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Enhancing Organizational Agility and Crisis Preparedness in SMMEs.

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ABSTRACT

During significant economic instability, SMMEs are vital to economic stability and prosperity, especially in rising economies like South Africa. This study examines how financial flexibility, technology adaptability, leadership and strategic vision, and crisis preparedness enhance SMME agility and crisis management. To help managers, policymakers, and researchers understand how SMMEs flourish during crises, the research investigates five important capabilities.

A cross-sectional survey of 204 South African SMME owners and managers from various industries was conducted in this quantitative study. Researchers used a structured questionnaire to evaluate how dynamic abilities affect organizational agility and crisis readiness. Reliability, correlation, and multiple regression were employed in SPSS to assess study hypotheses. The reliability research showed strong constructs with good Cronbach's alpha values for all variables. Correlation and regression indicated that some traits improve organizational resilience.

The results demonstrate that agility and preparation require different dynamics. Financial and decision-making flexibility are the most crucial agility factors for SMMEs to adapt fast. Targeted training, clear communication, and crisis management resource allocation increased crisis readiness. Integration matters: SMMEs with dynamic capacities were better at handling volatility than those with specialized competencies.

This study contextualizes the Resource-Based View (RBV) and Dynamic Capabilities Framework in emerging economy SMMEs, a neglected research topic. To understand SMME resilience, this study distinguishes agility and crisis preparation. The paper suggests SMME management invest in financial flexibility, digital transformation, and staff training to create crisis resilience. Policy assistance is needed to give SMMEs the resources and technologies they need to develop these capacities.

This study found that dynamic skills make small, medium, and micro companies resilient. To survive and sustain regional economic stability, SMMEs must adapt fast and manage crises due to global problems and market uncertainty. According to the findings, resilience should stress adaptability and preparation through capability development. How industry contexts affect resilience strategies and competencies should be studied longitudinally and sector-specifically. This study seeks to deepen understanding to enable SMMEs, policymakers, and researchers navigate today's business environment.

Key Words

Dynamic Capabilities

The capacity of an organization to adjust and reorganize resources and capabilities in response to evolving surroundings, crucial for small and medium-sized enterprises encountering swift changes or crises.

Organizational Agility

The ability to swiftly modify strategies, operations, and resources to sustain competitive advantage in fluctuating conditions.

Crisis Preparedness

An anticipatory strategy encompassing preparation, resource distribution, and communication techniques to adeptly handle unforeseen interruptions.

Financial Flexibility

The organization's ability to mobilize and reallocate financial resources as required, facilitating adaptation during emergencies.

Technological Adaptation

The use and integration of novel technology to augment resilience and efficiency, essential for SMMEs in unstable environments.

Leadership and Strategic Vision

The direction offered by organizational leaders emphasizes resilience development and the alignment of resources with long-term goals.

Organizational Resilience

The capacity to withstand, adjust to, and recuperate from disturbances, guaranteeing operational continuity and sustained viability.

Resource Allocation

The efficient allocation of financial, human, and operational resources to prioritize and oversee crisis response initiatives.

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Chapter 1: Introduction to Research Problem

1.1 Background to the Research

Small, Medium, and Micro Enterprises (SMMEs) are crucial to global economy, particularly in developing areas. They stimulate economic growth, generate employment, promote innovation, and substantially aid in poverty reduction (Zitierung et al., 2019). SMMEs serve as essential elements of emerging economies, contributing to GDP while fostering entrepreneurial potential and providing localized solutions in regions sometimes neglected by larger firms (Muriithi, 2017).

These firms supply vital commodities and services, stimulate competition, and enhance regional economic development (Jili et al., 2017; Rankhumise & Letsoalo, 2019). Nonetheless, small, medium, and micro enterprises encounter distinct problems, especially in their capacity to respond to unforeseen crises, owing to resource constraints, inadequate technical access, and the absence of formal support networks (Molefe et al.,2018).

The COVID-19 epidemic exacerbated these issues, underscoring the systemic vulnerabilities of SMMEs. Throughout this crisis, numerous SMMEs faced supply chain interruptions, diminished consumer demand, and stringent public health laws, all of which created a difficult operational landscape (Farisani, 2022).

The pandemic highlighted the imperative for SMMEs to develop resilience strategies and adaptive capacities that improve their capacity to endure and recuperate from crises. For these enterprises, resilience encompasses not merely enduring catastrophic occurrences but also adapting, recovering, and maintaining long-term viability in the face of uncertain circumstances (Myres&Mamabolo,2023).

Despite their essential socio-economic function, SMMEs frequently lack the resources necessary to develop complete crisis preparedness plans, rendering them more vulnerable to operational disruptions and economic shocks. This research investigates the dynamic characteristics that empower SMMEs to develop organizational agility and resilience, providing critical insights for improving their crisis management effectiveness and ensuring company continuity.

1.2 Problem Statement

Despite their crucial role in socio-economic development, SMMEs often lack the essential tools and resources to execute effective crisis management and resilience strategies. The existing body of research identifies several problems encountered by SMMEs, including restricted financial resources, technological limitations, and deficiencies in crisis management proficiency (Ingle, 2014). These limits intensify during crises, resulting in operational disruptions, business closures, job losses, and widespread economic instability (Mason & Harrison2015).

The COVID-19 epidemic revealed substantial inadequacies in the crisis preparedness of SMMEs, as numerous enterprises struggled to adjust to the swift alterations in market conditions. The failure to pivot effectively underscored the necessity for robust resilience methods that empower SMMEs to predict, respond to, and recover from disruptions. Confronting these obstacles is essential for SMMEs to preserve business operations and promote economic stability within the communities they serve.

This study aims to address knowledge gaps by investigating dynamic capabilities such as adaptability, technological integration, and strategic leadership that SMMEs can cultivate to improve organizational agility and resilience. This research enhances the debate on SMME sustainability and resilience by defining competencies and assessing their influence on crisis preparedness, thereby assisting small firms in managing future crises and ensuring continuity.

1.3 Purpose of the Study

This study aims to examine the impact of dynamic capabilities on organizational agility and crisis preparedness in small, medium, and micro enterprises (SMMEs). This study specifically intends to:

- Determine the essential dynamic capabilities that enhance the agility and preparedness of SMMEs in times of crisis.
- Examine the correlation between these capabilities and the ability of SMMEs to successfully respond to and recover from disruptive occurrences.
- Provide actionable advice for SMME managers and policymakers to bolster resilience, so improving their capacity to endure future crises and maintain uninterrupted operations.

This study aims to enhance the comprehension of crisis management and resilience in the SMME sector by analyzing these areas. The results will assist SMME managers and policymakers in formulating evidence-based methods to manage crises and guarantee long-term sustainability, promoting both organizational development and economic stability.

1.4 Research Setting and Context

This study is positioned within the distinct context of SMMEs, which, in contrast to bigger businesses, frequently possess less resources and encounter specific obstacles during times of disruption. Small, Medium, and Micro Enterprises (SMMEs) are generally more nimble than bigger organizations, enabling them to adapt rapidly to evolving circumstances. This flexibility is sometimes impeded by limited access to capital, technological limitations, and inadequate formal support systems (Molefe et al., 2018).

This research is contextualized by the COVID-19 pandemic, which disrupted conventional business patterns worldwide and highlighted the essential requirement for SMMEs to develop strong resilience plans. This study addresses a significant gap in resilience research by concentrating on SMMEs, which are frequently neglected in terms of their distinct problems and potential. This environment allows for a concentrated examination of how SMMEs might develop dynamic capacities suited to their unique requirements and limitations, hence yielding more precise and relevant conclusions.

1.5 Justification for the Study

1.5.1 Business Relevance

From a business perspective, this study provides essential insights that can assist SMME managers in bracing for future crises. In a time characterized by heightened economic instability, climate-induced disturbances, and global health crises, resilience has emerged as an essential asset for company continuity. The COVID-19 epidemic highlighted this necessity, as SMMEs globally faced abrupt operational interruptions, financial strain, and supply chain disruptions. This study provides managers with techniques to create resilience, equipping them with the tools and insights needed to improve their businesses' capacity to endure and recover from crises.

The study is pertinent due to the acceleration of digital transformation and the changing dynamics of labor in a post-pandemic environment. This research provides insights for SMME

management to make strategic investments in digital tools, flexible work arrangements, and staff skill development, thereby improving resilience in an increasingly volatile environment.

1.5.2 Theoretical Relevance

This research theoretically enhances the domains of organizational resilience and crisis management. The current resilience literature predominantly emphasizes larger firms, while the unique needs and skills of SMMEs have received comparatively little attention. This study explores resilience by analyzing dynamic capacities pertinent to smaller enterprises. This concept is based on the Resource-Based View (RBV) and the Dynamic Capabilities Framework, which propose that companies achieve a competitive advantage by utilizing distinctive internal resources and capabilities (Barney, 1991; Teece et al., 1997). This study enhances the comprehension of resilience in resource-constrained environments by applying these ideas to SMMEs.

This research examines the relationship between dynamic capabilities and crisis preparedness, adding to the expanding literature that highlights adaptation as a crucial element of resilience. This theoretical contribution has ramifications for both academia and practice, offering a refined view on how SMMEs might deliberately foster resilience within their current resource frameworks.

1.6 Scope of the Study

This research aims to discover and analyze dynamic capabilities that improve agility and crisis preparedness in small, medium, and micro enterprises (SMMEs). This study will incorporate a cross-sectional sample of SMMEs across multiple sectors to capture a varied array of experiences and strategies. Nonetheless, the study's conclusions may be constrained to the particular geographic and industrial contexts represented in the sample, and the results may not be broadly generalizable.

This research utilizes a quantitative approach, including structured surveys to collect data on organizational competencies and crisis readiness. This method ensures statistical rigor but may constrain the depth of insights that qualitative approaches can offer, especially with individual organizational experiences during crises.

1.7 Conclusion to Chapter 1

In conclusion, Chapter 1 has laid the groundwork for this research by addressing the context, problem statement, objectives, and scope of the study. The problems faced by SMMEs, especially during crises, underscore the necessity of bolstering resilience through dynamic capacities. This research seeks to connect theory with practice, offering small and medium-sized enterprises a framework for developing resilience and agility.

The subsequent chapter will conduct a comprehensive assessment of pertinent literature, analyzing the theoretical underpinnings and empirical research that underpin the study's emphasis on dynamic skills and resilience.

Chapter 2: Literature Review

2.1 Introduction to the Literature Review

This chapter provides an in-depth review of the literature to examine the correlation between dynamic capabilities and the enhancement of organizational agility and crisis preparedness in Small, Medium, and Micro Enterprises (SMMEs). Comprehending this relationship is essential, as dynamic capabilities organizational assets that facilitate rapid and effective adaptation to changing environments are recognized as crucial for survival and growth, especially in the volatile and resource-limited environments characteristic of SMMEs (Teece, 2018).

Recent economic instability, exacerbated by events such as the COVID-19 pandemic, has underscored the necessity for enterprises to develop strong dynamic capabilities to navigate crises (Barney, 2020). Small, Medium, and Micro Enterprises (SMMEs), characterized by their agility but susceptibility to external disruptions due to constrained resources, provide an optimal framework to examine how characteristics including financial flexibility, technology adaptation, leadership and strategic vision, and organizational learning foster enduring resilience and agility.

The literature review commences by outlining the theoretical underpinnings of dynamic capabilities, examining two principal theories: the Resource-Based View (RBV) and the Dynamic Capabilities Framework. These theories function as conceptual foundations, directing the comprehension of how distinctive resources and flexible skills enable businesses to achieve enduring competitive advantage and proficient crisis management.

2.2 Theoretical Foundation of Dynamic Capabilities in Crisis Preparedness and Agility

2.2.1 Resource-Based View (RBV)

The Resource-Based View (RBV) is a fundamental framework for analyzing the role of internal resources in fostering an organization's competitive advantage and resilience (Barney, 1991). The Resource-Based View (RBV) argues that businesses possess a unique collection of valuable, rare, inimitable, and non-substitutable (VRIN) resources that determine their capacity to surpass competitors. Barney (2018) asserts that these resources encompass both concrete assets, like financial reserves and physical infrastructure, and intangible assets, such as reputation and organizational culture.

The Resource-Based View (RBV) has been widely utilized in research on organizational resilience, especially in examining how companies can exploit distinctive resources to endure disruptions (Wernerfelt, 2019). The Resource-Based View (RBV) highlights the necessity for strong internal resources in SMMEs to enable adaptive responses, as small businesses frequently encounter difficulties in obtaining external support, including finance and government aid (Roberts & Bea, 2020).

Recent studies demonstrate that the Resource-Based View (RBV) can be utilized to analyze how financial flexibility, as a VRIN resource, empowers businesses to deploy resources rapidly during crises (Roberts & Bea, 2020). Intangible assets like as technology expertise and adaptive leadership can serve as resilience catalysts, reinforcing the notion that dynamic capabilities based on distinctive resources facilitate effective crisis management (Anderson et al., 2020).

In small and medium-sized enterprises, which often lack the scale and resources of bigger firms, the identification and utilization of VRIN resources becomes increasingly essential. Financial flexibility serves as a strategic asset enabling SMMEs to adjust their operations in reaction to external shocks, therefore alleviating the effects of crises (Zahra, 2019). Furthermore, technology adoption, propelled by organizational adaptation, is another VRIN skill that enhances resilience by enabling remote work, digital transactions, and consumer involvement during disruptions (Pearson & Clair, 2020).

2.2.2 Dynamic Capabilities Framework

The Dynamic Capabilities Framework, proposed by Teece et al. (1997), builds on the Resource-Based View by highlighting an organization’s capacity to integrate, develop, and reconfigure internal and external competences in response to dynamically evolving surroundings. In contrast to the Resource-Based View, which is comparatively static, the Dynamic Capabilities Framework is fundamentally adaptive, seeking to better understand how companies sustain competitiveness by perpetually modifying their resources in reaction to external changes (Teece, 2018).

Dynamic capacities are defined by three core activities: identifying opportunities and threats, capitalizing on opportunities, and reallocating resources (Teece, 2018). Sensing entails the identification of alterations in the external environment, such variations in client requirements or technical progressions. Seizing denotes the organization's ability to leverage these changes, frequently necessitating swift investment or strategy realignment. Reconfiguring

refers to the capacity to reorganize resources efficiently, hence maintaining competitiveness and adaptability.

In the realm of SMMEs, which frequently encounter rapid market fluctuations and resource constraints, dynamic capabilities are essential for agility and resilience. Research conducted by Wang et al. (2020) and others highlights that the capacity of SMMEs to perceive and react to external disruptions significantly affects their survival in times of crisis. Dynamic skills, including technology adaptation, enable organizations to rapidly rearrange procedures to facilitate remote work or digital sales, thus sustaining operations amid crises (Pearson & Clair, 2020).

The application of the Dynamic Capabilities Framework to SMMEs underscores the significance of financial flexibility, technological adaptation, and leadership in establishing an effective crisis management framework. Financial flexibility is seen as a dynamic capability that enhances organizational resilience by enabling the firm to rapidly reallocate resources in response to variable demands or unexpected expenses (Zahra, 2019). Furthermore, transformational leadership cultivates an adaptive organizational culture, motivating employees to accept change and pursue innovative solutions to issues (Anderson et al., 2020).

The Dynamic Capabilities Framework offers a systematic method for analyzing the internal processes that enable SMMEs to attain resilience and agility, especially in crisis-prone contexts. Dynamic capabilities facilitate the ongoing transformation of resources, allowing SMMEs to maintain competitive advantage and react to anticipated and unforeseen changes, which is essential for businesses functioning in today's unpredictable marketplaces.

2.3 Dynamic Capabilities as Enablers of Organizational Agility and Resilience

Dynamic capabilities are crucial for fostering organizational agility and resilience in SMMEs. In the face of unparalleled unpredictability and change, dynamic capabilities empower firms to adapt to market conditions, foster innovation, and protect against disruptions (Teece, 2018). The importance of these qualities is especially apparent in SMMEs, where limited resources require a substantial level of adaptability (Barney, 2020). This section examines four principal dynamic capabilities pertinent to the improvement of agility and crisis preparedness: Financial Flexibility, Technological Adaptability, Transformational Leadership, and Organizational Learning and Knowledge Sharing.

2.3.1 Financial Flexibility

Financial flexibility, characterized as the organization's ability to rapidly reallocate and access funds, is an essential asset that enhances both agility and crisis resilience (Roberts & Bea, 2020). During crises, companies with enhanced financial flexibility can swiftly address emerging needs by reallocating resources, obtaining emergency funding, or postponing capital investments (Anderson et al., 2020). Research indicates that financially flexible organizations may rapidly adjust their strategy and withstand shocks with minimal damage, highlighting the importance of adaptable funding in maintaining operations during crises (Pearson & Clair, 2020).

For small, medium, and micro enterprises, financial flexibility provides a safeguard against cash flow interruptions prevalent during economic recessions (Zahra, 2019). In contrast to large businesses possessing substantial assets or varied revenue sources, SMMEs generally depend on short-term cash flow, rendering financial flexibility crucial for their survival (Wang et al., 2020). Consequently, it serves not merely as a dynamic capability but as an essential element of resilience, enabling SMMEs to adjust their financial plans in reaction to crises while maintaining long-term objectives.

Research indicates that financial flexibility enhances agility by allowing organizations to engage in emerging technologies or market possibilities as they become available (Barney, 2020). Financial flexibility facilitates prompt decisions about resource allocation, allowing firms to innovate and adapt to changing market needs, so improving their capacity to manage routine obstacles and major disruptions.

2.3.2 Technological Adaptation

Technological adaptation denotes an organization's ability to integrate new technologies into established frameworks to enhance efficiency, adaptability, and innovation (Pearson & Clair, 2020). The swift progression of technology and the growing digitization of markets necessitate technological adaptation for organizational agility (Teece, 2018). Digital transformation enables firms to improve customer engagement, optimize processes, and access new markets, thereby augmenting their capacity to respond rapidly to environmental shifts.

