. Additionally, employees were more engaged and more productive. This is essential in manufacturing SMEs' BMs. Chumphong et al. (2020) and Rodrigues et al. (2021) highlight that positive human resource practices create a competitive advantage for the SMEs. However, to add to the literature, this study indicated that these SMEs considered the socio-economic challenges that employees faced and aimed to address them through their human resource practices.

6.3.2.4 Partnerships

The presence of partnerships emerged strongly in four cases. The SMEs with more prominent partnership capabilities also reported experiencing post-crisis growth rather than mere survival. The case studies demonstrated that strong customer, supplier, and network partnerships were the foundational capability of some of the BMIs that the SMEs pursued, which supports other studies that report external partnerships to be a source of competitive advantage for SMEs (Rodrigues et al., 2021; Saunila, 2020; Weaven et al., 2021).

Customer partnerships

Similar to other studies, four SMEs placed significant emphasis on nurturing relationships and developing partnerships with their core customers as they were a lever of growth following crises. These SMEs also placed an emphasis on gaining an intimate understanding of their customers and their needs to enable the SMEs to better address them. Some SMEs emphasised the need to create convenience for customers, while others employed design-thinking practices to intimately understand their customers' needs. Bringing focus to customers, allowing for flexibility, providing expert advice, and spending time with customers to understand their businesses and their needs were some of the ways in which SMEs solidified their partnerships with customers. Using their customer relationships, they pursued BMIs that led to increased revenues for their businesses. This supports Ibarra et al.'s, (2020) view that the collaboration capability of SMEs assists them to unlock opportunities. Interestingly, BoardCo and DenimCo did not demonstrate the presence of strong customer relationships. Instead, they demonstrated survival strategies and inconsistent growth as a result of their BMIs, respectively. These findings from all other interviewed SMEs align with previous views that customer partnerships are a source of competitive advantage for SMEs (Rodrigues et al., 2021; Saunila, 2020; Weaven et al., 2021).

Supplier partnerships

Most SMEs identified good supplier relationships as a source for surviving crises and for BMI. Suppliers enabled business continuity by SMEs finding solutions for manufacturers, so that they could continue servicing their customers adequately, despite the supply chain disruptions caused by crises. Suppliers were also more willing to provide financial relief to some SMEs than were financial institutions, which

reinforced the need to build trusted partnerships with them as Alves et al. (2020) and Eggers (2020) studies show. ProcureCo acquired 30% of its local fabric supplier to solidify the relationship, after recognising that it would enhance its ability to offer faster turnaround to customers, and therefore enhanced its competitive advantage. The important role that suppliers played in this study therefore reinforced their key position in helping SMEs survive crises and pursue innovation.

Network partnerships

In this study, four SMEs noted that network partnerships also created opportunities for BMI. They were not always as formal as customer or supplier partnerships and generally provided the benefit of guidance and support through periods of crisis, which also enhanced sensing capabilities. However, for BeltCo, nurturing and leveraging its network partnerships through its strategic business partner resulted in successfully securing a major export customer, which was the foundation of its export sales channel BMI. The finding therefore also reinforced the literature that highlighted network partnerships as an important seizing capability (Rodrigues et al., 2021).

In summary, thematic analysis revealed four overarching capabilities that helped SMEs seize opportunities to innovate and mitigate threats arising from crises. These seizing capabilities were identified to explain how the SMEs went about making decisions that inevitably led to the BMIs they implemented. They included: 1) decision-making; 2) entrepreneurial orientation; 3) employee centricity; and 4) partnerships. These capabilities were prevalent in the crisis management literature and overlapped with seizing DCs in the BMI literature.

6.3.3 Discussion of research sub-question 3.3

How did SMEs transform their BM to enable survival or growth?

According to DC theory, transformation is a higher-order capability that relates to the reconfiguration of those elements of the BM that reflect the competitive strategy of the new BM (Teece et al., 1997). Those elements include the resources, operations, structure, and culture of the firm (Engelmann, 2023; Teece, 2018; Vu, 2020). Research question 3.3 aimed to understand how SMEs reconfigured the architecture of their BMs to transform their traditional models into more resilient, competitive ones.

6.3.3.1 Redesign of competitive strategy

All SME leaders demonstrated that they reflected on their crises experiences and considered how they were able to survive them and what they could have done better. Prior literature did not directly refer to realignment of the competitive strategy as a transforming DC, but Saunila's (2020) and Weaven et al.'s (2021) studies did make specific mention of the importance of continuous individual learning, organisational learning, and knowledge management as transformational capabilities for BMI. In this study, the post-crises learnings, and reflections of how the SMEs survived and on what they could have done better informed the redesign of their competitive strategies. This therefore extended the literature on individual and organisational learnings and knowledge management as a transforming capability.

Looking back at how they survived, all SMEs demonstrated that they needed to rethink their competitive strategy for the future after experiencing severe exogenous crises. It appeared that prior to Covid-19, their approach to competitive strategy generally concerned the maximum utilisation of their manufacturing capacity through regular customer orders. However, post-crises, they deliberately aimed to develop resilient strategies that improved their competitive market positioning to enable them to generate long-term sustainable economic returns. For instance, due to the recognition that their simplified BMs weakened their market positions, all SMEs described a long-term strategy to diversify their BMs, either from a product, industry, income stream or customer perspective. The long-term BMs that they pursued centred around their redesigned competitive strategies that maximised their competitive advantage which supported Chesbrough (2010) and Teece's (2018) suggestions to align the BM with the firm's competitive strategy for greater BM effectiveness.

6.3.3.2 Reconfiguration of resources and redesign of asset structure

According to Engelmann (2023), the activity of transforming one's business is enabled by activities that anchor changes in the BM. This includes the physical reconfiguration of resources (Teece, 2018; Vu, 2020). Similar to the literature, all these SMEs made significant changes to the physical layout of their factories in order to solidify the innovated BMs. They also allocated employees to new processes, particularly where the value creation aspect of the BM was innovated. Due to the size

and extent of these changes, Engelmann (2023) suggests that an efficient project management would also enable the coordination process.

All participants made significant changes to the physical configuration of their BMs through the implementation of new production lines, the establishment of new product divisions, new locations and employee facilities, the implementation of new manufacturing machinery and the alignment of value chain partners. However, the SMEs explained co-ordination activities as if they occurred performatively rather than through rigorous project management techniques. They were also overseen by the SME leaders rather than by project managers. Therefore, in contrast to Engelmann's (2023) study of SMEs in Australia, South African SMEs appeared to be successful with informal project management practices perhaps due to the higher level of direct involvement of the SME leader in the reconfiguration and design of a new BM.

6.3.3.3 *Realignment of culture*

Four of the six SMEs in this study placed particular emphasis on the need for a realignment of company culture to fit their innovated BMs. Interestingly, these were the four CMT manufacturers which focussed on developing inclusive and collaborative cultures as they recognised the importance of employees working as a team, to drive their BMs and to ensure its success. In support of Weaven et al.'s (2021) observation on the influence of culture on employees behaviour, the leaders in this study spoke proudly of the increased cohesive efforts and behaviours by team members as a result of a dedicated effort to create a collaborative culture. This supports Rodrigues et al.'s (2021) view that company culture improved labour productivity of SMEs. Increased collaboration and cohesion resulted in more efficient production, faster turnaround times, improved quality, and the ability to adapt to new products and processes for these SMEs which improved their competitive market positions. Due to increased cohesion, it also supports Teece et al.'s (1997) proclamation that transforming the company culture offers a competitive advantage.

In summary, thematic analyses revealed three overarching capabilities that helped SMEs to transform their BMs and anchor their BMs under a new paradigm. They included: 1) redesign of competitive strategy; 2) reconfiguration of resources and redesign of asset structure; and 3) realignment of culture.

6.4 Primary research question

This study aimed to explore the primary research question:

How do SMEs implement BMI in response to crises that results in survival and/or growth?

The primary research question arose as exogenous crises pose a severe risk to SMEs because they tend to operate simplistic BMs, with limited resources and weak support structures (Alves et al., 2020; Clauss et al., 2022; Fubah & Moos, 2022). Crises place SMEs in a precarious fight for survival; therefore some SMEs choose to respond proactively to crisis and lean towards relying on their small size and agility to innovate their BMs (Clauss et al., 2022; Miklian & Hoelscher, 2022). However, even though researchers have called for studies that investigate the antecedents for BMI of SMEs (Clauss et al., 2022; Cucculelli & Peruzzi, 2020; Eggers, 2020) there are limited documented studies that demonstrate how SMEs have innovated their BMs and which capabilities enabled them to do so.