Technological adaptation improves agility and crisis preparedness for SMMEs by facilitating the implementation of remote work models, e-commerce solutions, and digital communication tools (Anderson et al., 2020). During crises like the COVID-19 epidemic, companies who promptly embraced technology were more capable of sustaining operations and adjusting to

evolving consumer behaviors. Furthermore, by investing in digital infrastructure, SMMEs can enhance their operational resilience, ensuring business continuity even in constrained circumstances (Wang et al., 2020).

Research highlights the significance of technology adaptation in promoting long-term resilience. Through the utilization of data analytics, SMMEs can improve their comprehension of market trends, enabling them to anticipate demand variations and proactively modify operations (Roberts & Bea, 2020). Thus, technology adaptation facilitates quick crisis response while establishing a basis for enduring adaptability and competitive advantage.

2.3.3 Transformational Leadership

Transformational leadership, defined by its emphasis on inspiring and persuading employees to accept change, is a crucial dynamic capability that enhances resilience and agility inside organizations (Barney, 2020). Transformational leaders promote creativity, adaptability, and a proactive problem-solving mindset, fostering a culture that facilitates rapid strategic and operational modifications (Pearson & Clair, 2020). Transformational leadership can be pivotal for SMMEs in navigating crises by cultivating a collective vision and a mindset of resilience.

Transformational leadership correlates with increased employee engagement, innovation, and organizational commitment, all of which enhance the organization's agility (Wang et al., 2020). This leadership style fosters an environment where employees are encouraged to provide ideas and adjust to evolving circumstances, essential for sustaining flexibility and responsiveness.

In disaster preparedness, transformational leaders are essential for establishing clear priorities, mobilizing resources, and fostering cross-functional collaboration. Effective communication of a definitive crisis response strategy enables leaders to diminish ambiguity, mitigate employee fear, and strengthen the organization's dedication to resilience (Anderson et al., 2020). Research indicates that transformational leadership enhances learning, as leaders who promote open communication and reflective practices allow teams to assess their crisis reactions and implement necessary modifications (Zahra, 2019).

2.3.4 Organizational Learning and Knowledge Sharing

Organizational learning and information dissemination are essential for cultivating resilience and enhancing agility in SMMEs (Roberts & Bea, 2020). By sharing knowledge, organizations can enhance collective expertise, promote the dissemination of best practices, and refine

decision-making in times of crisis. Organizational learning, characterized as the ability to absorb, analyze, and utilize knowledge, empowers organizations to enhance their crisis response plans and prepare for impending disruptions.

Small, Medium, and Micro Enterprises (SMMEs) that emphasize knowledge sharing are more adept at responding to crises, as personnel across all levels possess the requisite skills and information to adjust rapidly to changes (Anderson et al., 2020). This capability enhances agility by facilitating the unobstructed flow of information within the company, minimizing decision-making delays and augmenting responsiveness to environmental changes. Studies demonstrate that knowledge-sharing techniques, including cross-departmental training and collaborative problem-solving, enhance agility by cultivating an informed workforce adept at tackling complex difficulties (Pearson & Clair, 2020).

Additionally, organizational learning fosters resilience through the facilitation of ongoing enhancement. By analyzing past crisis responses and pinpointing areas for improvement, SMMEs can modify their strategy to alleviate the effects of future crises (Wang et al., 2020). This iterative process of learning, adjusting, and enhancing strengthens organizational agility, guaranteeing that companies can sustain competitiveness and resilience in unpredictable environments.

2.4 The Role of Agility and Crisis Preparedness in SMMEs

In the increasingly unstable business landscape, organizational agility and crisis preparedness are essential for SMMEs seeking resilience and continuity. Agility and preparation enable firms to swiftly adapt to market fluctuations and unexpected catastrophes (Teece, 2018). Given that these structures are frequently interconnected with dynamic capabilities, comprehending their function in enhancing resilience offers additional understanding of how SMMEs might sustain competitive advantage during disruptions (Roberts & Bea, 2020). The subsequent sections examine agility and crisis preparedness in relation to SMMEs, the interconnections between these concepts, and the circumstances that bolster organizational resilience.

2.4.1 Organizational Agility in SMMEs

Organizational agility is described as the capacity of an organization to promptly and efficiently perceive, react to, and leverage changes in the external environment (Pearson & Clair, 2020). Agility is crucial for SMMEs due to constrained resources, requiring rapid adaptation for survival and success (Barney, 2020). Research highlights that agility in small and medium-sized enterprises (SMMEs) is characterized by adaptable decision-making, swift innovation,

and the capacity to reorganize operations in response to evolving market conditions (Teece, 2018). These agile methodologies empower organizations to capitalize on emerging possibilities, maintain growth, and reduce risks.

In crisis scenarios, agility enhances SMMEs' capacity to adjust their plans and modify operations in real-time (Anderson et al., 2020). During the COVID-19 pandemic, numerous small and medium-sized enterprises exhibited adaptability by utilizing digital platforms, introducing new services, or modifying their business models to align with changing consumer needs (Wang et al., 2020). Agility functions as a strategic facilitator, augmenting companies' ability to maintain competitiveness under volatile conditions.

Agility fosters continual learning inside businesses by promoting experimentation and adaptation. Studies indicate that agile firms are more inclined to implement reflective practices, utilizing insights from previous experiences to enhance their strategy (Zahra, 2019). This competence corresponds with dynamic capabilities, emphasizing the significance of adaptation, creativity, and rapid decision-making in SMMEs as they pursue resilience.

2.4.2 Crisis Preparedness and Resilience in SMMEs

Crisis preparedness denotes an organization's proactive strategies to foresee, equip for, and alleviate the effects of disasters. Crisis preparedness for SMMEs entails formulating contingency plans, allocating emergency resources, and cultivating a crisis-resilient culture (Roberts & Bea, 2020). Preparedness allows SMMEs to diminish susceptibility and improve recovery speed, establishing it as a fundamental element of organizational resilience (Barney, 2020).

Research indicates that crisis preparedness in small and medium-sized enterprises typically encompasses techniques including financial planning, risk assessment, and crisis communication (Pearson & Clair, 2020). In times of disruption, readiness provides businesses with the frameworks needed to mitigate interruptions, maintain critical operations, and efficiently allocate resources (Teece, 2018). Firms that preserved financial reserves, diversified supply chains, and instituted risk management procedures demonstrated enhanced resilience during the COVID-19 pandemic (Anderson et al., 2020).

Alongside offering rapid crisis management, readiness enhances the organization’s adaptive capacity, crucial for enduring resilience. By promoting a culture of readiness, SMMEs develop a proactive stance toward risk management, urging employees to stay alert and react to

potential hazards (Wang et al., 2020). Crisis preparedness complements agility by offering a systematic method for managing disruptions, so improving the organization's capacity to endure both foreseeable and unforeseen crises.

2.4.3 The Relationship Between Agility and Crisis Preparedness

The interplay between agility and crisis preparedness is synergistic, as both elements augment an organization's resistance to disruptions (Zahra, 2019). Agility affords the necessary flexibility for rapid adaptation, whereas crisis preparedness supplies the structures for methodical disaster response (Barney, 2020). Collectively, these frameworks empower SMMEs to endure upheavals and seize emerging opportunities in adverse conditions.

Agility enhances preparation by promoting ongoing learning and adaptation, hence refining crisis response techniques over time (Teece, 2018). An agile firm can swiftly recognize emerging threats or possibilities, necessitating modifications to its readiness strategies. Conversely, readiness augments agility by providing companies with the necessary resources and strategies to respond rapidly to crises, hence minimizing the time needed for decision-making and resource mobilization during disruptions (Roberts & Bea, 2020).

The interplay between agility and preparedness is essential for SMMEs, as resource limitations hinder their ability to endure extended interruptions (Anderson et al., 2020). This link highlights the necessity for a cohesive strategy to resilience, wherein agility and preparedness are developed as fundamental organizational competencies. Research indicates that SMMEs demonstrating higher agility and preparedness achieve enhanced performance during crises, as they can swiftly change while ensuring operational continuity (Wang et al., 2020).

2.5 Dynamic Capabilities and Their Role in SMMEs' Resilience

Dynamic capabilities denote an organization's capacity to intentionally develop, improve, or adapt its resource base in reaction to rapidly changing environments (Teece, 2018). Dynamic capabilities are crucial for SMMEs, which function with constrained resources, to establish resilience and competitive advantage (Roberts & Bea, 2020). Dynamic capabilities facilitate enterprises' adaptation and innovation, enhancing SMMEs' ability to manage external disruptions and maintain growth in volatile markets. This section examines key dynamic capabilities pertinent to SMMEs, specifically Financial Flexibility, Technological Adaptation, Transformational Leadership, and Supply Chain Resilience, and analyzes their contributions to organizational resilience.

2.5.1 Financial Flexibility as a Dynamic Capability

Financial flexibility, defined as an organization's capacity to mobilize and deploy financial resources in response to evolving circumstances, is an essential dynamic characteristic for resilience (Anderson et al., 2020). For SMMEs, financial flexibility facilitates swift adaptations to market fluctuations and crises by offering the resources necessary to implement strategic modifications, like supply chain diversification, technological investments, or operational scale (Wang et al., 2020). Studies indicate that companies with greater financial flexibility are more adept at managing crisis-related expenses and modifying their business models as necessary (Zahra, 2019).

In the realm of SMMEs, financial flexibility encompasses the creation of reserve money, the optimization of cash flow management, and the preservation of access to credit lines (Barney, 2020). During the COVID-19 pandemic, financially adaptable SMMEs managed to alleviate interruptions by utilizing reserves, obtaining emergency finances, or leveraging credit to sustain operations despite revenue declines (Roberts & Bea, 2020). Financial flexibility enables firms to endure crises and capitalize on opportunities, such as market expansion or innovation investment during economic downturns.

Efficient financial flexibility is achieved by adaptive financial planning and strong cash management techniques, allowing organizations to proactively address financial risks (Pearson & Clair, 2020). For SMMEs, fostering financial flexibility as a dynamic capability enhances their resilience by securing the financial stability required to endure extended interruptions and by enabling decision-makers to implement resource-intensive modifications as necessary.

2.5.2 Technological Adaptation as a Dynamic Capability

Technological adaptation denotes an organization's capacity to accept, integrate, and utilize new technologies to improve operational efficiency, customer engagement, and market competitiveness (Wang et al., 2020). For small and medium-sized enterprises, technological adaptation is an essential dynamic capacity, facilitating swift responses to changes in market demands, operational interruptions, and new business models (Teece, 2018). During a crisis like the COVID-19 pandemic, SMMEs who embraced technology adaptation were more adept at adjusting their operations, implementing remote work solutions, and enhancing their online presence, so preserving continuity and relevance (Anderson et al., 2020).

Research highlights the significance of technology adaptation by correlating digital transformation with increased agility and resilience (Roberts & Bea, 2020). Small, Medium,

and Micro Enterprises (SMMEs) possessing robust digital infrastructure are more adept at adopting new solutions, including e-commerce, digital marketing, and supply chain analytics, hence improving their responsiveness to external environmental changes (Pearson & Clair, 2020). By cultivating a culture of perpetual learning and technical transparency, SMMEs may guarantee their adaptability and responsiveness to technological developments that influence business sustainability.

Moreover, technology adaptation enables SMMEs to enhance their market reach and operational scalability by dismantling conventional geographical and operational constraints (Zahra, 2019). This potential is especially beneficial for small, medium, and micro enterprises in emerging countries, as digital transformation can equalize opportunities and improve competitiveness versus larger, resource-abundant organizations (Barney, 2020). Consequently, technological adaptation not only facilitates crisis management but also enhances long-term resilience and growth for small, medium, and micro enterprises (SMMEs).

2.5.3 Transformational Leadership as a Dynamic Capability

Transformational leadership is a dynamic capability that focuses on encouraging and motivating individuals to adopt change, foster innovation, and dedicate themselves to organizational objectives (Pearson & Clair, 2020). This leadership style is especially appropriate for SMMEs, as leaders frequently influence corporate culture and facilitate transformation (Teece, 2018). Transformational leaders promote proactive problem-solving and flexibility, crucial for cultivating resilience in SMMEs confronting tumultuous situations.

Research demonstrates that transformational leaders enhance organizational agility and preparedness by cultivating a culture of creativity, dedication, and adaptability (Anderson et al., 2020). In times of crisis, such as the COVID-19 pandemic, transformational leaders in SMMEs effectively navigated their organizations through uncertainty by uniting employees around a common vision, fostering collaborative decision-making, and empowering teams to adjust operational practices as necessary (Zahra, 2019). This talent is crucial for bolstering resilience, since it motivates employees to align with company objectives and actively participate in crisis response initiatives.

Transformational leadership also supports dynamic capabilities by fostering an environment that values continuous improvement and strategic foresight (Barney, 2020). Transformational leaders foster a proactive mindset, enabling their businesses to foresee and address impending difficulties, thus enhancing resilience. This leadership approach, which integrates

flexibility with a focus on innovation, enables SMMEs to not only endure crises but also to emerge more resilient and competitive.

2.5.4 Supply Chain Resilience as a Dynamic Capability

Supply chain resilience denotes an organization's capacity to adjust its supply chain activities in reaction to unexpected events, hence maintaining supply continuity and operational stability (Sheffi, 2020). For small, medium, and micro enterprises (SMMEs), which frequently possess constrained supplier networks and reduced logistical capabilities, the establishment of supply chain resilience is crucial for sustaining competitive advantage and ensuring crisis preparedness (Ivanov & Dolgui, 2019). The COVID-19 pandemic underscored the essential importance of supply chain resilience, prompting numerous organizations to reevaluate and fortify their supply chain strategy due to disruptions in sourcing and delivery (Wang & Wei, 2021).

Integrating supply chain resilience as a dynamic capability enables SMMEs to adopt flexibility in their procurement and logistical operations. Methods including supplier diversification, creating alternate sourcing strategies, and investing in technology for supply chain transparency help mitigate the effects of external disruptions on operations (Christopher & Peck, 2018). Research indicates that firms exhibiting significant supply chain resilience are more adept at addressing unexpected interruptions and safeguarding essential company operations (Tang, 2020).

Additionally, supply chain resilience enables SMMEs to adjust to fluctuating market demands and mitigate susceptibility to localized interruptions. This capability offers the flexibility required to adapt to supplier shortages or delays, assisting organizations in preserving customer satisfaction and operational continuity (Ivanov & Dolgui, 2019). Enhancing supply chain resilience is essential to the overarching strategy of organizational resilience, enabling SMMEs to sustain competitiveness in a turbulent market landscape.

2.5.5 The Interplay Between Dynamic Capabilities and Organizational Agility

The correlation between dynamic capabilities and organizational agility is crucial for comprehending how SMMEs can sustain competitiveness and resilience in swiftly evolving environments (Wilden et al., 2019). Organizational agility refers to the capacity to rapidly adapt to market fluctuations, utilizing competencies that provide proactive modifications to operational and strategic frameworks (Doz & Kosonen, 2020). Dynamic capabilities, including financial flexibility, technology adaptability, transformational leadership, and supply chain

resilience, constitute the foundation of an agile firm by improving its responsiveness to external challenges.

Academics contend that agility enables firms to seize emerging possibilities and alleviate the dangers linked to disruptive occurrences (Wang et al., 2020). For SMMEs, organizational agility stemming from dynamic capabilities enables enterprises to rapidly reallocate resources, reorganize processes, and adjust strategy in response to evolving market conditions. Studies indicate that organizations exhibiting high agility are more capable of enduring market fluctuations, so setting themselves favorably for growth when stability is restored (Roberts & Bea, 2020).

The interplay between dynamic capacities and agility is crucial for SMMEs, which must utilize their reduced scale and intrinsic flexibility to effectively address disruptions (Teece, 2018). Consequently, fostering dynamic capabilities enhances agility by facilitating a proactive approach to change management, rather than a reactive one. This interplay fosters the creation of a flexible business model, wherein resilience and agility act as complementary components within the company's strategic framework.

2.5.6 Dynamic Capabilities and Crisis Preparedness in SMMEs

The enhancement of crisis preparedness in SMMEs is substantially achieved through the cultivation of dynamic capabilities, which furnish the necessary structural and strategic support to address unforeseen difficulties (Lengnick-Hall & Beck, 2019). Effective crisis preparedness encompasses contingency planning, emergency protocols, and robust infrastructure, enabling SMMEs to maintain operations during disruptions (Bowers et al., 2020). Dynamic capabilities enhance crisis readiness by providing organizations with the necessary instruments to navigate crises strategically instead of reactively.

Studies indicate that companies possessing strong dynamic capabilities are more adept at foreseeing impending crises and preparing accordingly (Sheffi, 2020). Financial flexibility enables enterprises to pre-allocate emergency cash, technical adaptability facilitates distant operations and continuity, and supply chain resilience guarantees availability to essential resources. These capabilities enable SMMEs to develop extensive crisis management frameworks that correspond with their operational capacities and risk tolerance (Doz & Kosonen, 2020).

In addition, cultivating these competencies fosters an organizational culture that emphasizes disaster preparedness, consequently enhancing morale and aligning personnel with common resilience objectives (Lengnick-Hall & Beck, 2019). Dynamic capabilities constitute the basis

of effective crisis preparedness, allowing SMMEs to endure interruptions, maintain their market position, and secure organizational assets during adversity.

2.5.7 Financial Flexibility and Organizational Resilience

Financial flexibility is an essential element of organizational resilience, particularly for small, medium, and micro enterprises (SMMEs) functioning in unpredictable contexts (Girod & Whittington, 2017). This competence enables businesses to manage financial resources effectively, diminish debt loads, and sustain liquidity factors that are crucial for crisis preparedness (Wang et al., 2019). In unpredictable markets, financial flexibility allows enterprises to adapt their plans, finance essential modifications, and maintain operations without incurring significant financial distress.

Recent literature underscores the significance of financial flexibility, with research demonstrating that financially adaptable enterprises exhibit greater resilience during economic downturns and market disruptions (Modigliani & Miller, 2019). Financial flexibility enhances organizational agility by supplying the requisite financial resources for swift adaptations and investments in innovative solutions. This competence allows SMMEs to effectively address both short-term disruptions and long-term market alterations, guaranteeing they can manage swings without sacrificing growth (Nguyen & Nguyen, 2020).

For SMMEs, attaining financial flexibility necessitates sensible cash flow management, sustaining accessible credit lines, and optimizing capital structure to facilitate adaptive investments (Luo & Chung, 2018). These financial practices enhance resilience by ensuring the business is equipped to address crises without turning to high-risk financial strategies, such as incurring excessive debt or cutting critical operations. Consequently, financial flexibility is integral to the resilience framework of SMMEs, allowing the enterprise to endure disturbances and recuperate more efficiently.

2.5.8 Technological Adaptation as a Pillar of Agility and Crisis Preparedness

Technological adaptation is essential for the agility and crisis preparation of SMMEs, enabling enterprises to sustain continuity and quickly respond to emerging disruptions (Yunis et al., 2018). Literature indicates that technical developments, such as digital transformation, augment organizational agility by enabling remote work, facilitating real-time data analysis, and enhancing customer relationship management (Chesbrough & Di Minin, 2020). The COVID-19 pandemic highlighted the significance of technology in maintaining operations, as

companies with digital competencies responded more swiftly to distant work and e-commerce requirements (McKinsey & Company, 2021).

Technological adaptation facilitates the creation of resilient business models by allowing enterprises to incorporate flexible solutions into their operations (Westerman et al., 2019). Cloud computing and data analytics enable companies to manage resources efficiently, anticipate future disruptions, and enhance supply chains. Studies demonstrate that companies emphasizing technology are more adept at crisis management and exhibit more competitiveness in swiftly evolving industries (Ritter & Pedersen, 2020).

In the realm of SMMEs, investment in technology not only improves crisis readiness but also cultivates an adaptive organizational culture that prioritizes innovation and responsiveness to external changes. Technology serves a dual function by ensuring operational continuity during crises and fostering an adaptable company environment capable of capitalizing on emerging market possibilities (Kane et al., 2019). This dual role highlights the critical importance of technical adaptation within the broader context of dynamic capabilities.

2.5.9 The Role of Leadership in Enhancing Organizational Agility and Resilience

Leadership is acknowledged as a fundamental element of dynamic capabilities, directly affecting organizational agility and resilience (Boin et al., 2020). Effective leadership cultivates a culture of creativity and adaptation, enabling employees to address changes and engage in problem-solving amid crises (Northouse, 2018). Transformational leadership has been associated with enhanced organizational resilience by fostering a proactive crisis management approach and cultivating a culture that prioritizes adaptability and continuous development (Bass & Avolio, 2019).

Leaders at small and medium-sized enterprises are essential in guiding their firms through unstable environments by cultivating a unified vision, encouraging risk-taking, and establishing a culture of trust and resilience (Day & Dragoni, 2019). Leaders' proficiency in effective communication, employee motivation, and decisive crisis management profoundly influences an organization's agility and recovery capacity (Avolio et al., 2018). During the COVID-19 pandemic, enterprises led by transformational leaders who emphasized employee well-being and adaptability shown greater resilience (Dirani et al., 2020).

Furthermore, effective leadership is essential for the execution of dynamic capabilities, as leaders are tasked with resource allocation, investment in technical innovations, and the

cultivation of a culture that promotes learning and flexibility. Studies demonstrate that executives who comprehend and utilize dynamic capabilities, including financial flexibility and technology adaptation, are more proficient in steering their firms through disturbances (Wang et al., 2020). Consequently, leadership is a crucial element in cultivating and maintaining the dynamic qualities that allow SMMEs to attain agility and resilience.

2.5.10 Supply Chain Resilience in Enhancing Crisis Preparedness

Supply chain resilience is essential for crisis preparedness, especially for SMMEs, since it allows companies to adapt efficiently to disturbances while maintaining operational continuity (Pettit et al., 2019). Supply chain resilience entails the formulation of adaptable sourcing strategies, the diversification of supplier networks, and the incorporation of real-time monitoring systems to anticipate and address disturbances proactively (Sheffi & Rice, 2020). Recent research demonstrates that supply chain resilience not only alleviates the effects of crises but also improves agility by enabling enterprises to swiftly adjust to evolving market conditions (Ivanov & Dolgui, 2020).

Research on supply chain resilience highlights the significance of visibility, collaboration, and contingency planning as critical components for maintaining operations during crises (Christopher & Peck, 2019). Supply chain resilience is particularly crucial for SMMEs due to their low resources and frequent dependence on a narrow network of suppliers. Disruption of this network can severely impact the firm's operations, highlighting the necessity for a robust supply chain that facilitates adaptability and swift recovery (Revilla & Saenz, 2017).

Supply chain resilience fosters organizational learning, enabling organizations to consistently evaluate their supply chain vulnerabilities and develop capacities to successfully mitigate them (Tang, 2018). The incorporation of resilience techniques into the supply chain allows SMMEs to foresee and address interruptions, enhancing their crisis readiness and mitigating the risk of prolonged operational setbacks.

2.5.11 Adaptability and Resource Reallocation as Drivers of Organizational Agility

Adaptability and efficient resource reallocation are essential for attaining organizational agility, especially amid unpredictable market dynamics and crises (Teece et al., 2016). Adaptability allows SMMEs to reallocate their resources, competencies, and strategies to meet evolving demands, ensuring the business remains responsive and competitive (Winter, 2017). Research indicates that companies exhibiting strong adaptability can promptly realign

resources, restructure operations, and innovate procedures, hence enhancing resilience (Eisenhardt & Martin, 2019).

The capacity to reallocate resources be they financial, human, or technological affords SMMEs the flexibility to prioritize key operations, reduce non-essential services, and direct funding towards crisis response initiatives (Barreto, 2019). The ability to reallocate resources is essential for organizational agility, enabling organizations to adapt rapidly to changes without incurring significant costs or operational inefficiencies. Research indicates that companies adept at swift resource reallocation are more likely to manage crises successfully, preserving stability while adjusting to changing market dynamics (Blyler & Coff, 2018).

For small, medium, and micro enterprises (SMMEs), adaptability and resource reallocation are interlinked with other dynamic skills, including financial flexibility and technical adaptation. Collectively, these competencies establish an operational framework that facilitates both crisis management and enduring resilience (Helfat & Peteraf, 2020). Research indicates that SMMEs that emphasize adaptation are more capable of managing market volatility, regulatory alterations, and competitive challenges, hence enhancing their resilience to both expected and unforeseen shocks.

2.5.12 Strategic Partnerships and Alliances as Resilience Enablers

Strategic partnerships and alliances are crucial for bolstering resilience in SMMEs by facilitating access to resources, expertise, and markets that may be difficult to get independently (Inkpen & Tsang, 2019). Collaborations, particularly with larger firms, financial institutions, or governmental entities, can provide SMMEs with enhanced support during crises, encompassing access to capital, supply chain options, and technology resources (Dyer & Singh, 2018). Research demonstrates that companies with strong partnerships are more effectively equipped to alleviate the effects of crises owing to their enhanced resource pool and cooperative support networks (Lavie, 2019).

Research indicates that strategic partnerships enhance resilience through the facilitation of information sharing and innovation, which are crucial for crisis adaptation and sustaining competitive advantage (Zaheer & Bell, 2020). By forming alliances, SMMEs can exchange best practices, utilize sophisticated technology, and collaborate on problem-solving initiatives, thereby enhancing their overall readiness and capacity to recover from disruptions (Gulati & Nickerson, 2018). During the COVID-19 pandemic, companies with established partnerships effectively utilized their networks for supply, knowledge, and other essential resources, enhancing their resilience in contrast to isolated enterprises (Ahuja et al., 2021).

Strategic relationships correspond with the Resource-Based View (RBV) by allowing SMMEs to enhance their internal resources with external competencies, therefore establishing a more resilient framework for crisis management (Barney, 2019). These alliances not only improve immediate crisis management but also cultivate long-term resilience by establishing inter-organizational support structures that companies can depend on during future crises.

2.5.13 Organizational Learning and Continuous Improvement in Crisis Preparedness

Organizational learning and continual development have become essential factors for augmenting crisis preparation in SMMEs. Organizational learning entails the systematic acquisition, interpretation, and dissemination of information inside an organization, enhancing adaptation and responsiveness (Argote & Miron-Spektor, 2019). In the realm of crisis preparedness, organizational learning allows SMMEs to extract insights from previous crises, execute remedial measures, and formalize best practices that enhance resilience (Fiol & Lyles, 2020).

The literature indicates that continuous improvement procedures promote a proactive crisis management strategy by fostering regular evaluations of vulnerabilities, enhancing crisis response techniques, and incorporating new technology (Senge, 2018). Through iterative learning and enhancement, SMMEs are more adept at recognizing early warning indicators and formulating resilient reaction frameworks. Companies that regularly conduct after-action evaluations and feedback loops during crises are more likely to improve their operational preparedness, thereby reducing the effects of future disruptions (Edmondson & Harvey, 2017).

Research indicates that organizational learning is interconnected with dynamic capabilities, as it improves the firm's capacity to reconfigure resources and align skills with the changing business environment (Crossan et al., 2019). Small, Medium, and Micro Enterprises (SMMEs) that emphasize ongoing learning and enhancement demonstrate greater preparedness, agility, and resilience, enabling them to manage intricate and evolving crisis situations more efficiently.

2.5.14 Leadership Agility and Crisis Decision-Making

Leadership agility, characterized as a leader's ability to render prompt and effective decisions under uncertainty, is crucial for crisis management in small and medium-sized enterprises (Joiner & Josephs, 2017). Leaders exhibiting significant agility may swiftly pivot, adjust plans, and allocate resources to address crises, so augmenting the organization’s overall resilience

(Yukl & Mahsud, 2019). The literature highlights that leadership agility enhances decision-making efficacy, allowing leaders to reconcile immediate crisis reactions with overarching strategy objectives (Heifetz et al., 2018).

Agile leadership in crisis management facilitates rapid evaluations of evolving situations, encourages cooperative problem-solving, and cultivates a resilient organizational culture (Denning, 2020). Agile leadership is essential for SMMEs because of their constrained resources and the need for swift adaptations in response to crises. Research indicates that agile leaders in small and medium-sized enterprises prioritize clear communication, encourage team adaptation, and facilitate an inclusive decision-making process, hence enhancing organizational resilience (Gibson & Birkinshaw, 2018).

Leadership agility in crisis decision-making corresponds with the tenets of transformational leadership, wherein leaders inspire and empower their people to attain shared objectives, even under adversity (Bass & Riggio, 2018). Transformational leaders in small, medium, and micro enterprises can enhance employees' dedication to crisis strategies, so augmenting both individual and organizational resilience. Leadership agility enhances prompt crisis responses and fortifies the organizational structure for ongoing crisis readiness.

2.5.15 Strategic Flexibility and Decision-Making Speed

Strategic flexibility denotes an organization's capacity to swiftly modify plans in reaction to evolving environmental circumstances (Hitt et al., 1998). The rapidity of decision-making enhances strategic flexibility by allowing companies to effectuate changes swiftly, a crucial characteristic in crisis situations where prompt reactions can alleviate harm (Eisenhardt, 1989). For small and medium-sized enterprises, strategic flexibility and swift decision-making are essential competencies that enable them to adapt to market shocks, resource limitations, or emerging opportunities during crises (Grewal & Tansuhaj, 2001).

Research indicates that SMMEs exhibiting significant strategic flexibility are more adept at implementing proactive crisis management techniques, enabling them to realign resources, modify supply chains, and reconfigure operational processes in response to crisis-induced alterations (Shimizu & Hitt, 2004). This competence also bolsters SMMEs' resilience by enabling them to adjust to prolonged changes in market conditions without sustaining substantial losses. The rapidity of decision-making, enhanced by a decentralized organizational framework, bolsters this adaptability by minimizing response time delays (Judge & Miller, 1991).

Research indicates that strategic flexibility, coupled with swift decision-making, allows SMMEs to sustain operational stability and competitive advantage, even under volatile conditions. Consequently, cultivating a culture that prioritizes flexibility and rapid decision-making strengthens the resilience and agility of SMMEs in times of crisis.

2.5.16 Strategic Decision-Making for Crisis Preparedness

Strategic decision-making is a crucial competency that affects an organization's agility and resilience. The capacity of SMMEs to execute prompt and informed strategic decisions can dictate their effectiveness in managing crises (Eisenhardt, 1989). Strategic decision-making entails risk assessment, evaluation of viable responses, and the selection of actions that correspond with company objectives and principles. By enhancing decision-making processes, SMMEs can adopt a more proactive stance in crisis management, enabling better responses to external disruptions (Mintzberg, 1973).

The literature emphasizes that strategic decision-making improves resilience by offering a systematic method for problem-solving and allowing organizations to swiftly adjust to evolving conditions (Eisenhardt & Zbaracki, 1992). This feature is particularly pertinent for SMMEs, since they frequently encounter resource limitations and must prioritize decisions that have the most impact. Strategic decision-making enhances agility by promoting a proactive outlook, enabling SMMEs to foresee prospective obstacles and opportunities instead of only responding to crises.

Aligned with the study's emphasis on dynamic capacities, strategic decision-making is essential for crisis preparedness, enabling SMMEs to reconcile immediate reaction requirements with long-term resilience objectives. Establishing a robust strategic decision-making framework enables SMMEs to possess the flexibility necessary to succeed in unstable situations.

2.5.17 Summary of Dynamic Capabilities for Agility and Resilience

This section consolidates the essential dynamic capabilities, financial flexibility, technological adaptation, transformational leadership, supply chain resilience, knowledge management, resource reallocation, organizational structure, and strategic decision-making relevant to the study's emphasis on improving agility and crisi preparedness in SMMEs. Collectively, these competencies establish a robust framework for comprehending how SMMEs may adequately prepare for and adeptly manage crises.

The literature continually emphasizes the significance of these qualities in cultivating an organizational culture that promotes learning, adaptability, and proactive crisis management (Teece et al., 1997). By incorporating these capabilities, SMMEs are more adept at withstanding interruptions, adjusting to evolving circumstances, and ensuring operational continuity. This integration closely correlates with the study's objective, which aims to investigate how dynamic capabilities empower SMMEs to improve agility and resilience. This literature study highlights the importance of these talents in establishing a strong basis for the crisis management and adaption strategies of SMMEs.

2.6 Theoretical Framework for Dynamic Capabilities in SMMEs

This study synthesizes the relationship between dynamic capabilities and the goals of agility and crisis preparedness by employing a theoretical framework that incorporates the Resource-Based View (RBV), Contingency Theory, and the Dynamic Capabilities Framework. These theories offer complementary viewpoints for comprehending how SMMEs can utilize internal strengths to respond to external obstacles.

2.6.1 Resource-Based View (RBV)

The Resource-Based View (RBV) asserts that an organization's competitive advantage derives from its distinctive resources and capabilities (Barney, 1991). In the realm of SMMEs, resources including proficient personnel, financial assets, and distinctive technology constitute the foundation of resilience and agility. By utilizing these resources, SMMEs can distinguish themselves from competitors and efficiently address disturbances (Wernerfelt, 1984). This study utilizes the Resource-Based View (RBV) to highlight the significance of internal resource allocation in attaining sustained disaster preparedness.

2.6.2 Contingency Theory

Contingency Theory posits that organizational efficiency depends on the alignment between internal capabilities and external environmental conditions (Lawrence & Lorsch, 1967). In crisis situations, the extent to which SMMEs synchronize their internal plans with external forces influences their agility and resilience. This alignment is accomplished by dynamically reorganizing capacities according to the characteristics and requirements of the situation. This study examines the responsiveness of SMMEs, utilizing Contingency Theory to elucidate how these enterprises might implement context-specific tactics to improve agility.

2.6.3 Dynamic Capabilities Framework

The Dynamic Capabilities Framework highlights an organization's capacity to adapt, integrate, and rearrange resources in reaction to evolving surroundings (Teece et al., 1997). This paradigm is directly applicable to SMMEs as it underscores the necessity of constant learning and adaptation to maintain competitiveness and resilience. Through the cultivation of dynamic capacities, SMMEs equip themselves to adeptly navigate both foreseeable and unforeseen difficulties, thereby augmenting their readiness and agility.

2.7 Synthesis of Literature and Identification of Gaps.

This study emphasizes that, although substantial research on dynamic capabilities is available, the majority of studies concentrate on larger organizations, with insufficient attention given to the use of these capabilities in small, medium, and micro enterprises (SMMEs) within emerging markets. The distinct problems and resource limitations encountered by SMMEs in these situations require customized resilience methods, which are inadequately covered in the existing literature (Munongo & Pooe, 2022).

Although financial flexibility, technology adaptability, and leadership are crucial for improving resilience, empirical research on their collective impact on agility and crisis preparedness in small, medium, and micro enterprises (SMMEs) is insufficient. This gap highlights the necessity for research aimed at finding certain dynamic qualities that enhance resilience in small firms, especially in volatile markets.

Additionally, although the Dynamic Capabilities Framework and Resource-Based View are well-established theoretical perspectives, there exists a potential to investigate their practical implementation inside Small, Medium, and Micro Enterprises to yield actionable insights for managers and policymakers.

2.9 Conclusion

This literature analysis provides a thorough understanding of the function of dynamic capabilities in improving organizational agility and crisis preparedness in SMMEs. The results demonstrate that financial flexibility, technical adaptation, transformational leadership, supply chain resilience, and strategic decision-making are essential competencies that combined empower SMMEs to adeptly maneuver through volatile circumstances. The theoretical underpinnings of Resource-Based View (RBV), Contingency Theory, and the Dynamic

Capabilities Framework offer significant insights into the role of these capabilities in fostering resilience.

This analysis identifies significant gaps in the current literature, underscoring the necessity for additional research on SMMEs in emerging countries, and emphasizes the importance of resilience measures tailored to the distinct problems faced by these firms. The following chapters will expand on these findings to examine the influence of dynamic capabilities on agility and crisis readiness through empirical analysis, offering practical advice for SMME leaders to enhance resilience in unstable environments.