This study revealed that two of the SMEs that implemented BMI in response to crises managed to survive and four of them experienced post-crisis growth, even though their intentions were purely to survive the tumultuous crises that impacted them. In his paper on BMs and DCs, Teece (2018) referred to the DC framework for BMI as being underpinned by sensing, seizing, and transforming first-order DCs. By studying how the SMEs in this study approached BMI in response to a crisis, further second-order DCs were identified, which gave rise to a proposed DCs framework for BMI in response to crises. This framework is illustrated in **Figure 9**.

The proposed framework highlights that when the threat of exogenous crises loom over SMEs, they can choose to adopt a proactive response and innovate the value proposition, value creation or value capture element of their BMs. This consequently gives rise to BMI of the SME. BMI is developed on a foundation of DCs. These include three first-order sensing, seizing, and transforming capabilities which are supported by 12 second-order capabilities. This study demonstrated that by possessing and developing the 12 second-order capabilities, the participating SMEs

were able to proactively adopt BMIs in response to crisis that enabled survival of two SMEs and stable growth in four of cases.

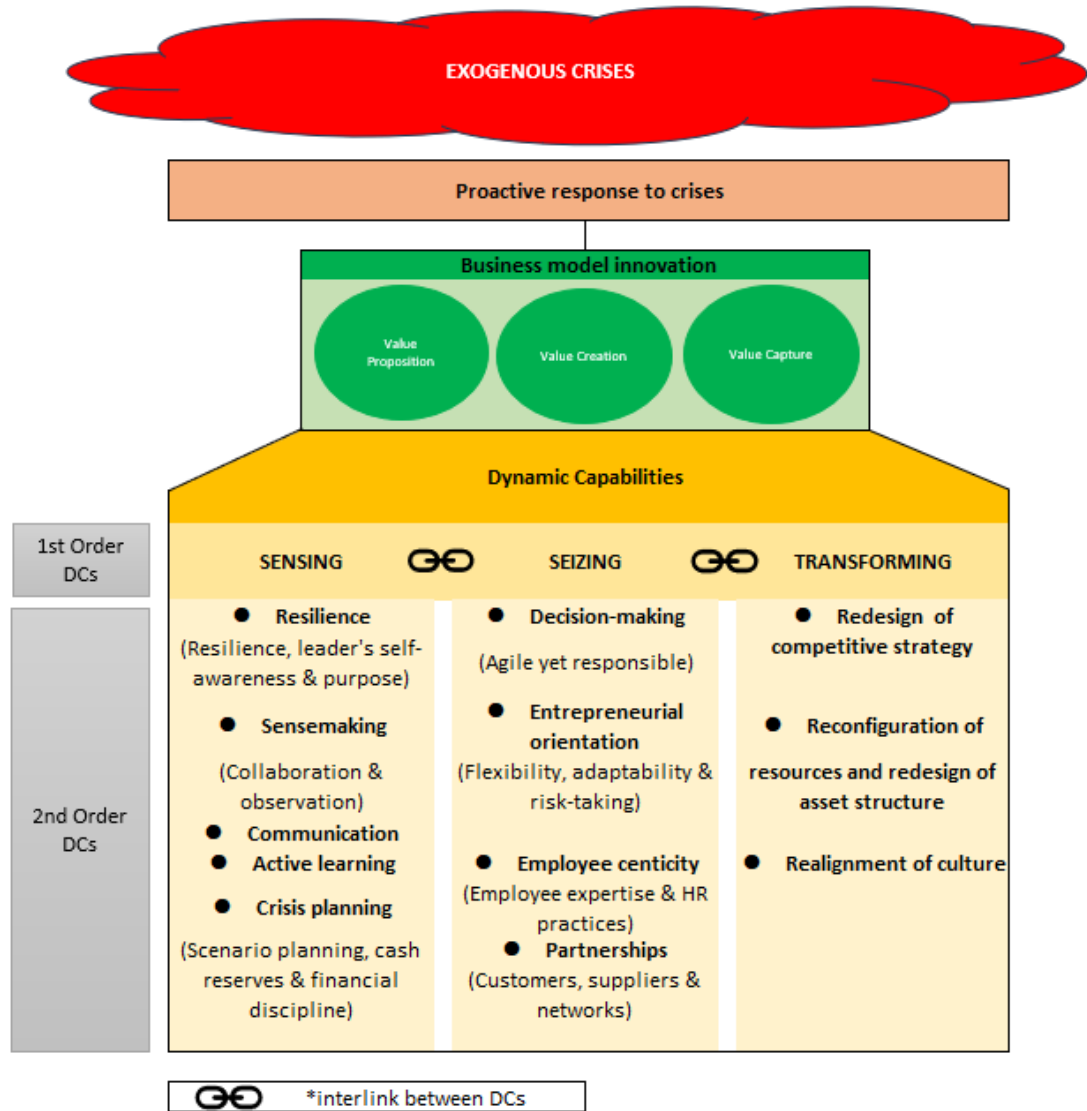


Figure 9: Proposed dynamic capabilities framework for SME business model innovation in response to crises (Author's compilation)

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

SMEs are viewed as the lifeblood of the economy in developed and emerging economies across the world (Eggers, 2020) for their important contributions to employment creation, reducing inequalities, accelerating innovation and economic growth (Alves et al., 2020; Eggers, 2020; Fubah & Moos, 2022; Handley et al., 2021). SMEs play a particularly important role in South Africa as they employ nearly 60% of the working population (SEDA, 2023) and make a substantial socio-economic contribution to the country. Since 2020, South African SMEs, particularly those located in the KZN Province of South Africa, were exposed to multiple exogenous crises. This study therefore focused on SMEs in KZN operating in the highly competitive manufacturing sub-sector. These SMEs were the most severely impacted by a number of crises (KZN Provincial Government, 2024). The demand and supply shocks that ensued from these multiple crises had a detrimental impact on thousands of SMEs and their BMs, and also slowed down the South African economy at large (SEDA, 2023). Despite the immense difficulties that SMEs faced in responding to these crises, some adopted proactive responses to innovate their BMs, which enabled them to survive and/or grow post these crises. This innovative approach by the participating SMEs in response to the crises inspired this exploratory study. Following a case study approach, the primary research question that this study sought to answer was:

“How do SMEs implement BMI in response to crises that results in survival and/or growth?”

This chapter presents the conclusion on the findings of each of the research sub-questions and the primary research question. It presents the theoretical contributions that this study makes from an existing and emerging economy standpoint. It also presents the implications for management and reflects on the limitations of this study. The chapter concludes with recommendations for future research.

7.2 Research findings

The research findings have been presented in the format of the three research sub-questions that aimed to understand how SMEs responded to crises, how they

innovated their BMIs for survival and/or growth and drawing on the DC literature, how they effectuated sensing, seizing, and transforming activities which led to their BMIs.

7.2.1 Conclusion of research sub-question 1

How did SMEs strategically respond to crises?

In line with the time boundaries of this study, the SMEs explained that their strategic response to the crises (beginning with the Covid-19 pandemic and the subsequent lockdowns and regulations) reflected a predominantly reactive response to crises in an effort to restore stability in the short term. These reactive responses mainly entailed retrenchment practices, of from an adapted South African perspective, partial retrenchment practices.

SMEs had an aversion to retrenchment practices as they were reluctant to place employees in socio-economic jeopardy for an extended period of time. When SMEs were forced to adopt a retrenchment strategy, they were more willing to adopt a partial retrenchment strategy, which entailed temporarily placing employees on short-time, a more flexible approach that was supported by the South African labour market. While Wenzel et al. (2020) cautioned the use of a retrenchment strategy due to the negative impact it would have on employee morale and productivity, this study discovered that SME's reluctance came from a place of guilt as leaders believed that they had a moral obligation to take care of their employees. This study adds to the literature from a South African standpoint, first, in the reluctance of SMEs to pursue retrenchment strategies due to a moral duty to employees and second, in the adoption of a partial retrenchment strategy. Furthermore, SME leaders' concern for the wellbeing of employees when responding to a crisis aligned with the African philosophy of *Ubuntu* that was acknowledged among the SMEs in this study.

In support of Doern's (2021) study, responding to crisis is not a linear process, but it rather depends on the nature and severity of the impact the crisis has on the business. Therefore, SME's responses to crises tend to change particularly when new exogenous crises arise. However, as they encounter more crises, and as more information about a crisis becomes available, SMEs are more predisposed to approaching crises with proactive and innovative response strategies, which

supports Miklian and Hoelscher's (2022) study. Therefore, once SMEs take a proactive stance on responding to crises, they are able to consider BMI as an appropriate crisis response. BMI is therefore reflected as a facet of a proactive response to crises in the proposed framework in **Figure 9**.

7.2.2 Conclusion of research sub-question 2

How did SMEs pursue BMI as part of their crisis response strategy to enable survival and/or growth?

This second research question concerned BMI and the elements of the BM, which is illustrated in the proposed framework in **Figure 9** above, as a proactive response to crises. This study supports the view that crises act as a catalyst for SMEs' innovation, in line with the findings of other global and South African post-Covid studies (Clauss et al., 2022; Fubah & Moos, 2022). However, this study was unique in that it explored BMI in response to multiple crises. Accordingly, this study observed that the number of BMI iterations that an SME undertook, generally increased with the number of crises that it experienced. This was a new finding identified by this study.

Additionally, this study identified that SMEs with multiple BMI iterations also innovated the value proposition, value capture and value creation elements of their BMs, thereby creating more dynamic BMs. They were therefore considered to be more innovative, which was a new finding that can be added to the literature. These cases also demonstrated a degree of SMEs' growth as an outcome of their BMs, which supported Heider et al.'s (2017) finding that greater success was attained when more than one component of the BM was innovated.

This study found that SMEs that experienced growth over the period of the study were entrepreneurially orientated. The importance of entrepreneurial orientation was therefore reinforced in this study as SMEs that pursued entrepreneurial market opportunities through their BMs demonstrated an increase in revenue. This study therefore supported Eggers (2020) proposition that SMEs that pursued market opportunities were more likely to grow during a crisis.

Researchers views advancing experimentation with BMI or temporary BMI as a quicker route to BMI were also supported in this study. However, contrary to Clauss et al.'s (2022) proposition, BMIs that aligned with traditional BMs were not necessarily a predictor of long-term prospects of a BMI. Rather, in support of other researchers and proponents of the DC theory underpinning this study, SMEs that explored BMIs outside of their traditional BMs were also able to demonstrate that new core competencies could be learned and they positioned themselves for long-term growth under their innovated BMs in new industries (Chesbrough, 2010; Cucculelli & Peruzzi, 2021; Handley et al., 2021).

7.2.3 Conclusion of research sub-question 3

This study revealed that DCs are the foundation upon which BMI for SMEs is built and is illustrated accordingly in the proposed framework. While the DCs have been grouped and described separately in this study, these capabilities were interlinked and often informed each other. This is represented by the interlink icon between the first-order DCs illustrated in **Figure 9**.

7.2.3.1 Conclusion of research sub-question 3.1

How did SMEs sense the threats and opportunities arising from crises?

This research question concludes that the second-order sensing DCs that enable SMEs to sense threats and opportunities arising from crises, are the capabilities of: resilience, sense-making, communication, active learning and crisis planning. These capabilities are clustered under the sensing first order DC in the proposed framework.

Resilience

The theme of resilience centred on the SME and its leader's ongoing willingness and motivation to face crises and find solutions. SME leaders have an inherent capability for resilience as they operate within the confines of limited skills, resources and support. This capability for resilience increased as leaders navigate through an increased number of exogenous crises which supports previous studies on crises (Doern, 2021; Miklian & Hoelscher, 2022).

Interestingly, leaders' self-awareness, and sense of purpose emerged as enablers of resilience. The need for self-awareness extended Doern's (2021) observation of the importance of the leader's self-efficacy and need for emotional regulation during a crisis. However, from a South African perspective, this study identified that the leaders' sense of purpose to achieve societal or personal goals created an inner drive to remain resilient and respond proactively to crises.

Sensemaking

Similar to other studies, this study found that sense-making occurred through collaboration with networks and through the observation of customer and market trends and patterns, which gave rise to the SMEs identifying market opportunities (Sarkar & Clegg, 2022; Weaven et al., 2021) and innovation opportunities (Teece, 2018). Of importance was the need to connect those opportunities with the SMEs' strengths while taking cognisance of their weaknesses (Salamzadeh & Dana, 2022). Importantly, sense-making activities were more performative rather than routinised in nature, in support of Engelmann's (2023) study.

Communication

Communication was essential to all first-order DCs as other studies have pointed out. Effective communication enabled SMEs to frame crisis positively (Alves et al., 2020; Bundy et al., 2017) and it was particularly helpful in demonstrating empathy towards employees and the personal devastation they experienced due to crises' effects. Frequent and transparent communication efforts therefore reinforced teamwork as well as with support networks. In addition to the literature, this study found that crisis-related communication was more prominent among more labour-intensive SMEs, which was not explicit in other SME studies. Ongoing, transparent and honest communication was vital during crises.

Active learning

In support of other studies, this study demonstrated the importance of actively learning by engaging in R&D to identify opportunities. Contrary to studies that suggest that South African SMEs engage in low levels of innovation (Fubah & Moos, 2022; Khoza et al., 2022), many of this study's participating SMEs demonstrated a regular practice of engaging in R&D in practical and inexpensive ways. Research

methods include internet searches, product sampling and physically inspecting and comparing their products with those of the competitors.

Crisis planning

This study found that SMEs became more predisposed to seeing where their crisis management gaps were post-crisis, based on their experience gained during crises, and they were subsequently more inclined to engage in crisis planning, which supported Doern's (2021) and Miklian and Hoelscher's (2022) findings on increased post-crisis preparedness of SMEs. However, these studies lacked specificity in terms of highlighting SMEs' tendency to attempt to build up cash reserves and improve their financial discipline after their experience with a crisis, which this study brought to light. While Chesbrough (2010) postulated that experimentation with innovation was needed to overcome the inertia of over-analysis, this study gave rise to a contrasting view in the context of crisis, as following a detailed and structured scenario planning process in response to a crisis led to better informed decisions, which translated into innovative actions.

7.2.3.2 Conclusion of research sub-question 3.2

How did SMEs seize opportunities to innovate and mitigate threats arising from crises?

This research question concludes that the second-order seizing DCs that influenced the SMEs' ability to make decisions regarding innovation in response to crises, are the capabilities of: decision-making, entrepreneurial orientation, employee centricity, and partnerships. These capabilities are clustered under the seizing first order DC in the proposed framework.

Decision-making

This study supported previous studies by Chesbrough (2010) and Eggers (2020) that highlighted the agility with which SMEs are capable of making decisions is due to their lower level of bureaucracy. Adding to the literature, this study found that responsible decision-making added another dimension to SMEs' decision-making capabilities as SME leaders were more inclined to make decisions that paid due consideration to the impact of these decisions on employees. They also placed

emphasis on being accountable for the decisions made. SMEs indicated a trend of making socially, environmental, and economically responsible decisions regarding BMI, which is in line with Filser et al.'s (2021) study, yet beyond the scope of this one.

Entrepreneurial orientation

In support of multiple prior studies (cf. Table 1; Table 3), the presence of entrepreneurial orientation was an enabler for seizing market opportunities and innovation. Similarly, SMEs' flexibility, adaptability, and propensity to take risks enhanced their entrepreneurial orientation capabilities as multiple studies have suggested. This study also identified that SMEs with an entrepreneurial orientation increased their revenues and consequently experienced growth as opposed to merely surviving crisis in support of Saunila's (2020) study.

Employee-centricity

This study found that the core competencies and competitive advantage of labour-intensive SMEs rested largely within its employees' skills, experience, and expertise, as well as its human resource practices, confirmed in the studies by Chumphong et al. (2020) and Rodrigues et al. (2021). An additional finding that emerged in this study was that the SMEs attempted to address, through their human resource practices, the socio-economic challenges their employees faced, which resulted in more committed, engaged, loyal, and motivated employees. This was vital as employees need to be just as invested in the SMEs BMI. Employee-centric human resource practices also resulted in increased productivity.

Partnerships

Several studies have drawn attention to the importance of partnerships with customers, suppliers, and networks, particularly for SMEs (cf. Table 3). However, the customer relationships were of paramount importance as they enabled these SMEs to grow during and after the crises and they provided a source of competitive advantage, which other studies have also shown (Rodrigues et al., 2021; Saunila, 2020; Weaven et al., 2021). Relationships with suppliers and extended networks also created financial and operational support for SMEs and also unlocked opportunities for BMI, therefore SMEs placed importance on building trust and nurturing these relationships.

7.2.3.3 Conclusion of research sub-question 3.3

How did SMEs transform their BM to enable survival or growth?

This research question concludes that the second-order transforming DCs that influenced the SMEs' ability to reconfigure the architecture of their BMs include the capabilities to: redesign their competitive strategy, reconfigure resources and redesign their asset structure, and realign their corporate culture. These capabilities are clustered under the transforming first order DC in the proposed framework.

Redesign of the competitive strategy

Although previous studies referred to the importance of continuous individual and organisational learning and knowledge management (Saunila, 2020; Weaven et al., 2021), this study found that the SMEs' learnings from surviving multiple crises demonstrated to these SMEs their need to increase their strategic resilience to crises. This informed the redesign of these SMEs' competitive strategies. The redesigned competitive strategy enabled their transformation as it guided the BMI to align with it. Alignment also created a competitive advantage, as Chesbrough (2010) and Teece (2018) have previously suggested.