Chapter 3: Research Questions and Hypotheses

This chapter defines the research objective by specifying certain research questions and hypotheses intended to investigate the impact of dynamic capabilities on organizational agility and crisis preparedness in Small, Medium, and Micro Enterprises (SMMEs). This chapter, informed by the literature examined in Chapter Two, establishes specific hypotheses and research questions to investigate the correlation between these capabilities and resilience in SMMEs. The hypotheses will direct the empirical study in Chapter Five, adhering to the methodological framework established in Chapter Four.

3.1 Research Questions

This study aims to investigate the influence of dynamic capabilities on improving organizational agility and crisis preparedness in small, medium, and micro enterprises (SMMEs). The subsequent study questions are derived from the literature review and establish a basis for examining the influence of particular dynamic talents on resilience.

Research Question 1: What are the primary dynamic capabilities that enhance organizational agility and crisis readiness in SMMEs?

Dynamic characteristics, including financial flexibility, technology adaptation, leadership, and organizational learning, are recognized in the literature as essential facilitators of resilience. This question aims to ascertain the capabilities that are important for SMMEs to maintain agility and readiness for emergencies.

Research Question 2: How do these dynamic capabilities impact the capacity of SMMEs to effectively respond to and recover from crises?

These research questions establish a framework for analyzing the dynamic capabilities that enhance organizational agility and crisis preparedness. They also enable an examination of how these capabilities enhance SMMEs' resilience and their capacity to adapt adeptly in turbulent circumstances.

3.2 Hypotheses

Hypotheses H1: Agility-Enhancing Dynamic Capabilities positively influence organizational agility.

Research on dynamic capabilities and organizational agility indicates that entities possessing

agility-enhancing attributes such as rapid decision-making, resource reconfiguration, and adaptability to environmental fluctuations are more likely to sustain a competitive advantage in rapidly changing markets (Teece, 2018).

Agility is particularly vital in SMMEs because of their constrained resources and heightened susceptibility to market upheavals (Wilden et al., 2016). Recent studies indicate that agility-enhancing capabilities enable SMMEs to swiftly adapt to changes, optimize operations, and enhance operational efficiencies, hence augmenting organizational agility (Clauss et al., 2019; Sahi et al., 2020).
Consequently, H1 asserts that SMMEs possessing advanced agility-enhancing capabilities are likely to exhibit heightened organizational agility.

Hypotheses H2: Crisis-preparedness enhancing dynamic capabilities positively influence crisis preparedness.

Crisis preparedness denotes an organization's capacity to respond adeptly to unexpected and potentially disruptive occurrences. Researchers assert that crisis-enhancing capabilities such as effective communication protocols, stakeholder involvement, and targeted crisis training are essential for fostering resilience and maintaining continuity during crises (Bundy et al., 2017).

Williams et al. (2017) contend that businesses possessing robust stakeholder relationship management capabilities exhibit greater resilience, as they can effectively collaborate with partners to alleviate adverse effects during crises. Furthermore, research indicates that crisis training and resource distribution enhance preparedness by improving employees' readiness and response efficacy (Bowers et al., 2017; Park et al., 2019). Thus, H2 posits that SMMEs possessing robust crisis-enhancing capacities exhibit superior crisis readiness.

Hypotheses are constructed to examine the relationships between dynamic capabilities (independent variables) and organizational agility and crisis readiness (dependent variables), in accordance with the study goals. These ideas are based on contemporary theoretical frameworks and empirical evidence in literature as discussed in Chapter 2.

Summary of Chapter 3

In summary, this chapter has outlined the research questions and hypotheses, grounded in current literature, that will guide the empirical investigation. The initial hypothesis (H1) posits

a positive correlation between agility-enhancing dynamic capabilities and organizational agility. The second hypothesis (H2) posits a positive correlation between crisis-enhancing dynamic capabilities and crisis readiness. These assumptions establish a basis for evaluating the role of dynamic capabilities in fostering resilience and agility within SMMEs.

Chapter Four will delineate the research methodology, specifying the data collecting and analysis techniques employed to examine these hypotheses. Subsequently, Chapter Five will present the empirical analysis, evaluating the hypotheses using quantitative methodologies. These chapters together seek to provide evidence on how small and medium-sized enterprises might utilize dynamic capabilities to adeptly manage crises, hence enhancing the understanding of resilience in such enterprises.

Chapter 4: Research Methodology

4.1 Introduction

This chapter seeks to clarify and substantiate the research methods employed to investigate the dynamic capabilities that bolster organizational agility and crisis preparedness in Small, Medium, and Micro Enterprises (SMMEs). This study's methodology encompassed the selection of research design, philosophical viewpoint, methodological approach, data gathering methodologies, and analytical methods. This chapter also discusses the demographic and sampling techniques, the measurement devices utilized, and the quality control measures implemented to guarantee the reliability and validity of the findings. Finally, the limitations inherent in the selected methodology are discussed.

4.2 Research Design

This study utilized an explanatory research approach, suitable for investigating the causal relationship between dynamic capabilities, including financial flexibility and technical adaptation, and resilience in small, medium, and micro enterprises (SMMEs). Explanatory research aims to clarify cause-and-effect relationships, rendering it appropriate for evaluating how particular competencies enhance organizational resilience (Saunders, Lewis, & Thornhill, 2019). This technique intended to clarify how internal organizational capabilities affect resilience during crises.

4.3 Research Philosophy

The research was based on a positivist philosophy, which argues that knowledge is obtained through objective observations and can be quantitatively measured (Bryman & Bell, 2015). Positivism prioritizes empirical data and hypothesis testing, corresponding with the study's emphasis on statistically examining the relationship between dynamic capabilities and organizational resilience. The positivist approach guaranteed that conclusions were derived from observable and quantifiable data, facilitating generalizable insights pertinent to the wider SMME sector.

4.4 Research Approach

This study utilized a deductive approach. Deductive research commences with a theoretical framework and employs empirical data to evaluate hypotheses developed from existing literature (Robson, 2016). This methodology was appropriate for the research, since it facilitated the examination of hypotheses concerning dynamic capabilities, based on existing theories such as the Resource-Based View (RBV) and the Dynamic Capabilities Framework

(Teece, 2018). The study employed a deductive technique to ascertain whether the theoretical components could predict resilience in small, medium, and micro enterprises (SMMEs) during crises.

4.5 Methodological Choices

The study employed a quantitative methodology to facilitate statistical analysis and hypothesis testing, yielding substantial insights into the correlations among the variables examined. Quantitative research facilitated the acquisition of organized data via a survey instrument, permitting the examination of patterns, relationships, and statistical significance in the results.

4.6 Research Strategy

The principal research method employed was a survey, disseminated to a population of small, medium, and micro enterprise (SMME) owners and managers. Surveys are frequently employed in quantitative research due to their capacity to efficiently and successfully collect substantial volumes of data (Creswell, 2018). This technique was considered suitable since it facilitated standardized data collection across various SMMEs, permitting a comparative investigation of the impact of dynamic capacities on resilience.

4.7 Time Horizon

The study employed a cross-sectional time horizon, collecting data at one specific moment. Cross-sectional studies are beneficial for quickly discovering correlations and testing hypotheses, aligning with the study's objective to assess current resilience levels in SMMEs without necessitating long term data (Saunders et al., 2019). While longitudinal data could yield more profound insights into temporal changes, a cross-sectional method delivered a picture of SMMEs' preparation and adaptability over the study period.

4.8 Population and Sampling Method

The study's population comprised SMME owners and managers from diverse industries within a specified geographic area. This group was selected for their participation in decision-making and their comprehension of organizational competencies and crisis management strategies.

4.8.1 Sampling Method

A stratified random sample technique was utilized to guarantee representation across many sectors, including manufacturing, services, and retail. Stratified sampling segments the population into discrete groups, or strata, and randomly picks individuals from each stratum

(Etikan & Bala, 2017). This methodology guaranteed that the sample represented the diversity of SMMEs regarding industry and size, hence augmenting the study's external validity.

4.8.2 Sample Size

A power analysis for quantitative studies indicated that a sample size of 204 respondents is adequate to get statistically significant findings. The sample size corresponds with analogous studies on organizational resilience, which generally utilize sample sizes between 100 and 300 to facilitate generalizable conclusions (Bryman & Bell, 2015).

4.9 Measurement Instrument

A standardized survey questionnaire served as the principal assessment tool. The questionnaire was created to evaluate the dynamic capabilities, resilience, and crisis preparedness of SMMEs, utilizing items derived from recognized scales in the literature.

4.9.1 Survey Structure

The survey had closed-ended and Likert scale questions to obtain quantitative data. Likert scales, spanning from 1 (strongly disagree) to 5 (strongly agree), were employed to assess attitudes about financial flexibility, technology adaptation, leadership, and supply chain resilience. Closed-ended questions yielded data on demographic parameters and organizational traits, enabling both descriptive and inferential statistical analysis.

4.9.2 Validity and Reliability of the Instrument

The survey instrument's validity and reliability were evaluated by pilot testing with a select sample of SMME owners to ascertain the clarity, relevance, and appropriateness of the questions. Cronbach's Alpha was computed to assess internal consistency, with a threshold of 0.7 signifying adequate reliability (Pallant, 2020). Content validity was assessed using expert evaluations to confirm that the survey accurately measured the desired constructs.

4.10 Data Gathering Process

Data collection was performed through online surveys to enhance accessibility and encompass a wider demographic across various geographic regions. The survey was disseminated via email invites and professional networks linked to SMMEs. Participants were informed of the study's objective, guaranteed confidentiality, and afforded the opportunity to withdraw at any moment, in compliance with ethical research protocols.

4.11 Data Analysis Approach

The data analysis included both descriptive and inferential statistical methods through SPSS software. The subsequent steps were executed to guarantee a comprehensive analysis:

Data Cleaning: The data were examined for absent values, anomalies, and discrepancies to guarantee precision and comprehensiveness.

Descriptive statistics: including measures of central tendency (mean, median) and dispersion (standard deviation), were computed to encapsulate the demographic traits and key variables.

Reliability Analysis: Cronbach's Alpha was employed to evaluate the internal consistency of the survey scales, so ensuring the reliable assessment of the constructs.

Correlation Analysis: Pearson correlation coefficients were computed to assess the correlations between dynamic capabilities and resilience results.

Regression Analysis: Multiple regression analysis evaluated the hypotheses, identifying important predictors of resilience and measuring the influence of each dynamic skill.

4.12 Quality Control Measures

The study employed many control procedures to uphold data quality and integrity:

Pilot Testing: Pilot testing was performed to enhance the survey instrument, guaranteeing the clarity and pertinence of the questions.

Uniform Data Collection: All participants received an identical survey in an online format, reducing interviewer bias and assuring response consistency.

Ethical Considerations: Informed consent was secured from all participants, and responses were anonymised to safeguard participant privacy and confidentiality.

4.13 Limitations of the Methodology

Notwithstanding the advantages of the selected methodology, several drawbacks were observed:

The cross-sectional design of the study restricted the observation of temporal changes, which could have offered more profound insights into the development of resilience skills. Self-Reported Data: Given that the data were self-reported, replies may have been influenced by social desirability bias, leading participants to portray themselves positively. Sampling Limitations: Although stratified sampling sought to guarantee representativeness, the sample may inadequately encompass all relevant industry-specific difficulties within the SMME sector, hence constraining the generalizability of the results.

4.14 Conclusion

This chapter outlined the study methods employed to examine the dynamic capabilities that bolster resilience in SMMEs. The study utilized a quantitative methodology based on positivist philosophy to evaluate hypotheses via systematic data gathering and thorough statistical analysis. The selected methodology, encompassing the research design, sampling strategy, measuring instrument, and data analysis methods, was suitable for addressing the research questions and fulfilling the study's objectives. Notwithstanding certain restrictions, the technique established a robust basis for obtaining empirically valid conclusions, which will be further upon in the findings and analysis chapters.

Chapter 5: Findings/Results

5.1 Introduction

This chapter presents the study's findings and offers a methodical analysis of the obtained data. The chapter is structured to reflect the study's hypotheses, showing data from descriptive, reliability, correlation, and regression analyses, and offers insights into how these findings address the research questions.

This study is guided by the following research questions:

1. What are the primary dynamic capabilities that enhance organizational agility and crisis readiness in small and medium-sized enterprises (SMMEs)?
2. How do these capabilities affect the capacity of SMMEs to respond and recover from crises?
3. What strategies can SMMEs adopt to improve resilience in crises?

Each question is analyzed using quantitative data, and the results offer empirical evidence for comprehending the significance of dynamic capacities in resilience and agility.

5.2 Description of the Sample

The study sample comprised 204 respondents from various SMME sectors, offering a comprehensive representation of viewpoints within the target demographic. The demographics, encompassing industry type, regional location, years of organizational operation, and company size, significantly impact the interpretation of outcomes owing to their possible effect on organizational resilience and adaptability.

Table 1 Sample size

Statistics

Participation_Agreement

N	Valid	204
	Missing	0

5.2.1 Demographic Composition

- Industry Classification: Among the respondents, 33.8% were affiliated with the service sector, 22.5% with manufacturing, and 6.4% with retail. The remaining 37.3% categorized as "Other" presumably encompasses a variety of distinct industries, highlighting the diversity within the SMME sector. The significant prevalence in the service sector may indicate that the findings hold increased relevance for service-oriented SMMEs.

Table 2 Organizational industry

Organizational Industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manufacturing	46	22.5	22.5	22.5
	Service	69	33.8	33.8	56.4
	Retail	13	6.4	6.4	62.7
	Other (Please Specifiy)	76	37.3	37.3	100.0
	Total	204	100.0	100.0	

- Geographic Distribution: The data indicates that 52.9% of respondents are located in Gauteng, 15.2% in the Western Cape, 5.9% in KwaZulu-Natal, and 13.2% in other regions, reflecting a predominance of urban business contexts.

Table 3 Geographic distribution

Org_Location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gauteng	108	52.9	52.9	52.9
	Western Cape	31	15.2	15.2	68.1
	KwaZulu-Natal	12	5.9	5.9	74.0
	Eastern Cape	26	12.7	12.7	86.8
	Other (please specify)	27	13.2	13.2	100.0
	Total	204	100.0	100.0	

- Years of Operation: Significantly, 44.6% of respondents were from organizations that have been operational for over 10 years, offering insights from established enterprises, while others operated from 1 to 10 years. This demographic distribution provides insights into the resilience capacities of both established and emerging enterprises.

Table 4 Years of Organizational operation

Org_Years_Operation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	10	4.9	4.9	4.9
	1-3 years	34	16.7	16.7	21.6
	4-6 years	35	17.2	17.2	38.7
	7-10 years	34	16.7	16.7	55.4
	More than 10 years	91	44.6	44.6	100.0
	Total	204	100.0	100.0	

- Firm Size: The sample exhibits a balanced distribution, with 30.9% of firms employing fewer than 10 individuals and 33.3% employing over 200, thereby encompassing perspectives from both small and large enterprises.

Table 5 Size of the organization

Number_of_Fulltime_Employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-10	63	30.9	30.9	30.9
	11-50	30	14.7	14.7	45.6
	51-100	26	12.7	12.7	58.3
	101-200	17	8.3	8.3	66.7
	More than 200	68	33.3	33.3	100.0
	Total	204	100.0	100.0	

The demographic statistics indicate that the sample is diversified and broadly representative, facilitating nuanced insights into the relationship between various organizational traits and resilience as well as crisis management capacities.

5.3 Results of Reliability and Validity Testing

Reliability testing was undertaken using Cronbach's Alpha to verify accuracy in measuring constructs, with validity testing. Table 5.1 below presents the Cronbach's Alpha for each key construct: Agility-Enhancing Dynamic Capabilities and Crisis-Preparedness-Enhancing Dynamic Capabilities

5.3.1 Agility-Enhancing Dynamic Capabilities

Table 6 Agility-Enhancing Dynamic Capabilities

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Perception_to_Realloc_Resources	204	1	5	3.72	.976
Perception_on_Decision_Flexibility	204	1	5	3.91	.960
Perception_on_Innovation_Continuity	204	1	5	4.16	.941
Perception_on_Reassessmnt_of_Strategy	204	1	5	3.90	.873
Perception_on_NewMarket_OpportunitiesID	204	1	5	3.89	.911
Valid N (listwise)	204				

Analysis of Descriptive Statistics Perception Regarding Resource Reallocation:

Mean: 3.72

Standard Deviation: 0.976

Respondents, on average, rated their perception of resource reallocation as relatively high, indicating that the majority feel their company possesses a certain capacity to reallocate resources in response to changes. A standard deviation of 0.976 indicates a moderate dispersion in replies, reflecting diverse viewpoints on this capability.

Perception of Decision Flexibility:

Mean: 3.91

Standard Deviation: 0.960

With a mean score of 3.91, respondents predominantly concur that decision-making freedom is present inside their business. This indicates a modest rise relative to resource reallocation, reflecting enhanced trust in decision-making flexibility. A standard deviation of 0.960 indicates substantial variability among responders.

Perception of Innovation Continuity:

Mean: 4.16

Standard Deviation: 0.941

Interpretation: This question possesses the highest mean (4.16), indicating that respondents recognize a significant focus on sustaining innovation within evolving conditions. The reduced standard deviation of 0.941 indicates a relatively uniform consensus among respondents about this capacity.

Evaluation of Strategic Reassessment:

Mean: 3.90

Standard Deviation: 0.873

Interpretation: This item exhibits a high mean score (3.90), signifying that respondents perceive their firm regularly reevaluates its approach to accommodate environmental changes. A standard deviation of 0.873 is comparatively low, indicating uniform responses.

Perception of New Market Opportunities ID:

Mean: 3.89

Standard Deviation: 0.911

Analysis: The variable, with a mean of approximately 3.90, indicates that respondents perceive their firm as actively identifying new market opportunities, which is essential for agility. A standard deviation of 0.911 signifies reasonable consistency in replies.

Comprehensive Insights on Agility-Enhancing Dynamic Capabilities

The average ratings for all categories range from 3.72 to 4.16, indicating that respondents typically regard their firms as having these agility-enhancing qualities to a considerable degree. Among these items, Innovation Continuity receives the highest score, signifying a robust focus on sustaining innovation amid transitions. Conversely, the Reallocation of Resources exhibits the lowest mean, indicating it may be perceived as a relatively weaker competence compared to the other traits.