Reconfiguration of resources and redesign of asset structure

In order to transform a BM, significant changes were frequently required to the physical layout of the factories and the other assets, as well as to employees roles, to anchor the changes of a BMI, particularly where the value creation element of the BM was innovated. While the size and extent of these changes warranted rigorous project management techniques in developed countries (Engelmann, 2023), this study added that they occur more informally and performatively in South Africa due to the leaders' direct involvement in the reconfiguration and design of the asset structure.

Realignment of corporate culture

In support of Weaven et al.'s (2021) study, this study similarly found that the realignment of the corporate culture led to more cohesive team efforts and behaviours. Other benefits of the realignment of the corporate culture were more efficient production, faster turnaround times, improved quality, and increased

adaptability. The benefits of aligning the corporate culture with the BM is therefore a source of competitive advantage, as Teece et al. (1997) also proclaimed.

7.2.4 Conclusion of primary research question

How do SMEs implement BMI in response to crises that results in survival and/or growth?

This study found that BMI as a response to crises is a viable route to survival and/or growth for SMEs and can unlock a competitive advantage for SMEs in a time of crisis. Even though the study by Clauss et al. (2022) reports that temporary BMI is a viable response to a crisis, this study found that most of these SMEs took a predominantly long-term stance on BMI and redesigned their competitive strategies for increased stability and resilience. The within-case and cross-case analyses provided an in-depth view into the SMEs backgrounds and traditional BMs, a description of the crises that impacted them severely and the BMs they implemented in response to the crises. Importantly, this study presented the DCs that emerged from this study, which demonstrated how SMEs implemented BMI in response to crises to survive or grow from them. The identified second-order DCs formed the basis of the proposed DCs framework for SME BMI in response to crises presented in **Figure 9**. The DCs that emerged in this study supported the findings of many other studies; however, this study was able to add to, extend or contradict certain findings from an emerging economy nuanced perspective.

7.3 Theoretical research contributions

This study makes a valuable contribution to the limited literature available on crisis management, DCs and BMI as they pertain to SMEs. It supported many of the existing views of studies undertaken on crisis management and BMI as they pertain to SMEs from a developed economy perspective. It added a further perspective from a South African emerging economy lens, which is so far underrepresented in the extant literature.

From a crisis management view, this study provided insights into the severity of the crises the SMEs experienced and the consequential reactive and proactive responses that ensued. As this study concerned multiple crises that occurred in KZN,

it was able to demonstrate an increase in the leaders' resilience and a predisposition towards proactive approaches as their experience with crises grew. In the South African context, this study also highlighted the reluctance of manufacturing SMEs in KZN to employ retrenchment as a crisis response strategy due to the negative impact it would have on their employees. This study was therefore able to associate the African philosophy of Ubuntu with SMEs' crisis management practices.

This study also contributed to the literature from a BMI perspective. Observing that SMEs demonstrated several rounds of BMI iterations as they continued to experience exogenous crises was surprising as much of the literature on South African SMEs characterises them as having low levels of R&D activities because of their limited resources. Similarly to the crisis management observations, a responsibility to take care of employees also enabled the association of Ubuntu principles to BMI in this study.

This study identified how SMEs are able to incorporate dynamism into their BMIs by innovating various elements of their BMs when they possessed the DCs of entrepreneurial orientation and strong, supportive partnerships, more specifically with customers. Through the identification of second-order practicable DCs, this study was able to bring more clarity to the concept of DCs, which many researchers still consider to be too broad and vague for application (Buntić et al., 2023; Engelmann, 2023).

Previous studies have identified the enabling capabilities of a proactive crisis response strategy. Similarly, other studies underpinning the DC theory have identified DCs for innovation for SMEs. However, these two disciplines have remained largely fragmented in the literature. Comparatively, this study demonstrated that proactive crisis response capabilities and DCs for innovation of SMEs bore a striking resemblance to each other, which had not been explicitly reported in previous studies.

Finally, as many studies have reported that due to a lack of a defined framework for SMEs on how to implement BMI, this study presented a proposed DC framework for SME BMI in response to crises.

7.4 Implications for management

In accordance with the theoretical contributions of this study, the proposed DC framework for SME BMI in response to crises offers SMEs a practical framework for implementing BMIs. The model presents the antecedent DCs that innovative SMEs employed in order to implement BMIs to respond proactively to crisis. Firms tend to experience inertia with implementing BMI due to the drastic changes it requires and because of how taxing it can be on the SME leader (Chesbrough, 2010; Rodrigues et al., 2021). The framework makes a valuable contribution as it has collected the reflective learnings of innovative SMEs that largely followed a trial-and-error approach to BMI. Furthermore, the SME leaders indicated that they would have been more prepared for crises had they known, at the time of experiencing the crisis, what they have subsequently learnt about BMI in a time of crisis.

The antecedent DCs identified for SME BMI create a foundation for effective BMI. SME leaders can apply the framework to benchmark their SME capabilities against the identified DCs in this study and identify the strengths to be leveraged or gaps to be addressed in order to pursue BMIs. This approach may help SME leaders to unlock areas of competitive advantage.

The innovative SMEs in this study also demonstrated several simple, practical, and inexpensive ways to enhance their DCs. These practicalities such as: observing patterns and trends in the SMEs surroundings; conducting internet-based research; product sampling; benchmarking competitors' products; scenario planning through pros and cons exercises and improving financial discipline were simple and inexpensive methods that the SMEs demonstrated in this study. The case study approach undertaken in this study therefore offers practical learnings that other South African SMEs can adopt to improve their innovation capability. It further demonstrates that by building new capabilities, SMEs are able to compete in new industries.

This study highlighted the critical importance of employees particularly in labour-intensive manufacturing SMEs. This study emphasises the vast operational and strategic benefits of employing sound human resource practices that demonstrate employee centrality. This study proposes the incorporation of Ubuntu principles to support SMEs human resource practices.

Finally, this study emphasized the need for the realignment of an SMEs competitive strategy and culture when a new BMI is implemented, which SME leaders have previously not given enough attention to, due to their extensive operational involvement in managing their SMEs.

7.5 Limitations of the research

The geographical scope of this study limited it to manufacturing SMEs in KZN, South Africa that experienced a number of crises that were unique to the region. This may reduce the generalisability of the study to other SMEs outside of KZN. A further generalisability challenge was that the participating case studies mostly operated within the CMT industry, and the study demonstrated certain DCs that appeared to be more prominent among CMT manufacturers.

Yin (1981) expressed that case studies have historically received criticism for lacking rigidity in the process of data collection and analysis. The qualitative, interpretivist and case study nature of this study also meant that there was a degree of subjectivity inherently involved in the data collection process and in the findings that emerged.

The study concerned the manufacturing SMEs post-crisis survival or growth; however, as all SMEs were private, unlisted companies, their financial records were not accessible. Thus, the researcher was unable to corroborate the financial extent to which SMEs had either survived or grown from the crises. A further limitation imposed by subjectivity was that the interviews involved the passionate SME leaders who were directly responsible for the SMEs' crisis response strategies and BMIs, and they may have been more predisposed to reflect a positive confirmation bias on the outcome of their BMIs. The use of theoretical terminology such as 'business model innovation' and 'dynamic capabilities' or 'capabilities' needed to be explained in laymen's terms to the research participants, which further imposed a subjectivity challenge as participants relied on the researcher's interpretations.

Due to the limited research available on crisis management and BMI pertaining to SMEs, and even more scarce literature on SMEs in South Africa, the theoretical base for this research included many research articles that relate to the topic studied but have not necessarily received AJG accreditation. Highly-rated articles pertaining to

larger companies in advanced economies were therefore also used to form the theoretical base of this study.

7.6 Recommendations for future research

As this study focused only on SMEs in the highly competitive manufacturing sub-sector, further studies are recommended in other dominant SME sectors, such as trade and accommodation, construction, and personal and business services (SEDA, 2023) to refine the proposed framework illustrated in **Figure 9** and to understand how DCs for other industries might differ. Additionally, similar studies of highly-competitive sub-sectors in other regions of South Africa are also recommended to assess how they compare to this study of KZN SMEs.

As a study of SMEs largely intertwined with the leader's capabilities, it is recommended that a study of SME leader's DCs for BMI is studied further to understand the extent to which SME capabilities are influenced by the leader and can thus maintain a continued competitive advantage in the leader's absence.

The influence of *Ubuntu* emerged regularly in the crisis management responses of SMEs and sensing and seizing DCs, as well as in the organisational culture of SMEs in this study. Further investigation is recommended to understand the influence of the adoption of a philosophy of *Ubuntu* on crisis management responses and BMI of SMEs to derive more nuanced findings on how it relates to the constructs explored in this study.

Similar to the appearance of *Ubuntu* in many of the themes that emerged in this study, sustainability and the social and environmental implications of BMI also appeared, but they were overshadowed by other themes. Filser et al. (2021) suggested that one of the trajectories of BMI research is to explore sustainable BMIs. A study exploring sustainable BMIs from a South African perspective is therefore recommended as it is likely to add to the growing literature from an emerging economy perspective. Finally, further studies of a quantitative nature is required to understand the significance of each of the identified DCs in enabling BMI to increase the level of focus of SMEs on the DCs with a larger impact.