The standard deviations among items are closely aligned (range from 0.873 to 0.976), indicating moderate consistency in respondents' perceptions. This uniformity may indicate a shared organizational culture or common experiences among the surveyed organizations concerning their adaptability.

5.3.2. Crisis-Preparedness-Enhancing Dynamic Capabilities

Table 7 Crisis-Preparedness-Enhancing Dynamic Capabilities

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Perception_on_Tech_Integration	204	1	5	4.00	.928
Perception_on_Process_Reconfig	204	1	5	3.85	.927
Perception_on_Stakeholder_Relationships	204	1	5	4.27	.871
Perception_on_Skills_Dev_Commitment	204	1	5	4.05	.968
Perception_on_Crisis_Training	204	1	5	3.29	1.162
Perception_on_Crisis_Resources	204	1	5	3.62	1.037
Perception_on_Crisis_Comm_Protocols	204	1	5	3.57	1.119
Valid N (listwise)	204				

Analysis of Descriptive Statistics for Crisis-Enhancing Dynamic Capabilities:

Perception of Technology Integration.

Mean: 4.00

Standard Deviation: 0.928

Interpretation: Participants typically recognize a significant degree of technological integration inside their firms, reflected by a mean score of 4.00. A standard deviation of 0.928 signifies a reasonable level of consistency in replies, indicating that technology integration is perceived as a fundamental competence for enhancing disaster preparedness.

Perception of Process Reconfiguration:

Mean: 3.85

Standard Deviation: 0.927

This item indicates perceptions regarding process reconfiguration, which similarly receives a high score of 3.85, demonstrating that respondents believe their businesses can effectively reconfigure procedures in times of crisis. The minimal standard deviation (0.927) signifies uniform replies among participants.

Perception of Stakeholder Relationships:

Mean: 4.27

Standard Deviation: 0.871

The question exhibits the highest mean score of 4.27, indicating a robust consensus on the need of sustaining ties with stakeholders for effective crisis management. A standard deviation of 0.871 indicates a rather high level of consistency across responders, corroborating this perception.

Perception of Commitment to Skills Development:

Mean: 4.05

Standard Deviation: 0.968

Interpretation: A mean score of 4.05 indicates that respondents concur that skills development and dedication are vital elements of disaster preparedness. The standard deviation of 0.968 indicates moderate variability, suggesting variations in respondents' perceptions of their businesses' commitment to skills development.

Perception of Crisis Training:

Mean: 3.29

Standard Deviation: 1.162

The mean score of this question is 3.29, indicating a comparatively diminished sense of regular crisis training comparison to other competencies. A standard deviation of 1.162 signifies considerable heterogeneity in responses, suggesting that crisis training may not be consistently applied across firms.

Perception of Crisis Resources:

Mean: 3.62

Standard Deviation: 1.037

Interpretation: A mean score of 3.62 suggests that respondents possess a moderate perception of the availability of resources allocated for crisis management. The standard deviation of 1.037 signifies variability in responses, suggesting that crisis resources may differ among businesses.

Perception of Crisis Communication Protocols:

Mean: 3.57

Standard Deviation: 1.119

Interpretation: This item has an average score of 3.57, indicating a moderate sense of the existence of crisis communication mechanisms. The elevated standard deviation (1.119) signifies greater diversity across responses, suggesting potential anomalies in the execution of communication procedures across several firms.

Comprehensive Insights on Crisis-Enhancing Dynamic Capabilities

The average scores for all items range from 3.29 to 4.27, reflecting a predominantly favorable assessment of crisis-enhancing capacities, with Stakeholder Relationships receiving the highest score. This indicates that respondents consider the preservation of stakeholder relationships a crucial aspect of crisis preparedness.

Nonetheless, Crisis Training and Crisis Communication Protocols exhibit lower mean scores and elevated standard deviations, suggesting a potential inconsistency in the use of training and communication protocols for crisis preparedness.

5.4. Correlation Analysis

5.4.1 Correlation between Dynamic capabilities and Agility

Table 8 Correlations of Agility-Enhancing Dynamic capabilities with Organizational Agility

Correlations

		Perception_to_Realloc_Resources	Perception_on_Decision_Flexibility	Perception_on_Innovation_Continuity	Perception_on_Reassessmnt_of_Strategy	Perception_on_NewMarket_OpportunitiesID	Perception_on_Adapt_Changes
Perception_to_Realloc_Resources	Pearson Correlation	1	.297**	.276**	.202**	.086	.601**
	Sig. (2-tailed)		<.001	<.001	.004	.223	<.001
	N	204	204	204	204	204	204
Perception_on_Decision_Flexibility	Pearson Correlation	.297**	1	.480**	.470**	.331**	.589**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001
	N	204	204	204	204	204	204
Perception_on_Innovation_Continuity	Pearson Correlation	.276**	.480**	1	.482**	.424**	.449**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001
	N	204	204	204	204	204	204
Perception_on_Reassessmnt_of_Strategy	Pearson Correlation	.202**	.470**	.482**	1	.555**	.391**
	Sig. (2-tailed)	.004	<.001	<.001		<.001	<.001
	N	204	204	204	204	204	204
Perception_on_NewMarket_OpportunitiesID	Pearson Correlation	.086	.331**	.424**	.555**	1	.341**
	Sig. (2-tailed)	.223	<.001	<.001	<.001		<.001
	N	204	204	204	204	204	204
Perception_on_Adapt_Changes	Pearson Correlation	.601**	.589**	.449**	.391**	.341**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	
	N	204	204	204	204	204	204

**. Correlation is significant at the 0.01 level (2-tailed).

The table presents the correlation coefficients for each agility-enhancing dynamic capability in connection to Perception_on_Adapt_Changes, illustrating the relationship of each independent variable to the organization's capacity for rapid adaptation to external changes. Here is a detailed analysis:

Perception Regarding Resource Reallocation:

The correlation coefficient ($r = 0.601$, $p < 0.01$) signifies a robust positive link, suggesting that organizations that believe they can efficiently reallocate resources are more inclined to demonstrate high agility. Resource reallocation is a vital dynamic skill for adjusting to external environmental changes.

Perception of Decision Flexibility:

Correlation Coefficient ($r = 0.589$, $p < 0.01$):

This indicates a robust positive link, implying that companies exhibiting flexibility in their decision-making processes can more effectively adapt to external changes. Consequently, decision flexibility is a crucial competency associated with organizational agility.

Perception of Innovation Continuity:

Correlation Coefficient ($r = 0.449$, $p < 0.01$):

This research indicates that continuous innovation techniques considerably enhance organizational agility due to a modest positive connection. Organizations that sustain continuous innovation are generally more adept at adaptation, although the effect is marginally less significant than that of resource reallocation and decision-making flexibility.

Evaluation of Strategic Reassessment:

Correlation Coefficient ($r = 0.391$, $p < 0.01$):

This modest positive connection suggests that periodic strategy reassessment enhances agility, albeit to a smaller degree than reallocation and flexibility. Frequent strategic evaluation aids companies in maintaining responsiveness; yet, its direct influence on agility is rather limited.

Perception of New Market Opportunities ID:

Correlation Coefficient ($r = 0.341$, $p < 0.01$):

The positive association in this instance is comparatively weaker than that of the other factors. This indicates that although recognizing new market opportunities contributes to increased agility, its effect on the organization's adaptability is very minimal.

Overview

The results underscore that:

Resource reallocation and decision flexibility have the most significant positive connections with organizational agility, indicating their critical importance for adaptability in response to external changes. Innovation continuity and strategic reassessment also positively influence agility, albeit with a little lesser effect. The identification of new market opportunities exhibits the smallest association, suggesting a diminished still significant role in agility. These associations indicate that emphasizing resource reallocation and decision-making flexibility may be particularly useful methods for SMMEs aiming to enhance their organizational agility.

5.4.2 Correlation between Dynamic capabilities and Preparedness

Table 9 Correlations between Crisis preparedness - Enhancing dynamic capabilities & Preparedness

Correlations

		Perception_on_Tech_Integration	Perception_on_Process_Reconfig	Perception_on_Stakeholder_Relationships	Perception_on_Skills_Dev_Commitment	Perception_on_Crisis_Mgmt_Plan	Perception_on_Crisis_Training	Perception_on_Crisis_Resources	Perception_on_Crisis_Comm_Protocols
Perception_on_Tech_Integration	Pearson Correlation	1	.543**	.440**	.471**	.268**	.303**	.418**	.354**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001	<.001	<.001
	N	204	204	204	204	204	204	204	204
Perception_on_Process_Reconfig	Pearson Correlation	.543**	1	.356**	.520**	.436**	.457**	.514**	.478**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001	<.001	<.001
	N	204	204	204	204	204	204	204	204
Perception_on_Stakeholder_Relationships	Pearson Correlation	.440**	.356**	1	.473**	.261**	.331**	.305**	.378**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001	<.001	<.001
	N	204	204	204	204	204	204	204	204
Perception_on_Skills_Dev_Commitment	Pearson Correlation	.471**	.520**	.473**	1	.301**	.367**	.379**	.467**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001	<.001	<.001
	N	204	204	204	204	204	204	204	204
Perception_on_Crisis_Mgmt_Plan	Pearson Correlation	.268**	.436**	.261**	.301**	1	.638**	.532**	.580**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001	<.001	<.001
	N	204	204	204	204	204	204	204	204
Perception_on_Crisis_Training	Pearson Correlation	.303**	.457**	.331**	.367**	.638**	1	.571**	.673**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001		<.001	<.001
	N	204	204	204	204	204	204	204	204
Perception_on_Crisis_Resources	Pearson Correlation	.418**	.514**	.305**	.379**	.532**	.571**	1	.694**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001		<.001
	N	204	204	204	204	204	204	204	204
Perception_on_Crisis_Comm_Protocols	Pearson Correlation	.354**	.478**	.378**	.467**	.580**	.673**	.694**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001	<.001	
	N	204	204	204	204	204	204	204	204

**. Correlation is significant at the 0.01 level (2-tailed).

The table displays correlation coefficients between each dynamic capabilities that enhances crisis preparedness and Perception_on_Crisis_Mgmt_Plan. This elucidates the correlation between each independent variable and the organization's crisis preparedness. Here is the analysis:

Perception of Technological Integration:

The correlation coefficient ($r = 0.268$, $p < 0.01$) signifies a positive albeit modest connection, suggesting that technological integration marginally enhances disaster preparedness. Organizations that incorporate technology are generally more adept at crisis management.

Perception of Process Reconfiguration:

Correlation Coefficient ($r = 0.436$, $p < 0.01$):

This moderate-to-strong positive connection indicates that businesses adept at reconfiguring procedures are more effectively equipped for crisis situations. Process reconfiguration demonstrates a significant correlation with an organization's disaster preparedness.

Perception of Stakeholder Relationships:

Correlation Coefficient ($r = 0.261$, $p < 0.01$):

This research reveals a moderate positive connection, suggesting that good stakeholder interactions contribute to improved disaster preparedness, albeit to a limited extent. Establishing and sustaining robust relationships with stakeholders moderately enhances the organization's capacity to manage emergencies.

Perception of Commitment to Skills Development:

Correlation Coefficient ($r = 0.301$, $p < 0.01$):

This moderate positive connection indicates that dedication to skills development enhances disaster preparation. Organizations that prioritize skill-building programs are typically more adept at managing crises effectively.

Perception of Crisis Training:

The correlation coefficient ($r = 0.638$, $p < 0.01$) indicates a robust positive association, demonstrating that crisis-specific training markedly improves preparation. This indicates that delivering specialized training is an exceptionally beneficial method for enhancing crisis

management skills.

Perception of Crisis Resources:

Correlation Coefficient ($r = 0.532$, $p < 0.01$):

A strongly positive correlation indicates that allocating resources for crisis management significantly enhances crisis preparedness. The accessibility of resources is crucial for an effective crisis management strategy.

Perception of Crisis Communication Protocols:

Correlation Coefficient ($r = 0.580$, $p < 0.01$):

A strongly positive connection suggests that communication mechanisms are essential for crisis planning. Effective communication tactics are closely associated with an organization's capacity to manage crises.

Perception of Lessons Learned from the Crisis:

Correlation Coefficient ($r = 0.467$, $p < 0.01$):

This moderate to high connection indicates that learning from previous crises enhances crisis management preparedness. Organizations that record and implement insights from prior crises generally exhibit enhanced crisis readiness.

The findings indicate that:

Crisis training and resources are critical capabilities that significantly improve crisis readiness, demonstrating the highest relationships. Communication protocols and process reconfiguration exhibit significant positive relationships with disaster readiness, underscoring their critical importance. Technology integration and stakeholder relationships exhibit moderate positive associations, indicating that although they aid in crisis management, their influence is relatively diminished. These findings indicate that companies seeking to improve crisis readiness should prioritize crisis training, resource allocation, and explicit communication procedures to significantly increase their crisis management plans.

5.4.3. Regression on Agility-enhancing Dynamic capabilities and Dynamic Capability

Table 10 Model summary of Regression on Agility-enhancing Dynamic capabilities and Dynamic Capability

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.759[a]	.576	.566	.641

a. Predictors: (Constant), Perception_on_NewMarket_OpportunitiesID, Perception_to_Realloc_Resources, Perception_on_Decision_Flexibility, Perception_on_Innovation_Continuity, Perception_on_Reassessmnt_of_Strategy

Interpretation of Model Summary

Coefficient of Determination: The R-Square result is 0.576, signifying that roughly 57.6% of the variance in organizational agility (Perception_on_Adapt_Changes) is explained by the set of agility-enhancing dynamic skills (independent variables). This indicates a robust model fit for the factors concerning agility. Modified R-Squared: The corrected R-squared is marginally reduced to 0.566, reflecting the quantity of predictors in the model. This continues to serve as a reliable measure of the model's explanatory power.

Table 11 Anova Table

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110.627	5	22.125	53.905	<.001[b]
	Residual	81.270	198	.410		
	Total	191.897	203			

a. Dependent Variable: Perception_on_Adapt_Changes

b. Predictors: (Constant), Perception_on_NewMarket_OpportunitiesID, Perception_to_Realloc_Resources, Perception_on_Decision_Flexibility, Perception_on_Innovation_Continuity, Perception_on_Reassessmnt_of_Strategy

Interpretation of the ANOVA Table

The F-statistic is 53.905, with a significance level of $p < 0.001$. This outcome is statistically significant, indicating that the model effectively fits the data and that the variables collectively exert a substantial influence on organizational agility.

Table 12 Coefficient Table

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.183	.278		-.658	.511
	Perception_to_Realloc_Resources	.454	.049	.456	9.247	<.001
	Perception_on_Decision_Flexibility	.365	.057	.361	6.390	<.001
	Perception_on_Innovation_Continuity	.089	.060	.086	1.495	.136
	Perception_on_Reassessmnt_of_Strategy	.011	.068	.010	.166	.868
	Perception_on_NewMarket_OpportunitiesID	.150	.061	.140	2.454	.015

a. Dependent Variable: Perception_on_Adapt_Changes

Interpretation of Coefficients Table

The coefficients table elucidates the distinct contribution of each agility-enhancing dynamic capacity to organizational agility.

The constant (B = -0.183) lacks significant interpretative value in this context, as our primary focus is on the impact of each predictor variable.

Perception for Resource Reallocation:

The unstandardized coefficient (B) of 0.454 signifies that for each one-unit increase in Perception_to_Realloc_Resources, organizational agility (Perception_on_Adapt_Changes) rises by 0.454 units, assuming all other variables remain constant.
Standardized Coefficient (Beta): 0.456, indicating a significant influence relative to other variables.
Significance (Sig.): $p < .001$ (very significant), indicating that resource reallocation is a substantial factor in agility.

Perception of Decision Flexibility:
The unstandardized coefficient (B) of 0.365 indicates that a one-unit increase in decision flexibility correlates with a 0.365 increase in organizational agility.
Standardized Coefficient (Beta): 0.361, indicating a significant effect.
Significance (Sig.): $p < .001$ (very significant), demonstrating that choice flexibility substantially influences agility.

Perception of Innovation Continuity:
Unstandardized Coefficient (B): 0.089, signifying a lesser influence on organizational agility relative to other variables.
Standardized Coefficient (Beta): 0.086, a comparatively low value among predictors.
Significance (Sig.): $p = .136$ (not significant), indicating that innovation continuity does not significantly forecast agility in this model.

Evaluation_of_Strategy_Reassessment:
Unstandardized Coefficient (B): 0.011, signifying a negligible effect.
Standardized Coefficient (Beta): 0.010.
Significance (Sig.): $p = .868$ (not significant), indicating that strategy reappraisal does not significantly affect agility.

Perception of New Market Opportunities ID:
Unstandardized Coefficient (B): 0.150, signifying that the identification of new market possibilities exerts a moderate influence on agility.
Standardized Coefficient (Beta): 0.140.
Significance (Sig.): $p = .015$ (significant), indicating that the identification of new market opportunities significantly contributes to the enhancement of agility.

Summary of Results

The regression analysis identifies the significant predictors of organizational agility (Perception_on_Adapt_Changes) as follows:

Perception as a determinant for resource reallocation: Most significant predictor (B = 0.454, p < .001).

Perception of Decision Flexibility: The second most significant predictor (B = 0.365, p < .001). Perception of New Market Opportunities ID: Moderate influence (B = 0.150, p = 0.015). The findings indicate that resource reallocation, decision-making flexibility, and the identification of new market opportunities are crucial dynamic characteristics that substantially improve organizational agility inside SMMEs. Additional capabilities, including innovation continuity and strategy review, demonstrate negligible or no statistically significant effect on agility within this paradigm.