REFERENCES

- Alves, J. C., Lok, T. C., Luo, Y., & Hao, W. (2020). Crisis management for small business during the Covid-19 outbreak: Survival, resilience and renewal strategies of firms in Macau. *Research Square*, 1–29. <https://doi.org/10.21203/rs.3.rs-34541/v1>
- Am, J. B., Furstenthal, L., Jorge, F., & Roth, E. (2020). Innovation in a crisis: Why it is more critical than ever. *McKinsey Insights*. <https://cbibusiness.ca/wp-content/uploads/2020/10/innovation-in-a-crisis-why-it-is-more-critical-than-ever-vf.pdf>
- Aorinka. (2023, May 9th). What automatic translation service is the most accurate. [Blog post]. *Linguae*. <https://www.linguae.com/blog/guide/what-automatic-translation-service-is-the-most-accurate/#:~:text=According%20to%20Microsoft%2C%20the%20overall,90%25%20for%20common%20language%20pairs>
- Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research: An International Journal*, 19(4), 426-432. <https://doi.org/10.1108/QMR-06-2016-0053>
- Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017). Crises and crisis management: Integration, interpretation, and research development. *Journal of management*, 43(6), 1661-1692. <https://doi.org/10.1177/0149206316680030>
- Buntić, L., Damić, M., & Delić, M. (2023). Building A Resilient Business Model: How To Use Dynamic Capabilities In Order To Adapt To Market Shocks. *InterEULawEast: journal for the international and european law*,

economics and market integrations, 10(1), 119-144.
<https://doi.org/10.22598/iele.2023.10.1.7>

Chesbrough, H. (2010). Business model innovation: opportunities and barriers. *Long range planning*, 43(2-3), 354-363. <https://doi.org/10.1016/j.lrp.2009.07.010>

Chumphong, O., Srimai, S., & Potipiroon, W. (2020). The resource-based view, dynamic capabilities and SME performance for SMEs to become smart enterprises. *ABAC ODI Journal Vision. Action. Outcome*, 7(2), 129-146.
<http://www.assumptionjournal.au.edu/index.php/odijournal/index>

Clauss, T., Breier, M., Kraus, S., Durst, S., & Mahto, R. V. (2022). Temporary business model innovation–SMEs' innovation response to the Covid-19 crisis. *R&D Management*, 52(2), 294-312. <https://doi.org/10.1111/radm.12498>

Coombs, W. T., & Laufer, D. (2018). Global crisis management–current research and future directions. *Journal of International Management*, 24(3), 199-203.
<https://doi.org/10.1016/j.intman.2017.12.003>

Creswell, J. W., Hanson, W. E., Clark Plano, V. L., & Morales, A. (2007). Qualitative research designs: Selection and implementation. *The counseling psychologist*, 35(2), 236-264. <https://doi.org/10.1177/0011000006287390>

Cucculelli, M., & Peruzzi, V. (2020). Post-crisis firm survival, business model changes, and learning: evidence from the Italian manufacturing industry. *Small Business Economics*, 54, 459-474.
<https://doi.org/10.1007/s11187-018-0044-2>

Department of Small Business Development (2019). Revised Schedule 1 of the National Definition of Small Enterprise in South Africa. *Government Gazette*, 390(42304). Department of Small Business Development, Republic of South Africa.

https://www.gov.za/sites/default/files/gcis_document/201903/423041gon399.pdf

Doern, R. (2021). Knocked down but not out and fighting to go the distance: Small business responses to an unfolding crisis in the initial impact period. *Journal of Business Venturing Insights*, 15, 1-10.
<https://doi.org/10.1016/j.jbvi.2020.e00221>

Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of business Research*, 116, 199-208.
<https://doi.org/10.1016/j.jbusres.2020.05.025>

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, 14(4), 532-550. <https://doi.org/10.2307/258557>

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they?. *Strategic management journal*, 21(10-11), 1105-1121.
<https://www.proquest.com/scholarly-journals/dynamic-capabilities-what-are-they/docview/225007242/se-2?accountid=14717>

Elliott, V. (2018). Thinking about the coding process in qualitative data analysis. *Qualitative report*, 23(11).
<https://nsuworks.nova.edu/tqr/vol23/iss11/14>

Elumalai, V., Godwyn-Paulson, P., Logesh, N., Muthusankar, G., Lakshumanan, C., & Jonathan, M. P. (2022). Burning urban cities of South Africa due to civil

turmoil 2021: Socio-economic and environmental consequences. *Cities*, 124, 1-7. <https://doi.org/10.1016/j.cities.2022.103612>

Engelmann, A. (2023). A performative perspective on sensing, seizing, and transforming in small-and medium-sized enterprises. *Entrepreneurship & Regional Development*, 1-27. <https://doi.org/10.1080/08985626.2023.2262430>

Fasth, J., Elliot, V., & Styhre, A. (2022). Crisis management as practice in small-and medium-sized enterprises during the first period of COVID-19. *Journal of Contingencies and Crisis Management*, 30(2), 161-170. <https://doi.org/10.1111/1468-5973.12371>

Filser, M., Kraus, S., Breier, M., Nenova, I., & Puumalainen, K. (2021). Business model innovation: Identifying foundations and trajectories. *Business strategy and the environment*, 30(2), 891-907. <https://doi.org/10.1002/bse.2660>

Foss, N. J., & Saebi, T. (2017). Fifteen years of research on business model innovation: How far have we come, and where should we go?. *Journal of management*, 43(1), 200-227. <https://doi.org/10.1177/0149206316675927>

Fubah, C. N., & Moos, M. (2022). Exploring COVID-19 Challenges and Coping Mechanisms for SMEs in the South African Entrepreneurial Ecosystem. *Sustainability*, 14, 1-20. <https://www.mdpi.com/2071-1050/14/4/1944>

Geissdoerfer, M., Vladimirova, D., & Evans, S. (2018). Sustainable business model innovation: A review. *Journal of cleaner production*, 198, 401-416. <https://doi.org/10.1016/j.jclepro.2018.06.240>

- Girotra, K., & Netessine, S. (2014). Four paths to business model innovation. *Harvard business review*, 92(7), 96-103. <https://search-ebscohost-com.uplib.idm.oclc.org/login.aspx?direct=true&db=bth&AN=96698919&site=ehost-live&scope=site>
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, 2(163-194), 105. https://miguelangelmartinez.net/IMG/pdf/1994_Guba_Lincoln_Paradigms_Quali_Research_chapter.pdf
- Handley, K., Molloy, C., & Faulkner, L. (2021). Crisis in small business: a literature review. *University of Newcastle, United Kingdom. UK.*
- Hattingh, M. What did cause the April KZN floods?. *The Water Wheel*, 21.4, 24-27. <https://journals.co.za/doi/pdf/10.10520/ejc-waterb-v21-n4-a5>
- Heider, A., Gerken, M., van Dinther, N., & Hülbeck, M. (2021). Business model innovation through dynamic capabilities in small and medium enterprises—Evidence from the German Mittelstand. *Journal of Business Research*, 130, 635-645.
- Hosseinzadeh S, M., & Nematollahi S, M. (2020). Business model innovation as a turnaround strategy. *Journal of Strategy and Management*, 13(2), 241-253. <https://doi.org/10.1108/JSMA-08-2019-0154>
- Ibarra, D., Bigdeli, A. Z., Igartua, J. I., & Ganzarain, J. (2020). Business model innovation in established SMEs: A configurational approach. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(3), 76. <https://doi:10.3390/joitmc6030076>

- Juergensen, J., Guimón, J., & Narula, R. (2020). European SMEs amidst the COVID-19 crisis: assessing impact and policy responses. *Journal of Industrial and Business Economics*, 47, 499-510. <https://doi.org/10.1007/s40812-020-00169-4>
- Kalidas, S., Magwentshu, N., & Rajagopaul, A. (2020). *How South African SMEs can survive and thrive post COVID-19*. McKinsey. <https://www.mckinsey.com/featured-insights/middle-east-and-africa/how-south-african-smes-can-survive-and-thrive-post-covid-19#:~:text=SMEs%20across%20South%20Africa%20represent,growth%20in%20the%20private%20sector>
- Khoza, S. Z. M., Adeniyi, A. O., & Ayandibu, A. O. (2022). A Thematic Analysis of The Challenges Faced by SME's during Uncertain Times in KwaZulu-Natal: A case of DACT Beneficiaries. *The Journal of Accounting and Management*, 12(3), 218-239. <https://orcid.org/0000-0002-2912-4563>
- KwaZulu-Natal Provincial Government. (2024). *Socio-Economic Review and Outlook 2024/2025*. Republic of South Africa. <https://www.kzntreasury.gov.za/ResourceCenter/Infrastructure%20Management%20and%20Economic%20Services/SocioEconomic%20Review%20and%20Outlook/2023-24/Final%20Socio%20Economic%20Review%20and%20Outlook%20%202024%202025%2015%20November%202023.pdf>
- Martin, R., Martinelli, F., & Clifton, J. (2022). Rethinking spatial policy in an era of multiple crises. *Cambridge Journal of Regions, Economy and Society*, 15(1), 3-21. <https://doi.org/10.1093/cjres/rsab037>

- Meyer, N., Molefe, K., & De Jongh, J. (2018). Managerial challenges within SMEs: The case of a developing region. *Polish Journal of Management Studies*, 18(2), 185-196. <https://doi.org/10.17512/pjms.2018.18.2.15>
- Miklian, J., & Hoelscher, K. (2022). SMEs and exogenous shocks: A conceptual literature review and forward research agenda. *International Small Business Journal*, 40(2), 178-204. <https://doi.org/10.1177/02662426211050796>
- Millar, C. C., Groth, O., & Mahon, J. F. (2018). Management innovation in a VUCA world: Challenges and recommendations. *California management review*, 61(1), 5-14. <https://doi.org/10.1177/0008125618805111>
- Mnguni, P., & Simbanegavi, W. (2020, July). *South African Manufacturing: A situational analysis*. South African Reserve Bank. [https://www.resbank.co.za/content/dam/sarb/publications/occasional-bulletin-of-economic-notes/2020/10410/OBEN%202002%20\(South%20African%20Manufacturing%20A%20situational%20analysis\)%20-%20November%202020.pdf](https://www.resbank.co.za/content/dam/sarb/publications/occasional-bulletin-of-economic-notes/2020/10410/OBEN%202002%20(South%20African%20Manufacturing%20A%20situational%20analysis)%20-%20November%202020.pdf)
- Müller, J.M. (2019), Business model innovation in small- and medium-sized enterprises: Strategies for industry 4.0 providers and users. *Journal of Manufacturing Technology Management*, 30(8), 1127-1142. <https://doi.org/10.1108/JMTM-01-2018-0008>
- Mundhree, J., & Beharry-Ramraj, A. (2022). The Impact of the Riots and Looting on the South African Economy and Small Business Owners. *Gender and Behaviour*, 20(3), 20056-20083. https://hdl.handle.net/10520/ejc-genbeh_v20_n3_a31
- OECD. (2022). *Financing SMEs and Entrepreneurs 2022*. OECD Library. <https://doi.org/10.1787/e9073a0f-en>

- Reddy, J., & Mamabolo, A. (2023). Resourcing actions that influenced business model adaptation during the COVID-19 crisis. *South African Journal of Business Management*, 54(1), 1-11. <http://dx.doi.org/10.4102/sajbm.v54i1.3597>
- Rodrigues, M., Franco, M., Silva, R., & Oliveira, C. (2021). Success factors of SMEs: empirical study guided by dynamic capabilities and resources-based view. *Sustainability*, 13(21), 1-17. <https://doi.org/10.3390/su132112301>
- Salamzadeh, A., & Dana, L. P. (2022). A systematic literature review of crisis management in and by small and medium-sized enterprises. In H. Etemad (Ed.), *Global Perspectives on Entrepreneurial Crisis Management* (pp. 38-61).
- Sarkar, S., & Clegg, S. R. (2021). Resilience in a time of contagion: Lessons from small businesses during the COVID-19 pandemic. *Journal of Change Management*, 21(2), 242-267. <https://doi.org/10.1080/14697017.2021.1917495>
- Saunders, M., & Lewis, P. (2018). *Doing research in business and management: An essential guide to planning your project*. Harlow Pearson Education Limited.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson Education Limited.
- Saunila, M. (2020). Innovation capability in SMEs: A systematic review of the literature. *Journal of Innovation & knowledge*, 5(4), 260-265. <https://doi.org/10.1016/j.jik.2019.11.002>

Sedgwick, P. (2014). Unit of observation versus unit of analysis. *BMJ*, 348, 1-2.
<https://doi.org/10.1136/bmj.g3840>

Schilke, O. (2014). Second-order dynamic capabilities: How do they matter?. *Academy of Management Perspectives*, 28(4), 368-380.
<http://dx.doi.org/10.5465/amp.2013.0093>

Small Enterprise Development Agency. (2023). *SMME Quarterly Update 3rd Quarter 2022*. Department of Small Business Development, Republic of South Africa.
[http://www.seda.org.za/Publications/Publications/SMME%20Quarterly%20022-Q3%20\(005\).pdf](http://www.seda.org.za/Publications/Publications/SMME%20Quarterly%20022-Q3%20(005).pdf)

Sornette, D. (2006). Endogenous versus exogenous origins of crises. *Extreme events in nature and society*, 95-119.
<https://arxiv.org/pdf/physics/0412026.pdf>

Statistics South Africa. (2023a). *Beyond unemployment – Time-Related Underemployment in the SA Labour Market*. Department of Statistics South Africa, Republic of South Africa.
<https://www.statssa.gov.za/?p=16312#:~:text=South%20Africa's%20unemployment%20rate%20in,the%20fourth%20quarter%20of%202022.>

Statistics South Africa. (2023b). *StatsSA releases new provincial GDP figures*. Department of Statistics South Africa, Republic of South Africa..
<https://www.statssa.gov.za/?p=16650>

Teece, David J. (2010). Business models, business strategy and innovation. *Long range planning*, 43(2-3), 172-194. <https://doi.org.uplib.idm.oclc.org/10.1016/j.lrp.2009.07.003>

- Teece, D. J. (2018). Business models and dynamic capabilities. *Long range planning*, 51(1), 40-49. <http://dx.doi.org/10.1016/j.lrp.2017.06.007>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, 18(7), 509-533. [https://doi-org.uplib.idm.oclc.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi-org.uplib.idm.oclc.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: a resource-based view. *Strategic management journal*, 31(8), 892-902. <https://doi.org/10.1002/smj.841>
- Vu, H. M. (2020). A review of dynamic capabilities, innovation capabilities, entrepreneurial capabilities and their consequences. *The Journal of Asian Finance, Economics and Business*, 7(8), 485-494. <https://doi.org/10.13106/jafeb.2020.vol7.no8.485>
- Vašíčková, V. (2019). Crisis management process-a literature review and a conceptual integration. *Acta Oeconomica Pragensia*, 27(3-4), 61-77. <https://doi.org/10.18267/j.aop.628>
- Weaven, S., Quach, S., Thaichon, P., Frazer, L., Billot, K., & Grace, D. (2021). Surviving an economic downturn: Dynamic capabilities of SMEs. *Journal of Business Research*, 128, 109-123. <https://doi.org/10.1016/j.ibusres.2021.02.009>
- Wenzel, M., Stanske, S., & Lieberman, M. B. (2020). Strategic responses to crisis. *Strategic Management Journal*, 41, 7-18. <https://doi.org/10.1002/smj.3161>

Wirtz, B., & Daiser, P. (2018). Business model innovation processes: A systematic literature review. *Journal of Business Models*, 6(1), 40-58. <https://www.proquest.com/scholarly-journals/business-model-innovation-processes-systematic/docview/2111714412/se-2?accountid=14717>

World Economic Forum. (2022). *Unlocking Business Model Innovation through Advanced Manufacturing*. https://www3.weforum.org/docs/WEF_Unlocking_Business_Model_Innovation_through_Advanced_Manufacturing_2022.pdf

World Economic Forum. (2024). *The Global Risks Report 2024*. (19th ed.). https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2024.pdf

Yin, R. K. (1981). The case study as a serious research strategy. *Knowledge*, 3(1), 97-114. <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=6ae86719aad8fe98b7acafaed16dc100a5e25ec3>

Žukauskas, P., Vveinhardt, J., & Andriukaitienė, R. (2018). Philosophy and paradigm of scientific research. *Management culture and corporate social responsibility*, 121(13), 506-518. <http://dx.doi.org/10.5772/intechopen.70628>