5.4.4. Regression on Crisis Preparedness-enhancing Dynamic capabilities and Readiness.

Table 13 Model Summary Table

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.686[a]	.471	.452	.841

a. Predictors: (Constant), Perception_on_Crisis_Comm_Protocols, Perception_on_Tech_Integration, Perception_on_Stakeholder_Relationships, Perception_on_Skills_Dev_Commitment, Perception_on_Process_Reconfig, Perception_on_Crisis_Training, Perception_on_Crisis_Resources

In the Model Summary table:

R = 0.686 signifies a relatively good association between the independent factors (capabilities boosting disaster readiness) and the dependent variable (perception of crisis management planning).

R Square = 0.471 indicates that 47.1% of the variation in the dependent variable is elucidated by the independent variables in the model.

The Adjusted R Square is marginally reduced to 0.452, considering the quantity of predictors and sample size, suggesting that the model exhibits relative stability.

This degree of explanatory power (47.1%) is acceptable in the social sciences, where behavior and perception are frequently influenced by numerous factors.

Table 14 Anova Table

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	123.426	7	17.632	24.958	<.001[b]
	Residual	138.471	196	.706		
	Total	261.897	203			

a. Dependent Variable: Perception_on_Crisis_Mgmt_Plan

b. Predictors: (Constant), Perception_on_Crisis_Comm_Protocols, Perception_on_Tech_Integration, Perception_on_Stakeholder_Relationships, Perception_on_Skills_Dev_Commitment, Perception_on_Process_Reconfig, Perception_on_Crisis_Training, Perception_on_Crisis_Resources

In the ANOVA table:

The model's F-value is 24.958, and the p-value (Sig.) is less than 0.001, demonstrating that the entire regression model is statistically significant. The collection of predictors (crisis-enhancing capabilities) consistently forecasts the dependent variable (perception of crisis management planning).

Table 15 Coefficient Table

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.628	.349		1.801	.073
	Perception_on_Tech_Integration	-.035	.082	-.028	-.425	.672
	Perception_on_Process_Reconfig	.160	.087	.131	1.837	.068
	Perception_on_Stakeholder_Relationships	.004	.081	.003	.044	.965
	Perception_on_Skills_Dev_Commitment	-.043	.080	-.037	-.544	.587
	Perception_on_Crisis_Training	.392	.071	.401	5.503	<.001
	Perception_on_Crisis_Resources	.151	.085	.138	1.787	.075
	Perception_on_Crisis_Comm_Protocols	.181	.086	.178	2.107	.036

a. Dependent Variable: Perception_on_Crisis_Mgmt_Plan

The Coefficients table illustrates the impact of each specific predictor on crisis management strategy. Here is a detailed analysis:

Perception of Crisis Training

B = 0.392 (Unstandardized Coefficient), Beta = 0.401 (Standardized Coefficient); t = 5.503, p < 0.001

The analysis indicates that crisis training substantially enhances crisis management planning. The predictor with the highest Beta value contributes most significantly to elucidating the dependent variable. This indicates that higher perception of crisis training correlate with enhanced perceptions of successful crisis management planning.

Perception of Crisis Communication Protocols

B = 0.181, Beta = 0.178; t = 2.107, p = 0.036

Crisis communication protocols significantly enhance crisis management planning, while their impact is less pronounced than that of crisis training. Efficient communication protocols during crises improve the perception of robust crisis management planning.

Perception of Process Reconfiguration

B = 0.160, Beta = 0.131; t = 1.837, p = 0.068

Interpretation: Process reconfiguration exhibits a favorable correlation with crisis management planning, while not statistically significant at the 0.05 level (p = 0.068). This indicates that although process reconfiguration may enhance perceptions of crisis preparation, its impact is not as significant as other aspects.

Perception of Crisis Resources

B = 0.151, Beta = 0.138; t = 1.787, p = 0.075

The perception of available crisis resources positively affects crisis management planning, while it does not achieve statistical significance (p = 0.075). This suggests that resource availability may be pertinent but is not a crucial factor in this scenario.

Insignificant Predictors

Perception of Technology Integration: (B = -0.035, p = 0.672)

Perception of Stakeholder Relationships: (B = 0.004, p = 0.965)

Perception of Skills Development Commitment: (B = -0.043, p = 0.587)

The p-values of these variables above the 0.05 threshold, signifying that they do not significantly influence perceptions of crisis management planning in this model.

Summary Analysis

Crisis Training and Crisis Communication Protocols are pivotal to views of effective crisis management planning, underscoring the significance of these competencies. Although Process Reconfiguration and Crisis Resources exhibit favorable correlations, they lack statistical significance. Other factors, including Tech Integration, Stakeholder Relationships, and Skills Development Commitment, do not significantly affect perceptions of crisis management planning in this scenario.

This analysis highlights the essential importance of particular capabilities especially crisis

training and communication protocols in improving organizational readiness for crisis scenarios.

Chapter 5 Summary: Findings/Results

Chapter 5 presents a comprehensive analysis of the collected data, corresponding to the study's research questions and hypotheses. This chapter analyzes the impact of two key constructs Agility-Enhancing Dynamic Capabilities and Crisis-preparedness-Enhancing Dynamic Capabilities on organizational agility and crisis preparation in small, medium, and micro enterprises (SMMEs). The analyses performed encompass descriptive statistics, reliability testing, correlation analysis, and multiple regression, all of which affirm the reliability of the constructs and the overall model fit.

5.2 Key Findings:

1. **Agility-Enhancing Dynamic Capabilities**:

   Resource reallocation and decision-making flexibility were recognized as the most significant determinants of organizational agility, suggesting that SMMEs with adaptable resources and decision processes are more capable of managing external changes.
   other factors, including innovation continuity and market opportunity identification, also positively influenced agility, however with less statistical significance. These findings highlight the critical importance of adaptability-oriented capabilities in enhancing the agility of SMMEs.

2. **Crisis-Preparedness-Enhancing Dynamic Capabilities**:

Crisis training and communication protocols have emerged as critical predictors of effective crisis management planning, underscoring their vital importance in preparedness.
Process reconfiguration and crisis resources exhibited a positive correlation with crisis preparedness, but with lesser impact. This indicates that although resource availability and process adaptability are advantageous, formal training and structured communication are more essential for crisis response.

Overall, the results indicate that the organizational agility and crisis preparedness in the context of SMMEs can be improved through specific dynamic capabilities. This chapter sets the stage for further discussion in Chapter 6, where these findings will be rigorously assessed against current literature and theoretical frameworks, establishing a foundation for practical recommendations for SMME leaders and policymakers.

Chapter 6: Discussion of Results

6.1 Introduction

Chapter 6 provides an in-depth analysis of the data, explaining the role of dynamic capabilities in enhancing organizational agility and crisis preparedness in Small, Medium, and Micro Enterprises (SMMEs). This chapter compiles the results according to the study's research questions and hypotheses, evaluating their significance in relation to the theoretical frameworks outlined in Chapter 2. This study assesses the impact of dynamic capabilities that enhance agility and crisis preparedness, interpreting their contributions to resilience strategies for small, medium, and micro enterprises (SMMEs).

This chapter is organized into multiple sections, each focusing on a certain research question. We begin by examining data pertinent to the key dynamic capabilities that enhance agility, followed by a discussion on the implications of capabilities that bolster crisis preparedness. This is succeeded by a synthesis with existing literature, connecting the study's findings to recognized theories, including the Resource-Based View (RBV) and Organizational Resilience Theory. Ultimately, we analyze the practical and theoretical ramifications for SMME management and propose directions for future research.

This chapter serves as a transition from the empirical data in Chapter 5 to the theoretical and managerial insights derived from this research, preparing for the conclusions and recommendations in Chapter 7.

6.2 Detailed Analysis by Research Question and Hypotheses

Section 1: Research Question 1 and Hypothesis 1 (Agility-Enhancing Dynamic Capabilities)

6.2.1. Interpretation of Findings for Agility-Enhancing Dynamic Capabilities

- The first research question aims to uncover dynamic capabilities that improve organizational agility in SMMEs. This was evaluated across five fundamental characteristics of agility-enhancing capabilities: resource reallocation, decision flexibility, innovation continuity, strategic reassessment, and identification of new market opportunities. Each of these dimensions exhibited differing levels of

correlation and regression significance with the dependent variable, organizational agility, assessed by rapid adaptation to external changes.

- Resource reallocation, evidenced by a high correlation value ($r = 0.601$, $p < 0.01$), is a significant predictor of organizational agility. This research indicates that the capacity to rapidly reallocate resources in response to changes allows SMMEs to respond efficiently to environmental unexpected events. Research indicates that resource flexibility is essential for smaller firms that may not possess the financial reserves of larger organizations (Teece, 2018).

- The positive association ($r = 0.589$, $p < 0.01$) underscores the significance of adaptable decision-making processes in attaining agility. Decision flexibility, as indicated in the research, is a defining characteristic of agile businesses, enabling them to swiftly adapt to unexpected situations (Wilden et al., 2016). This flexibility may entail decentralized decision-making frameworks that enable employees at all tiers to make prompt, informed decisions.

- Innovation continuity demonstrated a positive correlation, although had a comparatively diminished effect ($r = 0.449$, $p < 0.01$). This suggests that although continual innovation enhances agility, it may be subordinate to more immediate adaptive capacities like as resource reallocation and decision-making flexibility. Research indicates that in small and medium-sized enterprises (SMMEs), the sustainability of innovation is crucial yet frequently hindered by resource limitations, prompting companies to favor rapid operational adaptability over ongoing innovation (Bock et al., 2012).

- Strategic reassessment exhibited a modest association ($r = 0.391$, $p < 0.01$), validating the notion that regular strategy evaluations improve agility by maintaining organizational alignment with market fluctuations. The finding indicates that reappraisal alone does not produce agility without the integration of action-oriented competencies (Zhou & Wu, 2010).

- The identification of new market opportunities demonstrates a correlation with this variable ($r = 0.341$, $p < 0.01$), indicating its supportive function in agility. The comparatively diminished impact suggests that, for SMMEs, identifying new

opportunities may be less immediately consequential for agility than reallocating resources or modifying decision-making frameworks.

6.2.2. Theoretical Implications for Agility

The substantial connection between resource reallocation and decision flexibility and organizational agility reinforces the Resource-Based View (RBV) and the Dynamic Capabilities Framework. Due to their constrained financial and human resources, SMMEs can utilize flexibility and adaptability to offset these limitations, consistent with the Resource-Based View's focus on harnessing internal resources for competitive advantage (Barney, 1991). Flexibility in decision-making and adaptive resource reallocation are fundamental talents that allow SMMEs to prosper in volatile circumstances, a crucial characteristic of dynamic capacities.

6.2.3. Practical Implications for Agility in Small, Medium, and Micro Enterprises

In light of these findings, SMMEs are encouraged to prioritize investments in managerial processes that enhance flexibility in resource allocation and decision-making processes. Creating internal training that emphasizes rapid resource mobilization and adaptable decision-making could enhance organizational agility more effectively than substantial technological investments, which may be better suited for larger companies with abundant resources. Moreover, consistent strategy evaluations might assist SMMEs in remaining vigilant to market fluctuations, thereby improving their adaptability to environmental changes.

Section 2: Research Question 2 and Hypothesis 2 (Crisis-Preparedness-Enhancing Dynamic Capabilities)

6.2.4. Interpretation of Findings for Crisis-Preparedness-Enhancing Dynamic Capabilities

The second research question focuses on identifying capabilities that improve disaster preparedness. The examined dimensions encompassed crisis training, communication protocols, process reconfiguration, stakeholder relationships, and resource availability, each demonstrating different significance for crisis preparedness.

Crisis Training: A strong positive correlation ($r = 0.638$, $p < 0.01$) indicates that crisis training is a significant predictor of preparedness. This supports findings in resilience literature that highlight the necessity of focused disaster training for preparedness (Duchek, 2020). Effective

training provides personnel with essential abilities for crisis response, highlighting its importance as a fundamental competency for disaster resilience.

Crisis Communication Protocols: A high correlation ($r = 0.580$, $p < 0.01$) underscores the importance of established communication procedures in disaster planning. Communication channels facilitate swift information distribution during disturbances, consistent with Organizational Resilience Theory's focus on systematic preparedness (Burnard & Bhamra, 2011). This competence enables organizations to sustain cooperation and coherence during crises, reducing risks linked to misinformation.

Process Reconfiguration: This dimension exhibited a moderate correlation ($r = 0.436$, $p < 0.01$), suggesting that firms with adaptive processes are more well equipped for crises. Research indicates that process reconfiguration can improve crisis response by facilitating rapid modifications to operational workflows (McKinsey & Company, 2020).

Stakeholder relationships ($r = 0.261$) and resource availability ($r = 0.301$) exhibited a moderate correlation but had comparatively minimal effects on crisis preparation. This suggests that, although significant, these capabilities are more auxiliary and less essential than direct crisis-response skills like as training and communication protocols (Hollnagel, 2011).

6.2.5. Theoretical Implications for Crisis Readiness

The findings indicate that proactive strategies such as crisis training and communication protocols are closely aligned with Organizational Resilience Theory, emphasizing that structured preparation and learning from previous disruptions are essential for resilience (Sheffi & Rice, 2005). Resource limitations for SMMEs may restrict their investment in expensive preparedness strategies, underscoring the importance of process-oriented capabilities.

6.2.6. Practical Considerations for Crisis Readiness in Small, Medium, and Micro Enterprises

The results indicate that SMMEs ought to prioritize training and communication as economical techniques for crisis preparedness. Consistent training sessions, even with constrained resources, can markedly improve employee preparedness. Crisis communication plans must be standardized to guarantee that all staff comprehend the processes and can respond cohesively. Moreover, the significance of stakeholder ties, though secondary, indicates that cultivating robust partnerships might provide supplementary support during crises.

6.3 Comparative Analysis with Literature

This section examines the relationship between the study's findings and the existing literature on dynamic capabilities, organizational agility, and crisis preparedness. By comparing the findings of this research with known theories and other studies, we can derive insights that either support or contest these theoretical frameworks, offering an in-depth understanding of how SMMEs utilize dynamic capabilities for resilience.

6.3.1 **Comparison with Resource-Based View (RBV) and Dynamic Capabilities Framework**

The Resource-Based View (RBV) asserts that firms attain a competitive advantage via distinctive resources and competencies that are challenging to replicate (Barney, 1991). Consistent with the Resource-Based View (RBV), this study identified that specific internal resources namely, decision-making flexibility, resource allocation adaptability, and ongoing innovation are critical for attaining agility and preparedness. The crucial function of resource reallocation in improving agility substantiates the Resource-Based View's focus on utilizing internal resources. The Dynamic Capabilities Framework builds upon the Resource-Based View, positing that companies require capabilities to reconfigure resources in reaction to changes (Teece, 2018). The results, particularly concerning process reconfiguration and crisis training, substantiate this concept, emphasizing that SMMEs adept at dynamically modifying their processes are more equipped to manage crises.

Capabilities for Enhancing Agility and Resource-Based View (RBV): The considerable influence of decision-making flexibility and resource reallocation corresponds with previous research on Resource-Based View (RBV), which highlights adaptability as a competitive asset (Eisenhardt & Martin, 2000). however, the lesser significance of innovation continuity in forecasting agility indicates that, in small and medium-sized enterprises (SMMEs), rapid adaptability may take precedence over enduring innovation, which contrasts with certain resource-based view (RBV) research. This disparity may stem from the resource constraints of SMMEs, wherein immediate survival imperatives overshadow long-term innovation plans (Zahra et al., 2006).

Crisis Preparedness and Dynamic Capabilities: In alignment with Teece’s (2018) assertion that crisis resilience arises from capabilities such as swift reconfiguration, this study revealed that organizations possessing comprehensive training programs and effective communication procedures are more adequately prepared for disasters. These findings emphasize the necessity of dynamic capabilities that enable rapid adaptation in high-pressure scenarios, supporting research that underscores the significance of organizational learning for crisis preparedness (Duchek, 2020).

Contradictions with RBV:

Although RBV asserts that uncommon and valuable resources are the foundation of competitive advantage, this study indicates that for SMMEs, more widely accessible capabilities such as communication protocols and training are crucial for disaster preparedness. This deviation from conventional Resource-Based View (RBV) assumptions may indicate the distinctive operational environment of Small, Medium, and Micro Enterprises (SMMEs), where resources are limited compel an emphasis on adaptable capabilities rather than on rare assets (Wilden et al., 2016).

6.3.2 Organizational Resilience Theory and SMMEs

Organizational Resilience Theory underscores the importance of proactive strategies such as planning, flexibility, and learning from previous crises to improve crisis preparedness (Sheffi & Rice, 2005). The study's results support this notion by showing a substantial correlation between crisis training, communication procedures, and crisis preparation. This association indicates that organized planning, a fundamental principle of resilience theory, is particularly relevant for SMMEs.

Crisis Training as a Proactive Measure

Crisis training serves as a proactive strategy, closely aligned with resilience theory's emphasis on anticipatory measures. Previous research has demonstrated that pre-crisis training mitigates uncertainty and improves response effectiveness during disturbances (Bhamra et al., 2011). The findings substantiate these conclusions, indicating that employees in SMMEs that emphasize crisis-specific training exhibit higher levels of preparedness, underscoring the significance of preparedness despite constrained resources.

The Role of Stakeholder Relationships:

While stakeholder relationships had a moderate correlation with crisis preparedness, their significance was less pronounced than expected. Conversely, a significant portion of the resilience literature emphasizes the critical role of external relationships in enhancing resilience, especially through collaborations and resource allocation during crises (Hollnagel, 2011). This discrepancy may indicate that SMMEs, owing to restricted external alliances, depend more on internal competencies than on external partnerships.

Adaptation and Process Reconfiguration:

Organizational Resilience Theory emphasizes adaptability through internal process reconfiguration as a resilience-building measure (McManus et al., 2008). The findings of this study indicate that the capacity to rearrange processes enhances disaster readiness. Nonetheless, its moderate influence relative to crisis training and communication protocols suggests that although adaptability is advantageous, systematic preparedness may be more significant in the crisis management of SMMEs.

6.3.3 Integration with Literature on Crisis-Preparedness-Enhancing Capabilities

Previous research has consistently highlighted the need of structured planning, resource allocation, and communication protocols in crisis management (Burnard & Bhamra, 2011). The research results regarding crisis-preparedness-enhancing dynamic capacities are consistent with existing literature, affirming that particular competencies are essential for promoting organizational resilience.

Alignment with Established Crisis Management Strategies:

The substantial function of crisis communication protocols supports Parsons' (2018) findings regarding the essentiality of communication in crisis management. Communication standards guarantee that staff are adequately informed and that consistent responses may be implemented during disruptions. The high correlation identified in this study supports Parsons' assertion regarding the significance of clear communication as a resilience component, indicating that SMMEs ought to formalize their crisis communication procedures.

Inconsistency in Crisis Resources' Role:

The moderate link between resource availability and crisis readiness contrasts with certain crisis management literature that emphasizes the primacy of resources in effective crisis response (Pearson & Clair, 1998). This study indicates that although resources are significant, their influence in SMMEs may be subordinate to capabilities such as training and communication. This disparity may indicate the distinctive resource limitations of SMMEs, which need the prioritization of cost-effective, impactful strategies.

Process-Oriented Capabilities:

The results on process reconfiguration indicate a significant though moderate correlation with crisis readiness, reinforcing the notion that flexible internal processes bolster resilience. Previous research highlights that adaptable processes enable firms to swiftly react to unexpected occurrences (McKinsey & Company, 2020). The study indicates that SMMEs acknowledge the advantages of process adaptability, yet may be constrained by insufficient resources to execute comprehensive reconfiguration methods.

6.4 Implications for Theory and Practice

6.4.1 Theoretical Implications

The research contributes to both the Resource-Based View and Dynamic Capabilities Framework by emphasizing that in small and medium-sized enterprises, capabilities that enhance agility and crisis preparedness have unique functions with varied impacts. This research validates the Resource-Based View's significance in a resource-constrained environment while also enhancing it by highlighting characteristics that may be cultivated with minimal resources. Furthermore, the results enhance the Organizational Resilience Theory by illustrating that internal preparedness strategies such as training and communication protocols are crucial for crisis resilience in small and medium-sized enterprises (SMMEs), supporting resilience literature while providing specificity for smaller firms.

6.4.2 Practical Implications for SMMEs

This study provides practical ideas for SMME leaders aiming to improve agility and crisis readiness: Emphasize Training and Communication: Small, Medium, and Micro Enterprises (SMMEs) can attain substantial crisis readiness by allocating resources to economical training and establishing formal communication protocols. Consistent training sessions provide staff with crisis-response competencies, while communication protocols guarantee organizational coherence during disruptions.

Invest in Flexible Decision-Making and Resource Reallocation:

To improve agility, SMMEs should establish frameworks that facilitate adaptive decision-making and effective resource reallocation. These techniques enable SMMEs to swiftly adapt to evolving surroundings, an essential ability for maintaining competitiveness.

Focus on Internal Resilience Capabilities:

Although stakeholder relationships and resource acquisition are advantageous, SMMEs may achieve enhanced resilience by prioritizing internal dynamic capabilities that directly influence adaptability. Systematic methodologies for agility and disaster readiness can optimize scarce resources, according to best standards for resilient operations.

6.5 Summary of Chapter 6

Chapter 6 covered an extensive analysis of the results, contextualizing each finding within the existing literature and theoretical frameworks. The study illustrated, through comparative analysis, the essential roles of agility-enhancing and crisis-preparedness-enhancing capabilities in the resilience strategies of SMMEs. The chapter emphasized that decision flexibility and resource reallocation are crucial for agility, while crisis training and communication protocols greatly improve crisis preparedness.

These findings correspond with the Resource-Based View, Dynamic Capabilities Framework, and Organizational Resilience Theory, while also highlighting the distinct context of SMMEs, where organized, cost-effective preparedness techniques hold significant value. This discussion sets the stage for Chapter 7, which will give conclusions, managerial recommendations, and directions for future research.

Chapter 7: Conclusions and Recommendations

7.1 Study Overview and Rationale

This research investigated the role of dynamic capabilities on enhancing organizational agility and crisis preparedness in Small, Medium, and Micro Enterprises (SMMEs). This research identified essential capabilities that enhance the resilience of SMMEs, which often encounter unique challenges due to resource limitations and increased susceptibility to environmental changes. These capabilities include flexibility in resource allocation, strategic leadership, and effective crisis training. This topic is vital as it highlights the pressing necessity for SMMEs to endure crises and adjust in progressively volatile environments, hence fostering economic stability and growth.

7.2 Research Context and Its Importance

The study was carried out within the framework of South African small, medium, and micro enterprises across diverse sectors. The South African economy is significantly dependent on SMMEs, which are crucial for employment generation and fostering innovation, particularly in economically disadvantaged communities. In light of the nation's socio-economic difficulties, the resilience of SMMEs has become extremely crucial. This context highlighted the effectiveness of dynamic capacities in a region vulnerable to economic volatility and crises, shown by the current COVID-19 epidemic. Given that SMMEs are crucial for job creation and economic stability, safeguarding their survival and resilience can substantially enhance the nation's economic development.

7.3 Review of Literature and Identification of Knowledge gaps

Previous research has emphasized the significance of dynamic capabilities such as resource flexibility, technological adaptation, and stakeholder interactions in fostering organizational resilience. The Resource-Based View (RBV) and Dynamic skills Framework have significantly influenced this research, demonstrating that businesses possessing flexible skills are more inclined to attain sustainable competitive advantage and withstand disruptions (Teece, 2018).

Knowledge gaps:

Nonetheless, empirical research about the application of these competences to SMMEs, especially in emerging markets, remains scarce. Many previous studies have concentrated on large corporations, frequently in developed nations, neglecting the distinct limitations and flexibility requirements of smaller organizations.

Furthermore, whereas numerous studies have focused on specific elements of crisis management and resilience, few have investigated a holistic framework that combines agility and crisis preparedness for small, medium, and micro enterprises (SMMEs). This study addressed these deficiencies by concentrating on the distinct requirements of SMMEs and by analyzing a comprehensive array of competencies essential for both agility and crisis preparedness.

7.4 Addressed Research Questions

This study sought to address the subsequent research questions:

What are the primary dynamic capabilities that enhance organizational agility and crisis readiness in SMMEs?

The research identified resource reallocation, decision-making flexibility, and innovation continuity as qualities that enhance agility, whereas crisis training, communication protocols, and stakeholder relationships were recognized as essential components for crisis preparedness.

How do these dynamic capabilities impact the capacity of SMMEs to effectively respond to and recover from crises?

The results indicated that competencies like decision flexibility and resource allocation substantially improve agility, enabling SMMEs to swiftly adjust to external changes. Training and communication procedures tailored to crises were demonstrated to enhance preparedness, hence facilitating effective crisis response and recovery.

7.5 Research Methodology Summary

The research utilized a quantitative methodology using structured surveys directed at SMME owners and managers across various industries in South Africa. A deductive research methodology, guided by established theories (Resource-Based View and Dynamic Capabilities Framework), was employed, consistent with a positivist research philosophy emphasizing objective, quantifiable results.

Data Collection:

Data was gathered utilizing a stratified random sampling method to guarantee a representative sample across several businesses. The survey had Likert-scale items assessing perceptions of dynamic capabilities, agility, and crisis preparedness.

Data Analysis:

Reliability and validity were evaluated by Cronbach's Alpha and factor analysis. Descriptive, correlation, and regression analyses were performed using SPSS to evaluate hypotheses concerning the relationship between dynamic capabilities and aspects of resilience. This methodology provided a thorough, empirically robust framework for investigating the study topics, yielding results that are both statistically valid and relevant to real-world SMME contexts.

7.6 Summary of Key Findings and Their Interpretation

7.6.1. Agility-Enhancing Dynamic Capabilities:

Key Findings:

Resource reallocation, decision flexibility, and strategic reevaluation exhibited a substantial correlation with organizational agility, with resource reallocation emerging as the most impactful element. This suggests that SMMEs that emphasize flexibility in resource utilization and decision-making are more adept at responding to abrupt changes.

Analysis:

The capacity for quick resource reallocation enables SMMEs to sustain operational stability, while decision-making flexibility fosters a proactive response to unexpected changes, in accordance with the Dynamic Capabilities Framework.

7.6.2. Crisis-Preparedness-Enhancing Dynamic Capabilities:

Key Findings:

Crisis-specific training and communication mechanisms significantly enhanced crisis preparedness. Additionally, stakeholder relationships and process reconfiguration were identified as moderate facilitators of crisis preparedness.

Analysis:

Training provides SMMEs with vital skills for crisis management, while communication mechanisms ensure a coordinated response. These results highlight the significance of systematic planning and anticipatory communication, consistent with Organizational Resilience Theory.

7.7 Contribution to Academic Discussion and Theoretical implications

This research enhances the academic discourse on resilience and dynamic capabilities in multiple aspects:

7.7.1. Extension of the Resource-Based View and Dynamic Capabilities Framework: This study expands the Resource-Based View (RBV) by analyzing capabilities within the SMME context, highlighting that even easily accessible, low-cost skills such as decision flexibility and training are crucial for resilience in smaller enterprises. This contradicts the traditional emphasis of the Resource-Based View (RBV) on rare, inimitable resources, proposing that dynamic adaptability may constitute a vital resource for Small, Medium, and Micro Enterprises (SMMEs).

7.7.2. Contextualizing Organizational Resilience Theory for SMMEs:

The findings highlight that, whereas resilience theory typically emphasizes resources and collaborations, small and medium-sized enterprises (SMMEs) derive more advantages from internally cultivated capabilities and frameworks, including training and communication protocols. This study enhances resilience theory by demonstrating that systematic preparation is crucial for smaller enterprises with restricted access to external resources.

7.8 Practical and Business Implications of Findings

The research offers practical advice for leaders of small, medium, and micro enterprises, politicians, and support organizations:

For SMME Managers:

Invest in initiatives that enhance agility, namely in developing flexible resource allocation and decision-making frameworks. These qualities facilitate swift adaptation, essential for preserving stability amid external fluctuations. Emphasize crisis training and establish formal communication channels to guarantee coherent and effective reactions during emergencies. These measures can alleviate the effects of crises and minimize downtime, safeguarding the continuity of the firm.

For Policymakers and Support Organizations:

Establish funding and training initiatives to assist SMMEs in developing resilience-related competencies, especially those that incorporate low-cost, high-impact strategies such as crisis management training and stakeholder communication. Provide incentives for small and medium-sized enterprises to invest in flexible procedures, including digitalization and resource-sharing networks, that improve agility and crisis readiness.

7.9 Suggestions for Future Research

This study has multiple opportunities for more exploration:

Longitudinal Examination of the Evolution of Dynamic Capabilities: Future study may utilize longitudinal studies to examine the evolution of dynamic capabilities in small and

medium-sized enterprises across time. This method may yield profound insights into how businesses sustain agility and preparedness while evolving and confronting new challenges.

Industry-Focused Research: Performing sector-specific analyses would facilitate a more detailed comprehension of resilience tactics, emphasizing how industry-specific elements (e.g., legislation, supply chain configurations) affect the efficacy of dynamic capacities.

Comparative Research Between Emerging and Developed Markets: A comparative analysis of SMMEs' dynamic capabilities across diverse economic contexts would determine if resilience tactics are universally applicable or necessitate adaption to regional variables, including differing degrees of economic support and infrastructure availability.

Evaluation of External vs. Internal Resilience Factors: Future research may evaluate the comparative significance of internal dynamic capabilities in relation to external partnerships and resources. This study would elucidate whether SMMEs ought to emphasize cultivating internal resilience or rely more significantly on external support networks.

7.10 Closing remarks

This study has highlighted the essential function of dynamic capabilities in improving the agility and crisis preparedness of SMMEs, especially in resource-constrained environments. The research offers SMMEs a framework to bolster resilience by identifying competencies that promote agility and crisis preparedness through realistic, scalable actions.

Theoretical contributions expand the Resource-Based View, Dynamic capabilities Framework, and Organizational Resilience Theory, tailoring these models for small, medium, and micro enterprises (SMMEs) and highlighting the skills that smaller organizations can cultivate within their resource limitations. Practical implications provide tangible measures for SMME leaders and policymakers, promoting organized planning and flexible processes to adeptly manage crises.

This research establishes a basis for subsequent studies on resilience-building techniques, offering insights that are both timely and valuable for SMMEs operating in an increasingly turbulent business environment. The results are pertinent not only for crisis recovery but also provide strategic direction for sustainable growth and adaptability in a fluctuating economic landscape.

7.11. References

1. Bryman, A., & Bell, E. (2015). *Business research methods* (4th ed.). Oxford University Press.
2. Creswell, J. W. (2018). *Research design: Qualitative, quantitative, and mixed methods approach* (5th ed.). Sage.
3. Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal, 5*(6), 215-217. https://doi.org/10.15406/bbij.2017.05.00149
4. Pallant, J. (2020). *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS*. Routledge.
5. Robson, C. (2016). *Real world research* (4th ed.). John Wiley & Sons.
6. Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
7. Teece, D. J. (2018). Dynamic capabilities as (workable) management systems theory. *Journal of Management & Organization, 24*(3), 359–368. https://doi.org/10.1017/jmo.2017.75
8. Barney, J. B., & Hesterly, W. S. (2018). *Strategic management and competitive advantage: Concepts and cases* (6th ed.). Pearson.
9. Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal, 21*(10-11), 1105-1121. https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E
10. Jüttner, U., & Maklan, S. (2011). Supply chain resilience in the global financial crisis: An empirical study. *Supply Chain Management: An International Journal, 16*(4), 246-259. https://doi.org/10.1108/13598541111139062
11. Ambrosini, V., & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews, 11*(1), 29-49. https://doi.org/10.1111/j.1468-2370.2008.00251.x
12. Helfat, C. E., & Peteraf, M. A. (2009). Understanding dynamic capabilities: Progress along a developmental path. *Strategic Organization, 7*(1), 91-102. https://doi.org/10.1177/1476127008100133
13. Schoemaker, P. J. H., Heaton, S., & Teece, D. (2018). Innovation, dynamic capabilities, and leadership. *California Management Review, 61*(1), 15-42. https://doi.org/10.1177/0008125618790246
14. Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews, 9*(1), 31-51. https://doi.org/10.1111/j.1468-2370.2007.00201
15. Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science, 13*(3), 339-351. https://doi.org/10.1287/orsc.13.3.339.2780
16. Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal, 24*(10), 991-995. https://doi.org/10.1002/smj.318

17. Augier, M., & Teece, D. J. (2009). Dynamic capabilities and the role of managers in business strategy and economic performance. *Organization Science, 20*(2), 410-421. https://doi.org/10.1287/orsc.1090.0424
18. Chatzoglou, P. D., & Chatzoudes, D. (2018). The role of innovation in building competitive advantages: An empirical investigation. *European Journal of Innovation Management, 21*(1), 44-69. https://doi.org/10.1108/EJIM-02-2017-0015
19. Barasa, L., Knoben, J., Vermeulen, P., Kimuyu, P., & Kinyanjui, B. (2017). Institutions, resources and innovation in developing countries: A firm level approach. *Research Policy, 46*(1), 280-291. https://doi.org/10.1016/j.respol.2016.11.008
20. Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies, 43*(4), 917-955. https://doi.org/10.1111/j.1467-6486.2006.00616
21. Protogerou, A., Caloghirou, Y., & Lioukas, S. (2012). Dynamic capabilities and their indirect impact on firm performance. *Industrial and Corporate Change, 21*(3), 615-647. https://doi.org/10.1093/icc/dtr049
22. Grant, R. M. (2010). Contemporary strategy analysis (7th ed.). John Wiley & Sons.
23. Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal, 13*(S1), 111-125. https://doi.org/10.1002/smj.4250131009
24. Verdú, A. J., & Gómez-Gras, J. M. (2009). Measuring dynamic capabilities: An empirical analysis in a non-profit context. *International Journal of Public Sector Management, 22*(5), 452-470. https://doi.org/10.1108/09513550910972576
25. Denrell, J., Arvidsson, N., & Zander, U. (2004). Managing knowledge in the dark: An empirical study of dynamic capabilities in evidence-based decision making. *Management Science, 50*(4), 529-549. https://doi.org/10.1287/mnsc.1040.0216
26. Schilke, O., Hu, S., & Helfat, C. E. (2018). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of Management Annals, 12*(1), 390-439. https://doi.org/10.5465/annals.2016.0014
27. Jiang, X., & Li, Y. (2008). The relationship between organizational learning and firms' financial performance in strategic alliances: A contingency approach. *Journal of World Business, 43*(3), 365-379. https://doi.org/10.1016/j.jwb.2007.11.001
28. Pisano, G. P. (2015). A normative theory of dynamic capabilities: Connecting strategy, know-how, and competition. *Harvard Business School Working Paper, No. 16-036*.
29. Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99-120. https://doi.org/10.1177/014920639101700108
30. Schilke, O. (2014). On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism. *Strategic Management Journal, 35*(2), 179-203. https://doi.org/10.1002/smj.2099
31. Helfat, C. E., & Raubitschek, R. S. (2000). Product sequencing: Co-evolution of knowledge, capabilities and products. *Strategic Management Journal, 21*(10-11), 961-979. https://doi.org/10.1002/1097-0266(200010/11)21:10/11<961::AID-SMJ134>3.0.CO;2-E

32. Lavie, D. (2006). Capability reconfiguration: An analysis of incumbent responses to technological change. *Academy of Management Review, 31*(1), 153-174. https://doi.org/10.5465/amr.2006.19379629
33. Arend, R. J., & Bromiley, P. (2009). Assessing the dynamic capabilities view: Spare change, everyone? *Strategic Organization, 7*(1), 75-90. https://doi.org/10.1177/1476127008100132
34. Ambrosini, V., Bowman, C., & Collier, N. (2009). Dynamic capabilities: An exploration of how firms renew their resource base. *British Journal of Management, 20*(S1), S9-S24. https://doi.org/10.1111/j.1467-8551.2008.00610.x
35. Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350. https://doi.org/10.1002/smj.640
36. Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal, 24*(10), 997-1010. https://doi.org/10.1002/smj.332
37. Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal, 21*(10-11), 1105-1121. https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E
38. Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal, 41*(4), 464-476. https://doi.org/10.5465/257085
39. Laaksonen, O., & Peltoniemi, M. (2018). The essence of dynamic capabilities and their measurement: A bibliometric review. *International Journal of Management Reviews, 20*(2), 184-205. https://doi.org/10.1111/ijmr.12122
40. Jansen, J. J., Van Den Bosch, F. A., & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management Science, 52*(11), 1661-1674. https://doi.org/10.1287/mnsc.1060.0576

Appendix 1 – Research Questionnaire

Enhancing Organizational Agility and Crisis Preparedness in SMMEs

Statement of Consent

Dear Participant,

You are invited to participate in a research study conducted by Mosuli Ngqolowa, a student at GIBS, University of Pretoria. The purpose of this study is to explore the dynamic capabilities that enhance organizational agility and crisis preparedness in Small, Medium, and Micro Enterprises (SMMEs) in South Africa.

Participation in this study is voluntary. You may choose not to participate. If you decide to participate, you may withdraw at any time without penalty. The survey will take approximately 15-20 minutes to complete. All responses are confidential, and no personally identifiable information will be collected. The data will be used solely for academic purposes and will be stored securely.

By proceeding with this survey, you acknowledge that you have read and understood this consent form, and you agree to participate under the conditions stated above.

Researcher: Mosuli Ngqolowa

Email: 23036410@mygibs.co.za

Supervisor: Mr. Andre Vermaak

Email: andrepv@mweb.co.za

* Indicates required question

1. I agree to participate *

   Mark only one oval.

   - ◯ Yes
   - ◯ No

2. What is your role within the organization? *

Mark only one oval.

- ◯ Owner
- ◯ Manager
- ◯ Other: _____

3. Please indicate the primary industry of your organization: *

Mark only one oval.

- ◯ Manufacturing
- ◯ Services
- ◯ Retail
- ◯ Other: _____

4. How long has your organization been in operation? *

Mark only one oval.

- ◯ Less than 1 year
- ◯ 1-3 years
- ◯ 4-6 years
- ◯ 7-10 years
- ◯ More than 10 years

5. How many full-time employees does your organization have? *

Mark only one oval.

- ◯ 1-10
- ◯ 11-50
- ◯ 51-100
- ◯ 101-200
- ◯ More than 200

6. Please indicate the location of your organization: *

Mark only one oval.

- ◯ Gauteng
- ◯ Western Cape
- ◯ KwaZulu-Natal
- ◯ Eastern Cape
- ◯ Other: _____

Section 2: Organizational Agility

To what extent do you agree with the following statements regarding your organization's agility?
(Please tick one box for each statement)

7. Our organization quickly adapts to changes in the external environment. *

Mark only one oval.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

8. Decision-making in our organization is flexible and responsive to change *

Mark only one oval.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

9. Innovation is a continuous process in our organization to meet changing market demands *

Mark only one oval.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

10. We regularly reassess and adjust our strategic direction based on emerging trends. *

Mark only one oval.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

Dynamic Capabilities

Please indicate your level of agreement with the following statements about your organization's capabilities:
(Please tick one box for each statement)

11. Our organization excels in identifying new market opportunities. *

Mark only one oval.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

12. We effectively integrate new technologies into our operations. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

13. Our organization continuously improves operational efficiency through process reconfiguration. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

14. We maintain strong relationships with stakeholders critical to our success *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

15. Our organization is committed to developing the skills and competencies of our workforce. *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

Crisis Preparedness

To what extent do you agree with the following statements regarding your organization's preparedness for crises?
(Please tick one box for each statement)

16. Our organization has a formal crisis management plan. *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

17. Employees receive regular training on crisis response procedures. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

18. We have the necessary resources to respond effectively to a crisis *

Mark only one oval.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

19. Communication protocols during a crisis are clear and well-established. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

20. Our organization has successfully managed crises in the past *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

Impact of COVID-19

Reflecting on the impact of COVID-19, please indicate your level of agreement with the following statements:
(Please tick one box for each statement)

21. The COVID-19 pandemic significantly disrupted our business operations *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

22. Our organization quickly adapted to the challenges posed by the pandemic. *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

23. We implemented new strategies as a direct result of the pandemic. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

24. The pandemic revealed areas where our crisis preparedness needed improvement *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

25. We have made lasting changes to our operations in response to the pandemic *

Mark only one oval.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Strategic Planning for Future Crises

Please indicate your level of agreement with the following statements about your organization's future planning:
(Please tick one box for each statement)

26. We are actively developing strategies to enhance our preparedness for future crises. *

Mark only one oval.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

27. Building organizational resilience is a top priority for our future planning. *

Mark only one oval.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

28. We plan to invest more in technology to improve our organizational agility. *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

29. Lessons learned from past crises are regularly reviewed to improve future responses. *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

30. Please provide any additional comments or suggestions on how your organization could improve its agility and crisis preparedness:

_____

_____

_____

_____

_____

Appendix 2 GIBS Ethical Clearance Application Form

GIBS ETHICAL CLEARANCE APPLICATION FORM 2024/25

RESEARCH PROJECT INFORMATION

NAME:	Mosuli Ngqolowa
STUDENT NUMBER:	23036410
PHONE NUMBER:	
E-MAIL ADDRESS:	23036410@mygibs.co.za
PROPOSED TITLE OF STUDY:	
RESEARCH SUPERVISOR:	Andre Vermaak
E-MAIL OF SUPERVISOR:	andre.vermaak@icloud.com
RESEARCH CO-SUPERVISOR	
E-MAIL OF CO-SUPERVISOR	

The purpose of this Research Ethics process is to ensure that all research conducted under the auspices of GIBS is done so in an ethical manner, in accordance with the University's policy and in such a way that **the rights of all stakeholders** associated with the research are protected.

In order for the GIBS Research Ethics Committee to assess your application, you are required to submit **a description of your Research Methodology** that must contain sufficient detail to ensure that the required steps have been taken to achieve this purpose, in the research design, data collection, analysis and storage of data used in the conduct of this research.

Please indicate the nature of the output your research is aimed at producing (mark one box only):

- ☐ ABP Applied Business Project
- ☑ MBA Research Report
- ☐ MBA Project Publish Article
- ☐ MBA Teaching Case Study
- ☐ MBA Entrepreneurship Stream Portfolio
- ☐ MBA Consulting Stream Portfolio/MBA Health Stream
- ☐ MPhil Research Report

GIBS Ethics Policy distinguishes between FOUR main types of data and THREE main types of methodology. Please complete the table for ALL the data types that you plan to use. Note that all applications must be accompanied by a description of the methodology to be used in the study. Initial all sections that apply to your research

GIBS ETHICAL CLEARANCE APPLICATION FORM 2024/25

Section of form and type of data or methodology	Attachments – including methodology chapter (please mark that they are included)
A **Pre-existing personal records of human subjects,** e.g. performance reviews	☐ Methodology section of proposal ☐ Description of the nature of the records to be used ☐ Signed permission letter from appropriately authorised person in the organisation to use the data
B **New data solicited from human subjects**, e.g. through interviews or surveys	☑ Methodology section of proposal ☑ Informed consent statement attach proforma (separate for qualitative data collection; as part of survey questionnaire for quantitative data collection) ☑ Interview guide / survey questionnaire / pre-existing proprietary test instrument / description of intervention ☑ IF pre-existing proprietary test instrument, letter of permission from the owner/copyright holder (e.g. the MBTI)
C **Public non-human data,** e.g. World Bank or other databases (no letter needed)	☐ Methodology section of proposal ☐ Explanation of the nature of the data, how you will source it and how you will use it
D **Private Organisation-specific non-human data,** e.g. financial statements, marketing or safety records	☐ Methodology section of proposal ☐ Explanation of the nature of the data, how you will source it and how you will use it ☐ Permission letter from the owner/organisation to use the data
E **Indicate which methodology** you will be using. Choose one only	☐ Qualitative ☑ Quantitative ☐ Mixed methods

GIBS ETHICAL CLEARANCE APPLICATION FORM 2024/25

SECTION A. PRE-EXISTING PERSONAL RECORDS OF HUMAN SUBJECTS

1. Specify the nature of records and how they will be used

2. Confirm that permission has been obtained from an appropriately authorised person to study and report on these records.
Remember to attach permission letter(s).

☐ I confirm

3. Provide the name and job title of the person in the organisation who has authorised the use of the records.

Name: Job Title:

4. How will **confidentiality** (when the identity of the respondent is known to the researcher e.g. when data collection is via interviews) and/or **anonymity** (when the identity of the interviewer is not known to the researcher e.g. when data collection is via surveys) of the respondents and their data be assured?
Mark all that apply – ensure this is included in your methodology chapter.

☐ No names will be requested

☐ No names will be reported

☐ Data will be stored without identifiers

☐ Only aggregated information will be provided

☐ Other. Please specify

SECTION B. NEW DATA OBTAINED FROM HUMAN SUBJECTS

5. Does the nature of your research require you to collect data from respondents who constitute a 'vulnerable population' (defined as those who are particularly susceptible to coercion or undue influence or who have difficulty giving free and informed consent to being the subjects of research)

☑ No

☐ Yes.
IF yes, explain the nature of the population and what measures will be put in place done to reduce or minimise this vulnerability. Ensure this is included in your methodology chapter.

6. Please confirm that no incentive is to be offered to respondents to participate in the study.

☑ I confirm

7. Mark the applicable box(es) to identify the proposed procedure(s) to be carried out to obtain data.

☐ Interview guide Attach if applicable

☑ Survey questionnaire Attach if applicable

☐ Pre-existing proprietary test instrument, e.g. MBTI Attach if applicable
IF a pre-existing proprietary test instrument is used, confirm that permission has been obtained to use it.

GIBS ETHICAL CLEARANCE APPLICATION FORM 2024/25

I confirm
Remember to attach permission letter(s) to use proprietary test instrument/s from an appropriately authorised person.

☐ • Intervention, e.g. training or experiment Describe in full in methodology chapter

8. Confirm that the data gathering is accompanied by a consent statement.

☑ I confirm

9. Where is the consent statement found?

☑ As part of the survey questionnaire, if quantitative data collection, in the introduction section of the questionnaire.

☐ As a separate document, if qualitative data collection, remember to attach.

10. Is there a risk that the respondents may not fully understand the nature of the study, or instructions or questions, or their rights as a result of language barriers between themselves and the researcher?

☑ No, there is not a risk

☐ Yes, there is a risk.
IF yes, how will the subjects' full comprehension of the content of the research, including giving consent, be ensured? Please specify, and include in methodology chapter

11. Do any respondents risk possible harm or disadvantage (e.g. financial, legal, reputational or social) by participating in the research?

☑ No

☐ Yes.
IF yes, explain what types of risk and what is done to minimise and mitigate those risks and include in methodology chapter.

12. Are there any aspects of the research about which subjects are not to be informed?

☑ No

☐ Yes.
IF yes, explain why, and how subjects will be debriefed, and include in methodology chapter.

13. Will the audio or video recorded data be transcribed and/or translated by an independent transcriber and/or translator?

☑ No

☐ Yes.
If yes, confirm that the transcriber and/or translator will be required to sign a non-disclosure agreement to protect the respondent's confidentiality, and include in methodology chapter

☐ I confirm. Remember to attach a pro-forma non-disclosure agreement

14. How will **confidentiality** (when the identity of the respondent is known to the researcher e.g. when data collection is via interviews) and/or **anonymity** (when the identity of the interviewer is not known to the researcher e.g. when data collection is via surveys) of the respondents and their data be assured? Include in methodology chapter

☑ No names will be requested, relevant when the identity of the respondent is not known to the researcher

- ☐ No names of individuals or organisations will be reported, relevant when the identity of the respondent is known to the researcher
- ☐ Only aggregated information will be reported
- ☐ Data will be stored without identifiers
- ☐ Other. Please specify

15. Is the topic of your research and the nature of the interview or survey questions about one or more particular organisations or to be conducted within one or more particular organisations?

- ☑ No
- ☐ Yes. If yes, confirm that appropriately authorised person/s have provided written permission for you to conduct this research
- ☐ I confirm. Remember to attach signed permission letter/s

SECTION C. PUBLIC NON-HUMAN DATA

16. Specify the nature of records to be used: Explain how they will be selected, where the data will be sourced and how the data will be used, and include in methodology chapter:

17. Confirm that this pre-existing non-human data is in the public domain, is legally accessible and is free of any copyright.

- ☐ I confirm

GIBS ETHICAL CLEARANCE APPLICATION FORM 2024/25

SECTION D. PRIVATE ORGANISATION-SPECIFIC NON-HUMAN DATA

18. Specify the nature of records (e.g. financial reports, marketing reports or safety records) and how they will be used.

19. Confirm that permission has been obtained to study and report on these records.

☐ I confirm. Remember to attach a signed permission letter(s).

20. Provide the name and job title of the person in the organisation who has authorised the use of the records.

Name: Job Title:

21. Do companies risk possible harm or disadvantage (e.g. financial, legal, reputational or social) by participating in the research?

☐ No

☐ Yes. Explain what types of risk and what is done to minimise and mitigate those risks. Include explanation in methodology chapter

22. How will **confidentiality** (when the identity of the respondent is known to the researcher e.g. when data collection is via interviews) and/or **anonymity** (when the identity of the interviewer is not known to the researcher e.g. when data collection is via surveys) of the respondents and their data be assured? Include in methodology chapter

☐ No names will be requested, relevant when the identity of the respondent is not known to the researcher

☐ No names of individuals or organisations will be reported, relevant when the identity of the respondent is known to the researcher

☐ • Only aggregated information will be reported

☐ • Data will be stored without identifiers

☐ Other. Please specify

GIBS ETHICAL CLEARANCE APPLICATION FORM 2024/25

ALL APPLICANTS MUST COMPLETE SECTIONS E AND F

E. CONFIDENTIALITY OF RESEARCH REPORT SUBMITTED FOR EXAMINATION OR PUBLICATION

23. Please select the relevant option relating to the confidentiality of the research report you will submit for examination:

☑ Free access, i.e. report not embargoed

☐ No access for a period of two years after research report is submitted for examination
Note that in exceptional circumstances, GIBS, being the copyright holder of the published research, may consent to an embargo of the report submitted for examination for a period of no more than two years. If you wish to apply for such an embargo, please provide reasons for this in a separate attachment.

☐ No access under any circumstance for an undetermined period.
A letter of permission from the Vice- principal: Research and Postgraduate Studies at the University of Pretoria must be obtained prior to making this application – and attached to this application for ethical clearance.

F. DATA STORAGE AND DISSEMINATION OF RESEARCH REPORT SUBMITTED FOR EXAMINATION

24. Please conform that you will use appropriate methods to ensure your data is safely stored in an accessible format for a minimum period of 10 years

☑ I confirm

25. Confirm that the details of your data storage method are set out in your attached methodology chapter

☑ I confirm

26. It is a goal of GIBS to make research available as broadly as possible. Mark the boxes below for the medium/media in which you do NOT wish results to be made available.

Academic dissemination	**Popular dissemination**
☐ Research report	☐ TV
☐ Scientific article	☐ Radio
☐ Conference paper	☐ Lay article
☐ Book	☐ Podcast
	☐ Book

Provide reasons for any limitation on publication marked above

27. Confirm that the consent obtained reason from participant in the research is aligned with the extent of dissemination, specified in question 26. For example, consent if you are planning to use the research to launch a consulting career will be more comprehensive than in the case of research that is intended only for a scientific audience.

☑ I confirm

28. IF you wish to describe any other information which may be of value to the committee in reviewing your application

☑ No

☐ Yes. Provide details in a separate sheet attached to this application

GIBS ETHICAL CLEARANCE APPLICATION FORM 2024/25

G. APPROVALS FOR/OF THIS APPLICATION

When the applicant is a student of GIBS, the applicant must please ensure that the supervisor and co-supervisor (where relevant) has signed the form before submission

STUDENT RESEARCHER/APPLICANT:

29. I affirm that all relevant information has been provided in this form and its attachments and that all statements made are correct.

Student Researcher's Name in capital letters:	MOSULI NGQOLOWA
Date:	25 Aug 2024
Supervisor Name in capital letters:	ANDRE VERMAAK
Date:	25 Aug 2024
Co-supervisor Name in capital letters:	
Date:	25 Aug 2024

Note: GIBS shall do everything in its power to protect the personal information supplied herein, in accordance to its company privacy policies as well the Protection of Personal Information Act, 2013. Access to all of the above provided personal information is restricted, only employees who need the information to perform a specific job are granted access to this information.

Decision:

Approved

REC comments:

Date: 27 Aug 2024

Appendix 3 Certification of Data Analysis Support

CERTIFICATION OF DATA ANALYSIS SUPPORT

(Additional support retained or not - to be **completed by all students)**

Please note that failure to comply and report on this honestly will result in disciplinary action

I hereby certify that (please indicate which statement applies):

- ***I DID NOT RECEIVE*** *any additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report:*
  ……N/A……

- ***I RECEIVED*** *additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report:*
  ……

If any additional services were retained– ***please indicate below which:***

☐ ***Statistician***

☐ ***Transcriber***

☐ ***Editor***

☐ ***Other (please specify……)***

Please provide the name(s) and contact details of all retained:

NAME: ……Andre Vermaak ……

EMAIL ADDRESS: …… andrepv@mweb.co.za ……

CONTACT NUMBER: …0833080235…

TYPE OF SERVICE: …Document editing ……

NAME: ……..

EMAIL ADDRESS: ……

CONTACT NUMBER: ……

TYPE OF SERVICE: ……

NAME: ……..

EMAIL ADDRESS: ……

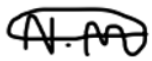
CONTACT NUMBER: ……

TYPE OF SERVICE: ……

I hereby declare that all *statistical write-ups and thematic interpretations of the results for* **my study were completed by myself without outside assistance**

NAME OF STUDENT:
Mosuli Ngqolowa
……

SIGNATURE:



……

STUDENT NUMBER:
23036410
……

STUDENT EMAIL ADDRESS:
23036410@mygibs.co.za
……