APPENDIX A: CONSISTENCY MATRIX

Research Questions	Literature Review	Data Collection Tool	Analysis
<p>Primary research question: <i>How do SMEs implement BMI in response to crises that results in survival and/or growth?</i></p>			
<p>RQ1: <i>How did SMEs strategically respond to crises?</i></p>	2.2 Response to crises	Interview guide, questions 1-4	Within-Case and Cross-Case Analysis
<p>RQ2: <i>How did SMEs pursue BMI as part of their crisis response strategy to enable survival and/or growth?</i></p>	2.4 Business model innovation	Interview guide, questions 5-7	Within-Case and Cross-Case Analysis
<p>RQ3: <i>How did SMEs sense the threats and opportunities arising from crises?</i></p>	2.2.2.3 SME capabilities for proactive crisis response strategies 2.4.3.1 Dynamic capabilities: Sensing	Interview guide, questions 8-11	Thematic Analysis, Cross-Case Analysis
<p>RQ4: <i>How did SMEs seize opportunities to innovate and mitigate threats arising from crises?</i></p>	2.2.2.3 SME capabilities for proactive crisis response strategies 2.4.3.2 Dynamic capabilities: Seizing	Interview guide, questions 8-11	Thematic Analysis, Cross-Case Analysis
<p>RQ5: <i>How did SMEs transform their BM to enable survival or growth?</i></p>	2.4.3.1 Dynamic capabilities: Transforming	Interview guide, questions 8-11	Thematic Analysis, Cross-Case Analysis

APPENDIX B: SEMI-STRUCTURED INTERVIEW GUIDE

No.	Interview Questions
1.	KZN has been exposed to a series of crises in the recent past, including Covid-19, the 2021 riots and the 2022 floods.
1.1	Was your business impacted by these or other events? To what degree?
2.	Did you engage in any crisis planning activities? Examples include a risk management plan, disaster recovery plan, insurance against disaster. Explain them.
3.	Looking back, as the CEO of the business, what were some of the immediate steps you took in response to the crises? (Retrenchment, cost-cutting, change of management, extended payment terms, exit).
4.	What was the reason for the chosen course of action?
5.	How did you innovate your business model following the crisis (such as new products, new processes, new value proposition for customers, new streams of revenue)?
6.	Explain the reason behind the adoption of the business model innovation.
7.	What has been the effect of the business model innovation on the business since the crisis? In your view, will this form part of the business in the long-term?
8.	What were the capabilities that enabled you to innovate during/following this uncertain time?
9.	Were there any factors that prevented you from innovating? Perhaps in other areas.
10.	Looking back, could you have responded differently? What were your personal learnings? What have been the organisational learnings and have they filtered down through the business?
11.	What is the central lesson you can take away from your experience that you would share with other CEOs of SMEs in responding to crises events?

APPENDIX C: THEMATIC ANALYSIS OF CODIFIED DATA

First Order Codes	Categories	Sub-themes	Main Themes	RQ	Dynamic Capability
558	70	9	5	RQ3.1	S E N S I N G
99	14	2			
70	10				
6	o Building a healthy balance sheetGr=6	Cash reserves and financial discipline	Crisis planning		
2	o Hamper to innovation: Financial constraintsGr=2				
18	o Having a reserve/emergency fundGr=18				
1	o Hurdles to innovationGr=1				
29	o Implementing discipline in the businessGr=29				
6	o Importance of costingGr=6				
2	o Innovation requires stabilityGr=2				
3	o Personal habits and disciplineGr=3				
2	o Strict leadership styleGr=2				
1	o Unsupportive banking institutionsGr=1				
29	4				
16	o Effective crisis planningGr=16	Post-crisis scenario planning			
6	o Lack of crises planning activitiesGr=6				
3	o Pre-crisis planning: Compliance with regulatory bodiesGr=3				
4	o Starting to formalise processesGr=4				
247	40	3			
57	9				
1	o Balance of leading with mind and heart neededGr=1	Purpose			
8	o CEO's personal ambitionsGr=8				
5	o Driven by duty to country's challengesGr=5				
11	o Driven by social endeavoursGr=11				
11	o Owner makes personal sacrificesGr=11				
1	o Passion is not enough to run a businessGr=1				
1	o PassionGr=1				
16	o Sense of Divine Calling/PurposeGr=16				
3	o Sense of South African PrideGr=3				
157	27				
2	o CEOs personal philosophyGr=2	Resilience experience	Resilience		
4	o Challenges immediately prior to COVIDGr=4				
8	o CMT is a tough industryGr=8				
5	o Difficulty of competing with importsGr=5				
4	o Difficulty of competing with large organisationsGr=4				
3	o Do not waste a crisisGr=3				
14	o Driven by pressure & responsibilityGr=14				
5	o Expect a crisisGr=5				
4	o Highly competitive value chainGr=4				
1	o Hostile business environmentGr=1				
1	o Innovation driven by need to pay wagesGr=1				
7	o Lack of Govt support & servicesGr=7				
1	o Lack of processes and systemsGr=1				
5	o Localisation challengesGr=5				
3	o Longevity as an indicator of survivalGr=3				
2	o Longevity doesn't guarantee survivalGr=2				
1	o Longevity of businessGr=1				
6	o Openness to the experience of experiencing crisesGr=6				
6	o OptimismGr=6				
1	o Past experience of dealing with crisesGr=1				
1	o Patience with coming out of crisisGr=1				
8	o Personal experience of experiencing challenging eventsGr=8				
1	o Problem solvingGr=1				
30	o ResilienceGr=30				
23	o Small business challengesGr=23				
6	o SurvivalGr=6				
5	o Turning to God/SpiritualityGr=5				
33	4				
6	o Dissappointment at waiting to actGr=6	Self-awareness			
2	o ProactiveGr=2				
16	o Self-awareness of ownerGr=16				
9	o Taking care of mental healthGr=9				
122	12	2			
72	5				
29	o CEO always listening/open to learningGr=29	Collaboration with networks			
20	o International benchmarkingGr=20				
3	o SensemakingGr=3				
17	o Understanding international brandingGr=17				
3	o Understanding international textile industryGr=3				
50	7				
2	o Analysing trendsGr=2	Observing patterns and trends	Sensemaking		
7	o CuriosityGr=7				
23	o Design thinking: Empathising - Observation of human behaviourGr=23				
1	o Finding ideas outside of day-to-day environmentGr=1				
2	o Hamper to innovation: Acting too lateGr=2				
14	o Identifying market trends, patterns and gapsGr=14				
1	o Identifying market trends: PPEGr=1				
79	3	1			
79	3				
24	o Understanding/empathising with customer journeyGr=24	Communication	Communication		
34	o Communication: Suppliers, Customers, EmployeesGr=34				
21	o Understanding of employee circumstancesGr=21				
11	1	1			
11	1				
11	o Research & DevelopmentGr=11	Active learning	Active learning		

First Order Codes	Categories	Sub-themes	Main Themes	RQ	Dynamic Capability
436	57	9	4		
68	6	2			
38	4				
7	<ul style="list-style-type: none"> o Going with your gut feeling/IntuitionGr=7 	Agile decision-making	Decision-making		
3	<ul style="list-style-type: none"> o Full commitment of CEOGr=3 				
18	<ul style="list-style-type: none"> o Gemba: Go and see for yourselfGr=18 				
10	<ul style="list-style-type: none"> o Lack of Managerial SupportGr=10 				
30	2				
23	<ul style="list-style-type: none"> o Business makes sacrifices to take care of employeesGr=23 	Responsible decision-making			
7	<ul style="list-style-type: none"> o Ideation: Process of elimination (What works)Gr=7 				
126	20	2			
97	14				
2	<ul style="list-style-type: none"> o Ageing industry creates opportunities for new younger entrantsGr=2 	Employee expertise	Employee-centricity		
28	<ul style="list-style-type: none"> o Building employee expertiseGr=28 				
5	<ul style="list-style-type: none"> o Desired Employee CapabilitiesGr=5 				
9	<ul style="list-style-type: none"> o DifferentiationGr=9 				
2	<ul style="list-style-type: none"> o Experienced managementGr=2 				
12	<ul style="list-style-type: none"> o Growth and Development of peopleGr=12 				
4	<ul style="list-style-type: none"> o Industry challenge: Aged workforceGr=4 				
1	<ul style="list-style-type: none"> o Industry Challenge: Lack of skillGr=1 				
1	<ul style="list-style-type: none"> o Innovation aided by employeesGr=1 				
2	<ul style="list-style-type: none"> o Labour challenge: Not paying wages causes more harmGr=2 				
11	<ul style="list-style-type: none"> o Making the industry attractive for the youthGr=11 				
17	<ul style="list-style-type: none"> o Multi-skilled workforceGr=17 				
1	<ul style="list-style-type: none"> o Non-monetary motivation: Esteem (Maslow)Gr=1 				
2	<ul style="list-style-type: none"> o Strong managerial partnershipGr=2 				
29	6				
4	<ul style="list-style-type: none"> o Consideration of employees and their familiesGr=4 	HR Practices			
4	<ul style="list-style-type: none"> o Employee ownership structureGr=4 				
4	<ul style="list-style-type: none"> o Empowering employeesGr=4 				
2	<ul style="list-style-type: none"> o Staff to reap the benefits of the business in the long termGr=2 				
11	<ul style="list-style-type: none"> o Strong teamworkGr=11 				
4	<ul style="list-style-type: none"> o Team BuildingGr=4 				
76	10	2			
48	6				
15	<ul style="list-style-type: none"> o AdaptabilityGr=15 	Flexibility and Adaptability	Entrepreneurial capability		
2	<ul style="list-style-type: none"> o Advantage over corporatesGr=2 				
2	<ul style="list-style-type: none"> o Creativity of CEOGr=2 				
4	<ul style="list-style-type: none"> o Creativity/Innovation driven by limited resourcesGr=4 				
3	<ul style="list-style-type: none"> o Enterprising aided by limited resourcesGr=3 				
22	<ul style="list-style-type: none"> o FlexibilityGr=22 				
28	4				
13	<ul style="list-style-type: none"> o Taking a risk and trying somethingGr=13 	Risk-taking			
8	<ul style="list-style-type: none"> o CEO's personal entrepreneurship venturesGr=8 				
1	<ul style="list-style-type: none"> o ExperimentationGr=1 				
6	<ul style="list-style-type: none"> o LuckGr=6 				
166	21	3			
97	11				
3	<ul style="list-style-type: none"> o Analysing customer's business performanceGr=3 	Customer partnership	Partnerships		
1	<ul style="list-style-type: none"> o Customer facing financial issuesGr=1 				
9	<ul style="list-style-type: none"> o Customer-centricGr=9 				
17	<ul style="list-style-type: none"> o Design thinking: What customer wantsGr=17 				
5	<ul style="list-style-type: none"> o Government ordersGr=5 				
1	<ul style="list-style-type: none"> o Importance of a value equationGr=1 				
3	<ul style="list-style-type: none"> o Observing the growth of a key customerGr=3 				
2	<ul style="list-style-type: none"> o Opportunities from Crises: Being approached by new customersGr=2 				
3	<ul style="list-style-type: none"> o Opportunities from crises: Government support for Small BusinessGr=3 				
6	<ul style="list-style-type: none"> o Quality control is importantGr=6 				
47	<ul style="list-style-type: none"> o Supportive customer partnership & relationshipGr=47 				
50	7				
2	<ul style="list-style-type: none"> o HatersGr=2 	Network partnerships			
2	<ul style="list-style-type: none"> o Lack of support from someGr=2 				
4	<ul style="list-style-type: none"> o Not stepping on others' territoryGr=4 				
3	<ul style="list-style-type: none"> o Partnership with craft vendorsGr=3 				
1	<ul style="list-style-type: none"> o Respect for industry peers/competitorsGr=1 				
7	<ul style="list-style-type: none"> o Support of friends and familyGr=7 				
31	<ul style="list-style-type: none"> o Support of industry peers/networks/advisorsGr=31 				
19	3				
2	<ul style="list-style-type: none"> o Opportunities from crises: Local manufactureGr=2 	Supplier partnerships			
3	<ul style="list-style-type: none"> o Opportunities from crisis: AcquisitionGr=3 				
14	<ul style="list-style-type: none"> o Support of suppliersGr=14 				

First Order Codes	Categories	Sub-themes	Main Themes	RQ	Dynamic Capability
137	20	3	3		
51	5	1			
51	5				
24	o Company culture: Inclusive and collaborativeGr=24	Culture	Realignment of culture	RQ3.5	TRANSFORMING
9	o Company culture: People are valuedGr=9				
7	o HumilityGr=7				
7	o Leadership style: CollaborativeGr=7				
4	o Values of uBuntuGr=4				
55	8	1			
55	8				
13	o DiversificationGr=13	Competitive strategy	Redesign of competitive strategy	RQ3.5	TRANSFORMING
10	o Creating a visionGr=10				
6	o Crisis strategyGr=6				
3	o Future direction of businessGr=3				
3	o Future technologiesGr=3				
8	o Long term strategy: Economically sustainableGr=8				
4	o Long term strategy: Socially and Economically sustainableGr=4				
8	o SustainabilityGr=8				
31	7	1			
31	7				
1	o Enhancing traditional business model with new business/product lineGr=1	Reconfiguration and redesign	Reconfiguration and redesign of asset structure	RQ3.5	TRANSFORMING
19	o Extending lead times by holding safety stockGr=19				
1	o Post crises management: InsuranceGr=1				
1	o Post crises management: Reducing asset baseGr=1				
1	o Post crises management: RestructuringGr=1				
3	o Second-hand machineryGr=3				
5	o Valuable resource: AssetsGr=5				
548	27				
548	27				
345	18				
20	o Value Capture Innovation: Direct to marketGr=20			RQ2	WITHIN-CASE ANALYSIS
10	o Value Capture Innovation: High-end retail brand with valuedcustomer partnershipGr=10				
6	o Value Capture Innovation: Trying out different marketsGr=6				
27	o Value Capture: Diversification of customersGr=27				
30	o Value Capture: ExportGr=30				
13	o Value Creation and Value Capture Innovation: Coffin insertsGr=13				
3	o Value Creation and Value Capture Innovation: Export palletsGr=3				
5	o Value Creation Innovation: Employee benefitsGr=5				
17	o Value Creation Innovation: In-house brand and Value Capture Innovation: RetailingGr=17				
33	o Value Creation Innovation: Motivation and EngagementGr=33				
31	o Value creation: Fixed cost reductionGr=31				
22	o Value Proposition & Value Creation & Value Capture: Mill houseGr=22				
27	o Value Proposition and Value Capture innovation: OnlineGr=27				
20	o Value proposition and value capture: New AccessoriesGr=20				
12	o Value Proposition Innovation: A Community Brand with a Social PurposeGr=12				
6	o Value Proposition Innovation: Fashionable tourism retail brandGr=6				
1	o Value Proposition Innovation: New/wider range of productsGr=1				
62	o Value Proposition Innovation: PPE and Value Capture Innovation: PPE and Value Creation:				
203	9				
37	o Impact of CovidGr=37			RQ1	WITHIN-CASE ANALYSIS
50	o Impact of floodsGr=50				
2	o Impact of Port CrisisGr=2				
58	o Impact of riotsGr=58				
6	o Impact of South African loadshedding crisisGr=6				
25	o Impact of XenophobiaGr=25				
2	o Reaction to CovidGr=2				
2	o Recovery from crisesGr=2				
21	o Traditional response to crisesGr=21				
1679	174				

APPENDIX D: GIBS ETHICAL CLEARANCE APPROVAL

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

**Ethical Clearance
Approved**

Dear [REDACTED]

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

[Ethical Clearance Form](#)

Kind Regards

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

APPENDIX E: CONSENT LETTER REQUESTING PARTICIPATION IN INTERVIEW

Dear Respondent

In partial fulfilment of my MBA degree with the University of Pretoria's Gordon Institute of Business Studies, I am conducting research with CEOs of Small and Medium Sized Enterprises (SMEs) that have innovated their business models in response to external crises events experienced in KZN, such as Covid-19, the July 2021 riots and the 2022 floods. This study aims to understand how and why CEOs of SMEs adopt business model innovation as a response to crises events despite the business challenges brought on by such crises. It also aims to understand the antecedents to effective business model innovations that help SMEs to survive and overcome such crises events.

Your assistance is therefore being requested to participate in an interview that will help me to gain deeper insights into your experience with innovatively responding to crises events. You are under no obligation to answer all questions, but your full participation would be greatly appreciated as it will enhance the findings of the study. The interview is expected to last approximately 90 minutes. Your participation is voluntary, and you may withdraw at any time should you wish to do so, without penalty. If you permit, it is preferred that the interview be recorded to enable better analysis of the responses.

Your answers and any information received will be treated confidentially. Any quotes used from the interview will be anonymised. Should you have any concerns, please feel free to reach out to myself or my supervisor.

Researcher:

Email:

Cell:

Supervisor:

Email:

Cell:

Participant Signature

Date:

Researcher Signature

Date:

APPENDIX F: PERMISSION LETTER TO CONDUCT RESEARCH ABOUT AN ORGANISATION

Dear Respondent

In partial fulfilment of my MBA degree with the University of Pretoria's Gordon Institute of Business Studies, I am conducting research with CEOs of Small and Medium Sized Enterprises (SMEs) that have innovated their business models in response to external crises events experienced in KZN, such as Covid-19, the July 2021 riots and the 2022 floods. This study aims to understand how and why business model innovation is adopted as a response to crises events despite the business challenges brought on by such crises. It also aims to understand the antecedents to effective business model innovations that help SMEs to survive and overcome such crises events.

As your business model has undergone innovation in response to the crises experienced, it would be beneficial to study your organisation for the purpose of this research. Your permission is therefore being requested to allow me to conduct research about your business as it relates to this study. Should you have any concerns, please feel free to reach out to myself or my supervisor.

Researcher:

Email:

Cell:

Supervisor:

Email:

Cell:

Please indicate that you have granted permission to conduct research about your business as it relates to this study and that you are duly authorised to do so by signing below.

Participant Signature

Designation:

Date:

Researcher Signature

Designation: Researcher

Date: