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AN EXPLORATION OF SMALL, MEDIUM ENTERPRISES (SMEs) OWNERS' PREPAREDNESS TOWARDS THE RISK OF NATURAL DISASTERS WITHIN THE LIMPOPO PROVINCE: A CASE OF VHEMBE DISTRICT MUNICIPALITY

By

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A Dissertation submitted in partial fulfilment of the degree

MASTER OF COMMERCE IN BUSINESS MANAGEMENT

In the

Department of Business Management

Faculty of Management, Law, and Commerce

UNIVERSITY OF VENDA

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2024

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I, Mapitsi Paulinah Masenya, student number 18014047, hereby declare that the thesis titled: **"An exploration of Small, Medium Enterprises (SMEs) owners' preparedness towards the risk of natural disasters within the Limpopo Province: a case of Vhembe District Municipality"** for Master of Commerce in Business Management at University of Venda is my original work and it has not been previously submitted to any academic institution. I also declare that all borrowed ideas from other sources have been acknowledged through in-text citation and reference list.

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ACKNOWLEDGEMENTS

Primarily, I want to offer my sincere gratitude to my supervisor Dr L.G Nkondo for her continuous guidance, support, patience, and encouragement throughout my study.

Ms N Khohomela, your guidance and supervision are greatly invaluable.

To my mother, Mrs N.R Masenya, your unconditional support, love, wisdom, care, and support are throughout my academic journey is inevitable. I will forever be indebted to you.

Dr Anyway Mikioni, your endless guidance and motivation is highly appreciated.

I want to thank all SMEs owners within Thulamela and Makhado Local Municipality who participated in this study, your contributions made this study a success.

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DEDICATION

This dissertation is dedicated to my mother, Mrs NR Masenya who values the significance of education and constantly guides and encourages me to do better in life. Her lessons and constant support and care made it easier for me to follow my dreams and made me who I am today. It is also dedicated to all the SMEs owners who shared their sentiments and experiences to make this research a success.

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ABSTRACT

Small and medium enterprises (SMEs) are considered as the engine of growth for every country's economy. These enterprises are estimated to be the major employer within the South African economy and contributes approximately 40 percent to the gross domestic product (GDP) of the country. SMEs are perceived as the main drivers of poverty reduction, employment, economic growth, and wealth generation, hence are vital for a marketplace to be profitable and competitive. Regardless of the significance of SMEs on the country's economic growth, literature has mainly ignored investigating the preparedness of SMEs owners towards the risk of natural disasters. Several available studies concentrated mainly on the challenges that SMEs come across in their businesses because of natural disasters thus threatening these enterprises' business continuity and performance. Hence, it is an opportunity for this study to address the gap based on the above literature. The purpose of this study was to investigate the SMEs owners' preparedness towards the risks of natural disasters within Thulamela and Makhado Local Municipality, Limpopo Province, South Africa. Furthermore, a qualitative research approach was employed with a sample of 10 participants; purposive sampling was used to select the sample who share similar characteristics, experiences, and sentiments. Semi-structured interview guides were used to conduct face-to-face interviews to gather data. After collecting data, the transcription of data was done using Microsoft word, then the transcribed data was analysed using thematic analysis through ATLAS.ti version 8 software. The findings of this study have shown that there is plethora strategies implemented to prepare to overcome risks of natural disasters in Thulamela and Makhado Local Municipality, therefore strategies revealed were investment in insurance, emergency financial funds, employee training and use of digital tools. The current study was limited solely to SMEs operating within two Local Municipality, namely Thulamela and Makhado Local Municipality and dependent only on the views and experiences of participants. The researcher recommended that SMEs should establish disaster awareness workshops and training to instil knowledge to other SMEs and large enterprises from other Municipalities or districts. It is advisable that a similar study be conducted in other districts using quantitative or mixed research approaches to gain a holistic understanding about the differences or similarities that may exist.

Keywords: Small and Medium Enterprises (SMEs); owners; preparedness; risk; natural disasters; South Africa; Limpopo Province.

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LIST OF ACRONYMS AND ABBREVIATIONS

SMEs: Small and Medium Enterprises

GDP: Gross Domestic Product

ATLAS.ti: Archive for Technology, Life world and Everyday Language

NGOs: Non-governmental Organizations

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CHAPTER 1

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction and background

In South Africa, Small, Medium Enterprises contributes to 70 percent creation of jobs within the country and improving the domestic markets efficiencies. Auzzir, Haigh and Amaratunga (2018) postulated that small, medium-sized enterprises (SMEs) contribute positively to the country's gross domestic product (GDP) thus yields approximately 40 percent to the country's gross domestic product (GDP). It is imperative to note that small, medium-sized enterprises (SMEs) are the engine that drives economic development through creation of jobs, tax provision, social inclusion, and innovation (Muriithi, 2021). According to Al-Herwi (2019) Small, medium-sized enterprises (SMEs) are businesses with revenues, assets, or several employees that remain below a specific limit and are witnessed to be the most enticing and tremendous innovative system. Algan (2019) asserted that these enterprises strive to adapt to the changing competition conditions and innovation within the globalisation process. Moreover, these enterprises establish an effective way towards the expansion of the country's manufacturing and industrialisation (Algan, 2019).

In addition, small and medium-sized enterprises (SMEs) possess a significant effect on economic activity and is the driving force of economic growth. This means that these enterprises contribute significantly to ensuring the sustainability of the economies through enhancing poverty alleviation, employment, and community development (Ogujiuba & Boshoff, 2020).

Regardless of the benefits that the small, medium-sized enterprises (SMEs) have on the country's economic growth, these enterprises are faced with challenges that threaten their business's sustainability, growth, and performance (Eggers, 2020). In support of this assertation, Malgas and Zondi (2020) posited that the challenges that SMEs encounter include limited access to financial resources, lack of education and training, inaccessibility of appropriate technology, inaccessibility of markets and lack of support structures. These challenges hinder the operation and sustainability of

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these enterprises and are detrimental to their success thereof adversely affect the growth of the nation's economy (Malgas & Zondi, 2020).

Furthermore, authors such as Algan (2019) have alluded that natural disaster is seen as another detrimental effect on businesses as it causes major disruptions which result in both the businesses and country's economy suffering significant losses. Patankar (2019) defined natural disasters as the sudden event that cause disruptions that prolongs for years on both businesses and economies. These disasters can be in the form of floods, earthquakes, storms, and hurricanes which cause huge losses for countries. It is imperative to note that these disasters are threatening the sustainability, development, and performance of the small, medium-sized enterprises (SMEs) or businesses at large (Asgary, Ozdemir & Ozyurek, 2020). The prevalence of natural disasters is attested by its widespread throughout the globe. The direct or indirect effects of natural disasters have a devastating impact on the small, medium-sized enterprise's activities and continuity (Samantha, 2018).

Moreover, in KwaZulu- natal, natural disaster contributed to the destruction of the economy as they were hit hard by the heavy rainfalls (Grab & Nash, 2023). It has been noted that the small, medium-sized enterprises (SMEs) in KwaZulu Natal areas suffered huge revenue losses as the disasters severely damaged these enterprises' infrastructure jobs were also lost. Eggers (2020) asserted that small, medium-sized enterprises are more affected by natural disasters than large enterprises due to being financially weaker, limited market and are less included in the recovery programmes.

Baltas, Fiordelisi and Mare (2022) postulated that the risks that natural disasters impose on businesses are the debt burdens additions, dissilience of business and financial instability; thus, making it difficult for businesses to maintain their operation and its sustainability. In addition, most studies focused on the economic impact of natural disasters and impact of natural disasters on businesses. Past studies have indeed proffering pertaining to the effect of natural disasters on both the economy of the nation and businesses (Asgary et al., 2020; Baltas et al, 2022). However, these studies did not address the preparedness of the SMEs in terms of dealing with risks associated with these disasters. The questions that remain unanswered within the existence of the natural disasters is "what are coping mechanisms employed by the SMEs owners to overcome the risks of natural disasters?" thus, this study focused on

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establishing the mechanisms SMEs owners employ to conquer the risks imposed by natural disasters.

1.2 Problem statement

Natural disasters have caused havoc on the sustainability and development of businesses worldwide. This means that during these natural disasters, businesses' performance, sales, and market share decreased drastically (Patankar, 2019). Natural disasters are considered the most expensive crisis, as its survey indicates that small, medium-sized enterprises lost their infrastructure and trading income (Agarwal, Fan, Klapper & Lee, 2021). The Small, medium-sized enterprises' sustainability has become challenging to maintain due to the high risks natural disasters imposed on their businesses. Natural disasters and the coping strategies used by SMEs have not been debated or researched fully in the SMEs owners need to be prepared for the risks imposed on their businesses by natural disasters. Hence, it becomes extremely hard for SMEs to remain competitive in the market. Thus, the SMEs preparedness towards overcoming the risk of natural disasters has not been investigated in the South African context including Vhembe District Municipality (Munawar, 2020). Therefore, there is a need to establish the coping mechanisms utilised to prepare for the risks imposed by natural disasters on their businesses.

1.3 Aim & objectives of the study

The aim and objectives of the study were as follows:

1.3.1 General objective:

The aim of this study was to investigate the SMEs owners' preparedness towards the risks of natural disasters.

1.3.2 Specific objectives:

1. To explore the forms of natural disasters that pose risks to SMEs owners in Vhembe District Municipality.
2. To examine factors that contribute towards preparedness of SMEs owners in dealing with natural disasters risks.
3. To identify the strategies or coping mechanisms that SMEs' owners use to overcome natural disasters risks.

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1.4 Research questions

The questions of this study were:

RQ1: What are the forms of natural disasters that pose risks to SMEs owners?

RQ2: What are factors that contribute towards the preparedness of SMEs owners in dealing with risks of natural disasters?

RQ3: Which strategies or coping mechanisms are being used by SMEs' owners to overcome natural disasters risks?

1.5 Proposed conceptual framework

According to Shikalepo (2020) conceptual framework represents the main concepts and ideas from theories, significant research findings, policy considerations and other sources of expert knowledge which guides and provides the direction of the study. To investigate and resolve the study's objectives, research problems and research questions, the conceptual framework was proposed to establish the focus of this study. The proposed framework was discussed in chapter 2 in relation to this study's objectives.

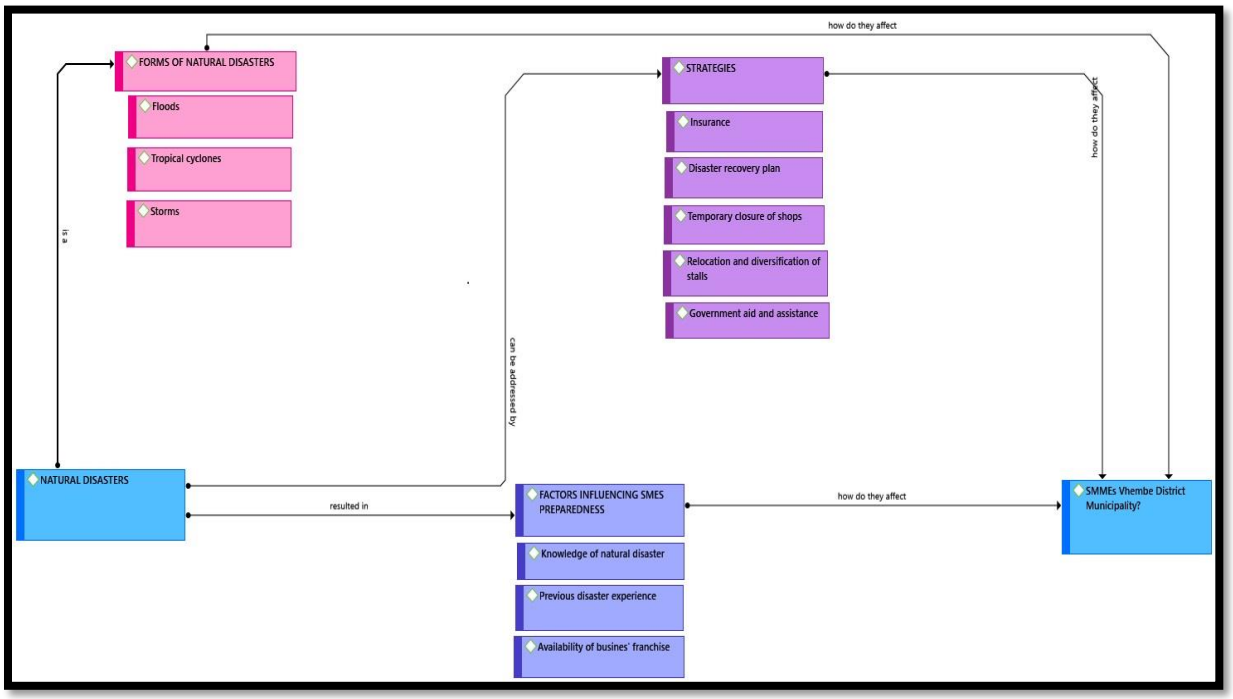


Figure 1.1: Proposed conceptual Framework.

Source: Researcher's own construct

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Figure 1.1 illustrated the correlation between natural disasters and the preparedness of SMEs owners within the Vhembe District Municipality. The framework began by depicting the forms of natural disasters such as floods, tropical cyclones, and storms that directly affects the SMEs owners. In addition, based on the review of literature, the framework highlighted several factors influencing SME owners' preparedness such as knowledge of natural disasters, prior disaster experience, and the availability of business franchises.

In response to these disasters and influencing factors, various coping strategies were identified such as insurance, disaster recovery plans, temporary shop closures, relocation, and government aid to mitigate adverse effects. These aspects collectively influence how SMEs owners were affected and how effectively they can respond to and recover from natural disasters.

1.6 Significance of the study

It is significant to execute a study that assesses the mechanisms SMEs owners utilise to prepare for the risks of natural disasters. This provided comprehensive understanding that benefited both the stakeholders of SMEs and other prospective researchers as they acquired relevant knowledge and information that assisted them to ensure sustainable business management. The information provided by this study educated various SMEs owners from different origins about the importance of preparing for risks that come with natural disasters thereby increasing their business continuity and growth rate thus making a valuable contribution to the phenomenon of interest.

In addition, the information also sheds more light to academia and large business owners about the importance of preparing for the risks that come with natural disasters. Therefore, the findings made a valuable contribution to the existing body of knowledge on large businesses and local economic development.

1.7 Delimitation of the study

Delimitation is boundaries of the study in terms of the study's theoretical background, objectives, research questions, study sample, study area and the research methodology (Theofanidis & Fountouki, 2018). The study focused on the SMEs owners' preparedness towards overcoming the risks of natural disasters in Thulamela and Makhado Local Municipality. Qualitative research methodology will be employed

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in this study. Hence, the participants of this study were SMEs owners within Thulamela and Makhado Local Municipality. The targeted SMEs owners under Thulamela Local Municipality were from Sibasa and Thohoyandou and at Makhado Local Municipality, they came from Tshakhuma as the SMEs in these two municipalities were severely affected by the natural disaster risks.

1.8 Operational definitions

This study's main concepts were defined as follows:

Natural disasters: refers to the devastating occurrence due to natural phenomenon that has severe impacts on the people's lives and live hoods, businesses' development and growth and the country's economy (Johnson, 2021). In this study, the researcher corroborates with the definition of (Johnson, 2021) to establish that natural disasters do not only affect the SMEs but also the societies and country's economies.

SMEs: refers to independent firms with limited revenues, assets and employ certain number of personnel and are usually localized (Sharif, 2021). For this study, SMEs are businesses with fewer personnel operating in small towns.

Owners: refers to the individuals who operates small businesses to satisfy the need while taking a financial risk with the hope of making profit (Venkataraman & Sarasvathy, 2021).). In this study, owners are all individuals owning small, medium-sized enterprises (SMEs).

Risks: refers to the prospective loss due to disaster occurrence in form of assets, finances, resources, human lives, and livelihoods which could befall a specific community or business in some specified future time (Pulhin, 2021). For this study, risks refer to devastating losses SMEs can incur as a form of assets, inventory, revenue, and resources.

Preparedness: refers to the pre-disaster occurrence actions aimed at increasing the readiness level to respond and eliminate disastrous events (Das, 2018). Preparedness in this study means the measures taken by SMEs to mitigate the future disaster effects.

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1.9 Literature review

1.9.1 Forms of natural disasters

Skouloudis, Tsalis, Nikolaou, Evangelinos, and Leal Filho (2020) stated that natural disasters affect the vulnerability and resilience of the SMEs worldwide. This section focused on the forms of natural disasters that pose risks to the SMEs owners which affect their business resilience as established by past scholars.

1.9.1.1 Floods

In Thailand, Pathak (2023) stated that floods are one of the devastating disasters that affects every sector of the SMEs and that of the country's economy. This implies that SMEs are affected more severely by this disaster because of unavailability of disaster risk reduction, business risk assessment and business continuity planning. Floods can be defined as high flows that overtake the natural channels provided for the runoff (Auzzir et al., 2018). Chang, Brown, Handmer, Helgeson, Kajitani, Keating, & Roa-Henriquez (2022) concur with the views of Pathak (2023) that floods have significantly caused extreme disruptions on the business industry particularly on the SMEs due to being less prepared to deal with the outcomes of such disastrous events thus forcing them to close their businesses with no intention of ever reopening again.

In addition, during this disaster the SMEs faced numerous risks such as perished stock, mangled infrastructure, or building, mutilated operating equipment, financial instability, inability to conduct business, higher insurance premiums and loss of revenue hence this made these enterprises to fail to remain open (Scuderi Tesorierew & Fasone, 2019). Owusu, Appiah- Kubi, Obeng & Baa-Poku (2021) added that floods caused a higher rate of unemployment as people lost their jobs due to businesses failing to maintain their operations and liquidity position. Hence, floods also caused high inflation rate and financial burdens on the nation's economy thus this affected its economic growth (Owusu et al, 2021).

1.9.1.2 Storms

Ngin, Chhom and Neef (2020) conducted an empirical study on climate change impacts and disaster resilience among micro businesses in Kratie, Cambodia. The study revealed that SMEs are adversely impacted by storms as these enterprises tend to be housed in non-engineered premises which makes it easier for this natural

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disaster to decay their property. During this disaster, the productivity of the SMEs decreased as it impedes these enterprises from operating their normal activities and employees from reporting to duty, thus this results in a decline in revenue (Munawar, 2020). Zhou andSun (2024) stated that storms are defined as the disturbance of weather that produces precipitation such as snow, rain, wind, and thunder. Moreover, Kunze (2021) added that storms tend to impose negative effects on these enterprises such as power outages, delays production processes, disruption in supply chain and demand while increasing their operating costs. This implies that the profits of the SMEs will drop drastically which will result in them having limited cash reserve to devise and execute a disaster management plan to respond to the risks that storms pose on their businesses (Ngin et al., 2020).

1.9.1.3 Tropical cyclones

Sharif (2021) conducted an empirical study to understand the impact of natural disasters on SMEs in Bangladesh. The study findings revealed that SMEs are more vulnerable to tropical cyclones than large businesses, this is because SMEs are usually smaller, low finance thus located in non- optimal areas (Sharif, 2021). According to Kunze (2020) tropical cyclones are any major windstorm rotating at a speed of greater than 100 kilometer per hour. Tropical cyclones cause widespread damage to commercial property and infrastructures which lead to shortfall of production (Lenzen, Malik, Kenway, Daniels, Lam & Geschke, 2019). Lenzen et al. (2019) postulated that during this disaster, business continuity is lost; this is due to disrupted supply of intermediate inputs thus this ripples the networks of upstream supply chains of SMEs. This also causes a decline of more than 262 percent in the sectoral growth rate and SMEs' business performance.

1.9.2 Factors that influence SMEs owners' preparedness towards natural disaster' risks

This section comprised of factors that influence SMEs owners to prepare for the risks that natural disasters may impose on their businesses. The factors are discussed as follows:

1.9.2.1 Knowledge of natural disasters

In Segamat District, Malaysia, Hashim, Ng, Talib and Tamrin (2021) conducted a study to investigate the factors influencing flood disaster preparedness initiatives

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among small, medium-sized enterprises and it revealed that knowledge of natural disasters is one of the factors that compel SMEs owners to promote the preparedness actions towards risks of natural disasters. Knowledge of natural disasters is incredibly significant to these enterprises as it assists them to identify disasters that have the potential of adversely harming their sustainability and business operation (Kusumastuti, Arviansyah, Nurmala & Wibowo, 2021). This implies that knowing about these natural disasters will assist them to plan how to mitigate and eliminate them properly.

1.9.2.2 Previous disaster experience

Kusumastuti et al. (2021) posited that another factor influencing preparedness is previous disaster experience. Previous disaster experience forces SMEs to associate their businesses with preparedness activities as they have dealt with the worst during previous outbreak of disaster events (Hashim et al., 2021). This implies that their experiences with dealing with disruptions of disasters assist these enterprises to be well prepared for future disaster' outbreaks (Saban, Rau & Wood, 2021). Saban et al. (2021) added that previous disaster experience influences SMEs to engage more in disaster management action especially when severe damage of the disasters has caused a long recovery period.

1.9.2.3 Availability of business franchise

Another factor influencing preparedness is the availability of business' franchise. Having another franchise situated in a different location associates an enterprise with high business resources thus this makes it less burdening for them to prepare for disaster events (Mpekiaris, Tsiotras, Moschidis & Gotzamani, 2020). Mpekiaris et al. (2020) asserted that owning numerous franchises in unusual places is essential as it increases the essential resources and funds needed to recover if damages are incurred.

1.9.3 Strategies or coping mechanisms utilized to overcome natural disaster' risks.

This section established the strategies or coping mechanisms employed by SMEs owners to mitigate the risks of natural disasters on their business. These strategies are as follows:

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1.9.3.1 Insurance

Utami, Santosa, Mardiana and Basuki (2019) stated that SMEs owners prepare for the devastating disasters through investing in the right insurance coverage. The insurance coverage that SMEs invest in include commercial property insurance and business interruption insurance. Commercial property insurance assists SMEs to protect its equipment and resources they need for their daily business operations thus this consists of the physical building owned by SMEs as well as its contents such as fixtures, furniture, business equipment and inventory (Kousky, 2019).

In addition, when a covered natural disaster vandalises or damages the SMEs' business property and equipment, the commercial property insurance will provide funds to repair or replace the damaged property and equipment (Utami et al., 2019). Kousky (2019) added that Business interruption insurance is utilised to ensure that SMEs recover everything it lost when a natural disaster striked. Ogutu (2021) added that this policy assists to pay items such as lost revenue, day to day operating expenses and businesses relocation costs when the outbreak of disaster event caused a havoc on the SMEs' business continuity and resilience.

1.9.3.2 Disaster recovery plan

According to Ogutu (2021) SMEs owners creates a comprehensive disaster recovery plan to assist minimise potential financial losses and from shutting down their businesses. Mendoza, Lau and Castillejos (2018) posits that this recovery plan must document the procedures every employee need to follow in the wake of a natural disaster hence such actions comprise of migrating important documents to the cloud or an off-site backup server, identifying alternative resources in the company's supply chain in order to ensure that business operations are uninterrupted, as well as outlining how employees will communicate with one another during an emergency. Furthermore, it is imperative for the SMEs owners to ensure that they invest fully in this recovery plan to ensure that they are in the best position possible for business continuity perspective when a natural disaster imposes threat to their businesses (Hashim, 2019).

1.9.3.3 Temporary closure of shops

Egbelakin, Poshdar, Walsh, Ingham, Johnston, Becker & Rasheed (2018) indicated that temporary closure of shops is another strategy to alleviate disastrous events on

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businesses. SMEs temporarily closes their businesses to avoid detrimental impacts of natural disasters on their businesses. Egbelakin et al. (2018) stated that closing shops temporarily is an effective and adaptive way SMEs uses as it assists them to incur less restructuring cost and can continue with their business activities as soon as the disasters subsided. This implies that these enterprises save capital costs of restarting a business. Moreover, SMEs businesses doors are closed to prevent the equipment, property, and stock from getting damaged through outbreak of natural disasters (Pathak & Olmo, 2021).

1.9.3.4 Relocation and diversification of stalls

Another coping strategy applied by SMEs is move their business stalls from the low-lying and non-engineering premises of the local areas to higher engineered ground premises to avoid various disasters from vandalising their business premises (Ngin et al., 2020). Das (2018) is of the view that most SMEs are moving from business area where their main market is located to a more protected area during an outbreak of disasters to ensure the continuity and resilience of their business. In addition, Most of the SMEs during a disaster tends to move their products to other business location while diversifying their business locations to overcome natural disasters impacts (Hashim et al., 2021).

1.9.3.5 Governmental aid and assistance

The government plays a crucial role in SMEs' disaster recovery plan (Kusumastuti et al., 2021). The governing of several factors such as disaster management, disaster aid and assistance programmes form the foundation for faster disaster recovery of SMEs; thus, this enables these enterprises to bounce back to normality (Baltas et al., 2022). It is noted that the support that government provides to SMEs for faster disaster recovery consists of risk transfer tools such as financial assistance, disaster mitigation prior to disaster event rather than post disaster as well as adequate utilisation of NGOs as an additional agency to assist the SMEs before, during and after the outbreak disaster events (Kimura, Hoshino & Onitsuka, 2019). Kimura et al. (2019) indicated that the government included the SMEs in the disaster management planning which enables SMEs to devise and respond well to the risks of disasters.

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1.10 Theoretical Framework

This study was guided by the Knight Theory of uncertainty and emergency management theory. The knight theory of uncertainty is grounded on the premise that lack measurable knowledge about some occurrence as opposed to the presence of quantifiable disasters (Akinboye & Morrish, 2022). It should be noted that within the context of disaster preparedness, the lack of knowledge of the possible occurrence results in an impact on the business operations. This study proposed that SMEs owners are affected by the risk associated with natural disasters.

In addition, emergency management theory was utilised to establish how to prepare, prevent, respond, and recover from disasters. This theory focused on the ideology that businesses need to practice implementing and adjusting the plans in accordance to changing circumstances (Du, Feng, Tang, Kang & Lu, 2020). This study followed both Knight Theory of uncertainty and emergency management theory following that most SMEs lack knowledge about the occurrence of natural disasters that may impose risks to their business's continuity and sustainability.

1.11 Research Methodology

The current study was conducted in Thulamela and Makhado Local Municipality which are situated within Vhembe District Municipality. The purpose of this study was to conduct an exploration about SMEs owners' preparedness towards the risks of natural disasters. The study followed a qualitative research approach to get rich, detailed and accurate data. Furthermore, interpretivism paradigm and phenomenological research design were adopted in this study in order for the researcher to acquire deeper understanding of SMEs experiences and views on natural disasters.

Furthermore, the population of this study comprised of small, medium-sized enterprises (SMEs) owners located in Thulamela and Makhado Local Municipality. The total sample size of this study was 10 SMEs owners. The study sample consisted of blacks and Indians SMEs owners who have been operating their business more than three (3) years. A purposive sampling was employed in this study to select the sample of the study and also to observe the participants viewpoints. The semi-structured interview guide was used to collect data through administering face to face interviews. The data was transcribed using Microsoft word and analysed using

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thematic analysis through ATLAS.ti version 8 software. The comprehensive discussion of methodology of the study is discussed in detail in chapter 3.

1.12 Trustworthiness

Adler (2022) stated that trustworthiness can be defined as the authenticity, truthfulness, and quality of qualitative research findings. The author added that trustworthiness has to do with the degree of trust or confidence researchers and readers have in results and addresses techniques that can ensure that researcher has carried out the research process correctly (Adler, 2022). Furthermore, it is important to note that trustworthiness of a study is based on reliability and validity (Kyngas, Kaariainen, & Elo 2020). Stahl & King (2020) posits that trustworthiness of a qualitative research merge from four approaches namely credibility, dependability, confirmability, and transferability.

In addition, credibility can be defined as a measure of determining the accuracy and correctness of the study findings (Stahl et al., 2020). Credibility enables the researcher to demonstrate individuals' real experiences and views through in-depth descriptions of the findings (Natow, 2020). To ensure credibility, the researcher will ensure that the participants are free to give their assumptions, experiences, and opinions about the phenomenon of interest. Moreover, through dependability, the researcher will ensure that they have proper documentation of data collection and analysis thus providing adequate information about the study thus emphasizing the changes that may occur during the research process. Hence, dependability is defined as the degree to which the study findings are dependable and consistent (Kyngas et al., 2020).

Furthermore, Natow (2020) stated that confirmability is defined as the degree to which other researchers could confirm the research findings. Through confirmability, the researcher will be able to indicate how the data collection, data analysis and interpretation of the results will be done and how the conclusions will be drawn to avoid biases on the study. This implies that the researcher will ensure that the study findings present the information acquired from the participants. Transferability can be defined as the degree to which the research findings can be transferred to other groups or settings (Cloutier & Ravasi, 2021). To ensure transferability, the researcher will provide an in-depth description of participants and the research process to allow readers to determine the findings' capability of being transferable to their own settings.

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1.13 Ethical consideration

In conducting this study, the researcher observed numerous ethical considerations which include permission to conduct the study, informed consent, voluntary participation, confidentiality, and anonymity.

i. Permission to conduct the study: the researcher presented and submitted her proposal to the research ethics committee to get approval for her intention of the study and research registration certificate will have to be acquired by the researcher to be allowed to go ahead with their study.

ii. Informed consent: the researcher informs all participants about their nature of involvement in the study before the commencement of interviews and makes sure that participants are not subjected to any harm. The researcher also asked participants to sign consent forms as evidence to show that they were not forced to participate in the study.

iii. Voluntary participation: the participants were not forced to participate in the study and participants were informed that they are free to withdraw from participating in the study any time they want.

iv. Confidentiality: the participants were given pseudo names to protect their identities thus ensuring that their dignity is upheld. The researcher also ensured that the participants' identities remain protected by not asking them for any personal information that can reveal their identities such as their names, contact details and home addresses.

v. Anonymity: the researcher gave participants' views and experiences codes to make it hard to link the participants to their opinions.

1.14 Outline of the project

Chapter 1: This chapter provided the general overview and background of the study. This included the introduction of the study, problem statement, objective of the study, aim of the study, conceptual framework, significance of the study, research questions, definitions of key concepts, delimitation of the study, literature review and research methodology.

Chapter 2: This chapter provided comprehensive knowledge and literature on natural disasters based on previous findings of past scholars. The researcher provided the

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related literature pertaining SMEs owners' preparedness towards the risk of natural disasters in South Africa.

Chapter 3: A comprehensive overview of methodological aspects utilised in this study was established which includes the research paradigm, research design, sample size and sampling method, study area, data collection and data analysis procedures as well as ethical considerations.

Chapter 4: The chapter presents the research findings obtained from SMEs owners in relation to the study objectives thus the data collected analysed and interpreted in this chapter. This chapter also established the discussion of the interpreted data in accordance with the findings of past scholars.

Chapter 5: This chapter presented the summary and conclusions of the interpreted results, and appropriate recommendations. Limitation of the study and direction for future research were also be discussed.

1.15 Support staff

The supervisors, proofreader and statistician provided support and guidance throughout this study.

1.16 Records

The data is kept in an encrypted hard drive and in a laptop for a period of five (5) years.

1.17 Chapter summary

In conclusion, this introduction presented a general background of the study, objectives and aim of the study, statement of the problem, research questions, operational definitions, research schedule and budget. Delimitation of the study, research methodology, support staff and research records of the study were explored.

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CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

This chapter presented the theoretical studies that corroborate the SMEs owners' preparedness towards natural disasters risks. The chapter commenced by exploring the overview of disaster preparedness of small businesses. Thereafter, the forms of natural disasters experienced by the SMEs owners were discussed within the South African context. Moreover, it determined the factors that influence the preparedness of SMEs towards risks of natural disasters in South Africa. Lastly, it identified the mechanisms SMEs owners apply to mitigate the risks that comes with natural disasters within the South African context.

2.2 Overview of disaster preparedness of small businesses

Godfrey (2019) indicated that disaster preparedness is regarded as the most vital stage that SMEs needs to engage in before the occurrence of natural disaster. Wang and Liu (2020) defined disaster preparedness as the plan of action or measures taken by small or large businesses to respond to the negative impact of natural disasters on their businesses. This is viewed as significant part of ensuring the survival and resilience of the SMEs and economy at large. Meyer & Wang (2022) asserted that proper disaster preparedness is essential to minimise the potential losses which SMEs may incur from unknown risks of natural disasters. The aim of disaster preparedness is to offer proper guidance and tools as that SMEs can utilise to rapidly recover from the negative effects of natural disasters.

In addition, disaster preparedness is also viewed as a mechanism which enhances awareness and knowledge about disasters within the SMEs organisations (Godfrey, 2019). In most countries, disaster preparedness is understood as the actions implemented and undertaken to boost SMEs ability to response faster to the disruptions of natural disasters (Mahmoud, Hamdan, Tahoo & Akeel, 2022). Despite the uncertainty of disasters, preparing for the unknown risks of natural disasters is significant to enable the SMEs to make informed decisions which are effective for recovery and survival of these enterprises. Meyer and Wang (2022) attested that SMEs justifies the preparedness tools and information employed to cope with natural

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disasters to justify and accomplish the aspect of business survival and recovery to other business owners, policymakers, and academia.

2.3 Forms of natural disasters

This section identified the forms of natural disasters which impacted the businesses' growth and sustainability. The forms of natural disasters which were identified in this study were extreme temperatures, floods, droughts, and storms and were discussed as follows:

2.3.1 Extreme weather

According to Rayadurgam and Rao (2023) extreme weather was established as one of the dire threats to the survival of the SMEs. The author acknowledged that extreme weather led to the products or raw materials of the SMEs perishing due to the unusual fluctuation of the weather patterns (Rayadurgam & Rao, 2023). Shilomboleni, Recha, Radeny and Osumba (2023) were of the view that SMEs experienced reduction in productivity due to their employees experiencing unusual health issues caused by this disaster. This meant that employees of these enterprises were struggling to operate to their full capacity which resulted in failure to meet deadlines and also caused delays in distribution of products or services (Shilomboleni, Recha, Radeny & Osumba, 2023).

Sadeghi (2022) asserted that SMEs encountered shortage of stock which created inefficiencies in the enterprise's operations during this disaster. During the occurrence of extreme weather, SMEs manufacturing systems started malfunctioning which made it hard to defect the exact quality of the products these enterprises manufacture (Sofyan, Arifin, Sofyan, Syamsu, Mansyur, Fauz & Waluya, 2021). Moreover, the author added that this meant that the quality of products the SMEs produced was compromised which made these enterprises to fail to satisfy the needs of customers hence resulting in dire decline in sales, its market share and reputation (Shilomboleni et al., 2023). SMEs operating in disaster prone areas also experienced an increase in the costs or premiums of their insurance coverage (Tavares, 2024).

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2.3.2 Floods

According to Msomi and Olarewaju (2021) floods caused severe physical damage or loss on the SMEs business infrastructure which led to extensive cost of repairing or replacing the entire infrastructure as most these enterprises are based on disaster prone areas hence resulted in SMEs being unable to continue operating. The author emphasized that this disaster also caused SMEs to incur loss of their inventories which made these enterprises to fail to meet the needs of customers (Msomi & Olarewaju, 2021). As this disaster compromised the safety and health of the SMEs employees, the absenteeism of these employees from work increased which started affecting the day-to-day business activities of these enterprises; this caused the SMEs to experience financial strains and being at verge of closing down (Sadeghi, 2022).

2.3.3 Droughts

Droughts imposed a severe threat to the business continuity, sustainability, and growth of SMEs (Tavares, 2024). Sahu (2022) revealed that SMEs encountered a decrease in revenue which forced these enterprises to retrench some of their employees and reduced the working hours in order to cover its operation costs. Drought made it difficult for various SMEs with limited access to financial resources to provide a working environment that was solid, safer, and adequate for its stakeholders (Azmi, Khalique, Noor, Yaacob & Hina, 2021). Therefore, this implied that SMEs infrastructures were exposed to harmful contaminators, putting the safety and health of the employees at risk due to failure of these enterprises to invest in protective disaster measures.

Furthermore, Azim et al., (2021) explained that SMEs encountered scarcity in raw materials and resources during this disaster which forced these enterprises to increase the prices of the products or services which also led to decline in customer demand and spending. SMEs that lacked access to adequate resources or advanced technological tools failed to adapt quickly to climate changes which made these enterprises vulnerable to the unknown risks of this disaster (Tavares, 2024; Sahu, 2022).

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2.3.4 Storms

Msomi et al., (2021) were of the view that during this disaster, SMEs experienced constant outages of power which interrupted the production and communication systems of these enterprises hence made it difficult for these enterprises to operate normally. Kativhu, Iwara & Mwale (2021) posited that SMEs inventories perished which led to these enterprises incurring revenue losses due to lack of adequate financial resources to quickly replace the damaged inventories. This disaster further caused interruption in SMEs steady flow of raw materials and goods which resulted in these enterprises failing to meet the set deadlines and orders being delayed (Farisani, 2022).

Therefore, several SMEs experienced shortage of stock or inventories which negatively affected these enterprises' ability to the satisfy customers' needs and demands – this also affected these enterprises financial performance (Kativhu, Iwara & Mwale (2021). Farisani (2022) acknowledged that SMEs with no emergency financial resources were struggling to recover from the damage caused by this disaster on their enterprises as these enterprises also failed to implement and invest in disaster preparedness strategies and adequate infrastructure.

2.4 Factors that influence SMEs preparedness towards natural disaster' risks

This section examined numerous factors which influences SMEs owners to prepare to deal with the risks of natural disasters. The factors examined in this study are understanding disaster risk, transfer of disaster risk, prior disaster related experience, Use of technological data backup, business network support and availability of financial resources. These factors were discussed as follows:

2.4.1 Understanding disaster risk

Understanding disaster risk refers to the ability of identifying, determining, and understanding the potential risks which can negatively impact the business's operations and existence (Sedibe, 2020). Harries (2021) stated that SMEs will invest in natural disaster risk mitigation mechanisms when they thoroughly understand how the natural disaster risk could impact the operation and sustainability of their business. This can be done by SMEs through assessing their vulnerability on the various risk of natural disaster based on their business infrastructure, operations and where the businesses are situated (Harries, 2021).

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2.4.2 Transfer of disaster risk

SMEs employ this strategy to shift their burden of financial and property risks which are associated with natural disasters to the insurance company thus alleviating the strain for SMEs recovery amid the occurrence of these risks (Katare, Marshall & Valdivia, 2021). According to De Matteis, Elia & Del Vecchio (2023) transfer of disaster risk can be defined as the practice in which risks are shifted from one business sector to another business sector; it can either be through insurance, outsourcing and contracts. De Matteis et al., (2023) further articulated that SMEs can also transfer the disaster risk through outsourcing certain operation functions of their enterprises to businesses which have better resources to effectively deal with natural disaster risks. By transferring the risk either through outsourcing or insurance, SMEs are able to protect their infrastructure and assets while ensuring long-term businesses sustainability for these enterprises (Katare et al., 2021).

2.4.3 Prior disaster related experience

Prior disaster related experience is the unforeseen events or hazards which have negatively impacted the businesses' operations and reputation in the past (Skouloudis, Leal Filho, Deligiannakis, Vouros, Nikolaou, & Evangelinos, 2023). Siwedza & Shava (2020) stated that SMEs that have faced risks unforeseen events or hazards in the past tend to prepare better based on the experiences they encountered, and knowledge gained from those events. Prior experience on the disasters encourages SMEs to comprehensively conduct a disaster plan which is appropriate to shape how their enterprises will respond to natural disasters in the future (Siwedza et al., 2020).

Furthermore, Miller & Seitz (2020) indicated that SMEs can analyse the how the past disasters impacted their businesses through assessing their business vulnerability to the disasters and ensuring that risk management mechanisms are established to enable these enterprises to continue operating effectively even in the midst of disasters. SMEs are able to evaluate the risk management mechanisms that they applied when they faced the unforeseen events in the past through identifying loopholes which made them to be vulnerable to those disasters and adjust their strategies to be well prepared should another disaster occur (Miller & Seitz, 2020).

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2.4.4 Use of technological data backup

Hossain, Rahman & Islam (2021) defined technological data backup as the process of copying and storing data from one location to another through the use of digital tools to protect it against disaster or malicious action. Goh & Heng (2021) stated that SMEs must establish a solid data backup plan to avoid loss of critical and sensitive business data due to natural disasters. SMEs utilise data backup tools such as cloud, automated backup software and external hard drives to recover business data faster after the unexpected disruptions of natural disasters (Hossain et al., 2021). Miller et al., (2020) says that these data backup tools also enable SMEs to quickly restore their business operations without incurring consequences which are permanent. SMEs which have backup plan that is clear are able to operate smoothly knowing that they are protected from the hassles of natural disasters (Zhang, Chen & Zhao, 2023).

2.4.5 Business network support

Zhang et al., (2023) indicated that business network support is vital for SMEs as these networks provide guidance and access to resources which are relevant to ensure operation of these enterprises even in the midst of unexpected disruptions of natural disasters. SMEs foster strong network support so that they are also able to receive financial assistance such as emergency grants or loans as disasters tend to put them on a financial strain – this will help them to maintain cash flow of their enterprises (Harries, 2021). Skouloudis et al., (2023) articulated that these network support enable SMEs to gain knowledge from the experiences of other businesses in terms of the risk management and recovery strategies they applied to mitigate the risks of natural disasters. Harries (2021) affirmed that after a disaster, SMEs can be able to get the opportunity to earn their market position through diversification of products and outreach of customers; this is done mostly through partnering with the same business sectors within the network support group.

2.4.6 Availability of financial resources

The author asserted that SMEs having adequate financial resources are able to invest in recovery measures such as backup system and infrastructure to ensure that their businesses are fully protected during the disruptions of natural disasters (Helgeson, Fung, Zhang, Roa-Henriquez, Zycherman, Nierenbeng, Butry & Ramkissoon, 2020). Chang, Brown, Handmer, Helgeson, Kaijani, Keating and Roa-Henriquez (2022)

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presented that when SMEs have access to available financial resources, they are able to quickly adapt to the circumstances which changes due to occurrence of natural disaster. In order to remain competitive within the business industry or market during the unforeseen disasters, SMEs utilise the available financial resources to modify and rebrand their products or services to avoid reduction in sales and consumer demand (Helgeson et al., 2020). Access to financial resources makes it easier for SMEs manages to pay for their operational expenses even during the prolonged disruptions of natural disasters on their businesses.

2.5 Strategies to overcome risks of natural disasters

This section presented the strategies that the SMEs owners established to deal with risks of natural disasters. The established strategies are implementing emergency business continuity plan, create communication system, diversification of business, engaging in disaster preparedness training, and use of technological systems, insurance coverage and invest in business property protection measures. These strategies were discussed as follows:

2.5.1 Implementing emergency business continuity plan

Pitt and Galloway (2021) indicated that business continuity plan is one of the effective mechanisms for SMEs to overcome the unknown risks of natural disasters that these enterprises may incur. Business continuity plan is defined as a plan which outlines the critical information and procedures that the business needs to follow in order to continue operating in case of unplanned event or disaster (Bharadwaj, Sharma & Gupta, 2020). SMEs outlines a well-established emergency business continuity plan to thoroughly do risk assessment on their enterprises to identify and assess their vulnerabilities to potential natural disasters to implement relevant emergency responses to safeguard the continuity of these enterprises (Mncube & Mthembu, 2023).

Dube and Lee (2019) determined that SMEs executes this plan to ensure that every personnel within these enterprises is aware of the detailed steps which needs to be taken to secure the normal business operations during and after the disruption of natural disasters. This emergency plan will consistently be reviewed and updated by the SMEs owners to align with the changing scenarios of unknown risks of natural disasters (Chang et al., 2022). The author further attested that SMEs makes sure that

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the roles of all personnel in this emergency plan are outlined so that the personnel know what is expected from them to help reach the recovery objectives of the business on time (Chang et al., 2022). Dube and Lee (2019) confirms that SMEs needs to set realistic objectives or targets for recovery to ensure that the business recovers before the risks of natural disasters hinders the operations of the business completely.

2.5.2 Create communication system

SMEs needs to be certain that communication system that is created is effective when faced with disasters as it will assist these enterprises to sustain the operations of the business, ensure employees' safety and enhancing coordination efforts within the business (Van Zyl & Botha, 2019). Mncube and Mthembu (2023) corroborated that SMEs made sure that all relevant stakeholders of the business are informed about the communication system which will be used during a disaster and the specific people that will be responsible for distributing the information through that system. This means that this communication system will be used to provide clear clarity and guidance to stakeholders about what needs to be done to overcome the risks that are imposed on these enterprises.

Furthermore, the SMEs ensured that dedicated communication lines such as Microsoft teams was set up so that it comes easier to share information and resources critical to the recovery plan of the enterprises from the disasters with the business' stakeholders (Katare et al., 2021). This ensures that all stakeholders are on the same page regardless of where they are currently working from. Helgeson et al., (2020) added that SMEs implement emergency communications training for their stakeholders where the stakeholders will acquire knowledge about evacuation procedures, emergency contacts, and roles the stakeholders need to play in the recovery operation of the business.

2.5.3 Diversification of business

Aharanwa (2021) defined diversification as the process of expanding the operation of business through modifying and adding the products or services offerings and exploring the new markets. The SMEs aim to diversify the business is to alleviate the risks of disaster and show resilience through transferring some of these risks to several facet of these enterprise. Reddy (2022) emphasized that SMEs diversify its business' product or service offerings based on seasonal changes and accommodate

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unique needs of customers. This assist SMEs not to experience slowdown in their operations even when the disaster causes disruption on certain part of these enterprises; E.g. SMEs that sells home fitness products may introduce outdoor gear to minimize the enterprise being dependent on one business sector (Reddy, 2022).

Makhaye and Subban (2022) asserted that SMEs explores and enter into new markets which they analysed that these markets are less vulnerable to the risks of natural disasters. Makhaye and Subban (2022) concurred with Aharanwa (2021) by attesting that SMEs expand its operation through exploring the ecommerce business sector which will assist these enterprises to maintain its business continuity and profitability regardless of the impact of natural disasters. In addition, SMEs identify alternative suppliers that can be used to supply their businesses with specific services or products they need to keep the operation of the business flowing. This will assist them to keep their business doors open even if one of their suppliers is facing challenges due to natural disasters (Fubah & Moos, 2022).

2.5.4 Engaging in disaster preparedness training

Fubah and Moos (2022) denoted that SMEs engage in disaster preparedness training to control the unknown risks of natural disasters. This is a crucial strategy for SMEs to equip its key stakeholders with vital expertise relevant to ensuring quick response to disruptions of natural disasters. SMEs ensures that they constantly host workshops and seminars which teaches stakeholders of the business about the risks of various forms of natural disasters which mostly affects the continuity and operations of businesses (Katz, Harwood & Nielsen, 2023). These training enables the SMEs to educate the enterprises' employees about the safety measures such as evacuation routes which needs to be taken into consideration during and after the occurrence of natural disasters.

Sadeghi (2022) attested that disaster preparedness training equip the SMEs employees and other stakeholders with the ability to effectively engage during a disaster through the designated emergency lines usage. This is an indication that these trainings emphasize the significance of SMEs' preparedness towards the day-to-day operations of their businesses and awareness of executing disaster management response plan on time. Through these training, SMEs stakeholders are

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able to actively suggest ideas which will improve these enterprises set plan for disaster response (Sharif, 2021).

2.5.5 Use of technological systems

SMEs enhances their preparedness towards the risks of natural disasters through employing the technological systems. The SMEs wield these systems to enhance and maintain the operations of these enterprises during disaster disruptions – this is mostly done by moving from working in the office to working remotely (Moyo, 2021). Moyo (2021) articulated that SMEs automated most of their business functions and processes to make sure that these enterprises continue to operate during and after disaster disruptions. This ensured that these enterprises recover faster after a disaster.

Moreover, Shikwambana, Malaza and Ncube (2022) said that SMEs created private network systems which enables the employees to retrieve the data and resources they needed from the enterprises to work effectively from home while safeguarding the privacy and security of enterprises data. The author further indicated that these network systems enable SMEs to remotely share information, monitoring the business's progress through tracking the business's inventory and how the products or services moves during and after the natural disasters (Shikwambana, Malaza & Ncube, 2022). Through the use of these technological systems, SMEs are able to facilitate workshops or meetings with stakeholders through online platforms such as Zoom and Microsoft teams to brainstorm ideas which ensure that the business remains operational and adjust its disaster management plan accordingly (Sharif, 2021).

2.5.6 Insurance coverage

Insurance coverage is another crucial strategy SMEs use to protect their enterprises against the risks associated with natural disasters (Markel, 2024). SMEs invest in insurance to remove the burden of financial crisis on their enterprises which results from unforeseen natural disasters. Giz (2019) highlighted that SMEs which invested in solid insurances receive financial rescue which helps them to recover faster and return to operate fully after the losses caused by natural disasters. As the natural disasters causes disruption within the operations of SMEs based on where the businesses are situated which normally results in closure of these businesses; the

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insurance provides these SMEs with extra financial resource to temporarily move and operate at a different location which is less disaster prone (Munongo & Pooe, 2022).

Mahmood, Hamdan, Tahoo and Akeel (2022) emphasized that investing in insurance helped SMEs receive revenue for income lost due to direct physical damage on the premises and operations of their business which was caused by disasters. The author added that insurance was able to cover the ongoing expenses of the SMEs until these enterprises are back to operate at their full capacity (Mahmood, Hamdan, Tahoo & Akeel, 2022).

2.5.7 Invest in business property protection measures

According to Ingirige and Wedawatta (2019) SMEs invest in property protection measures to reduce the physical damage and losses which are caused by risks of natural disasters. These property measures are implemented within these SMEs businesses to ensure that their business premises are protected and are not vulnerable to disasters. This strategy also enables the SMEs to assess areas which are less disaster prone and move their businesses to those particular destination or location to ultimately continue operating even during the disasters (Gamage, Ekanayake, Abeyrathne, Prasanna, Jayasundara, & Rajapakshe, 2020).

Furthermore, Montmasson-Clair, Mudombi, and Patel (2019) affirmed that the SMEs ensures that systems such as gutters and sandbags are installed on their business property to prevent forms of natural disaster such as floods and extreme temperatures to cause physical damage on their property. Gamage et al., (2020) added that by installing those systems on their business property, SMEs reduces the risk of the losing the revenue which may be caused by interruption of its operation during disasters. SMEs protects their business premises to be certain that their employees are protected from harm during natural disasters, this enhances the retention of their stakeholders and resilience of the business amid the risks that comes with natural disasters (Ingirige & Wedawatta, 2019).

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2.6 Theories adopted by this study

This section presented the theories that guided this research study. The theories that grounded this research study were Emergency management theory and Knight Theory of uncertainty. These theories were discussed as follows:

2.6.1 Knight Theory of uncertainty

The Knight theory of uncertainty was introduced by Knight (1921) to help understand how uncertainty affects the business and economics decisions. Previous scholars such as Arend (2023) and Knight, Moen & Madsen (2020) supported the notion that uncertainty influences the SMEs' decision making for their long-term survival and success. Knight et al., (2020) highlighted that SMEs establishes strategies which are adaptive to unexpected risks of disasters. SMEs which embrace uncertainties tend to make decisions which are informed to elevate their business survival and resilience chance in the unpredictable situations (Hassan & Bakar, 2023). This theory was relevant to this study because SMEs owners prepare to overcome natural disasters by implementing strategies that addresses the uncertainty of these disasters.

2.6.2 Emergency management theory

Klaas and Schmidt (2020) stipulated that SMEs ability to navigate emergencies effectively lies upon the frameworks and contingency plan they provide to influence how they address the unforeseen crises. Bhaduri & Ghosh (2019) concurred with Micheli & Puglisi (2021) and Zhou & Yang (2024) through the notion that this theory enables the SMEs which handles emergencies properly to enhance the reputation of its business and foster transparency among its key stakeholders through initiating emergency transparent communication lines where updates about the disaster plans are constantly updated during a crisis. This theory shows the availability of factors which influences the preparedness of SMEs to overcome disasters.

2.7 Summary of literature findings

Most existing scholars such as (Rayadurgam & Rao, 2023; Sadeghi, 2022; Msomi & Olarewaju, 2021; Sahu, 2022; Azmi, Khalique, Noor, Yaacob & Hina, 2021; Farisani, 2022; and Kativhu, Iwara & Mwale, 2021) had mainly focused on forms of natural disasters which negatively impact the SMEs survival and sustainability. The literature pertaining the factors that influences disaster preparedness were established as understanding the risk, transfer of risk, prior disaster related experience and use of

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technological data backup (Harries, 2021; Katare, Marshall & Valdivia, 2021; Miller & Seitz, 2020; Hossain, Rahman & Islam, 2021; and Chang, Brown, Handmer, Helgeson, Kaijani, Keating & Roa-Henriquez, 2022). Furthermore, the coping strategies established were implementing emergency business continuity plan, create communication system, diversification of business, engaging in disaster preparedness training, Use of technological systems and insurance coverage (Bharadwaj, Sharma & Gupta, 2020; Van Zyl & Botha, 2019; Aharanwa, 2021; Reddy, 2022; Makhaye & Subban, 2022, Katz, Harwood & Nielsen, 2023, Moyo, 2021, Shikwambana, Malaza & Ncube, 2022; and Markel, 2024).

Acknowledging the contribution of the reviewed existing studies, it has revealed inadequate literature about the factors that influences disaster preparedness of Micro enterprises despite this body of knowledge contributions, there was still a pending need to explore the factors that influences disaster preparedness of SMEs. Another literature that was ignored entirely in the existing literature was the body of knowledge pertaining the coping strategies or mechanisms that SMEs put in place to prepare to address the potential risks within natural disasters context. As a result, this showed that the literature pertaining those coping strategies or mechanisms still needed to addressed and prioritised.

2.8 Chapter summary

In summation, this chapter has shown that there are plethora coping mechanisms or strategies that SMEs put in place to prepare for unknown risks that comes from the occurrence of natural disasters. As several past scholars have focused on the impact of natural disasters which led to researcher addressing the gap regarding disaster preparedness strategies for SMEs. The following chapter focused on the adopted methodology to answer the set objectives and questions of this research.

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CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

Methodology is significant for guidance and ensuring that the ethical considerations are not compromised. This chapter outlined the methodology that was utilised to address the objectives set for the study and to answer the research questions. It discussed the research paradigm and research design which were employed in the study. Then it thoroughly described the techniques and instruments that were used to collect and analysis data. In addition, this chapter also presented the ethical guidelines which the researcher adhered to when conducting the research. Lastly, limitations which hindered the study to be finalised smoothly were addressed.

3.2 Study area

The study was conducted in Thulamela Local Municipality and Makhado Local Municipality which are situated within the Vhembe District Municipality in Limpopo province. These two Local Municipalities are part of the four Local Municipalities which forms the Vhembe District Municipality. Moreover, Thulamela and Makhado Local Municipalities are category B municipalities established by the Government municipal structures Act 117 of 1998 (Municipalities of South Africa, 2024).

Thulamela and Makhado Local Municipalities are stated as of the major business centres. These local municipalities are eastern most Local Municipalities in the district with cities such as Thohoyandou and Makhado. These cities are the administrative, agricultural, and commercial centre of the Local Municipalities. These Local Municipalities have the second largest population density with approximately 1 402 779 in 2020 (Municipalities of South Africa, 2024).

The study area is shown in Figure 3.1 below:

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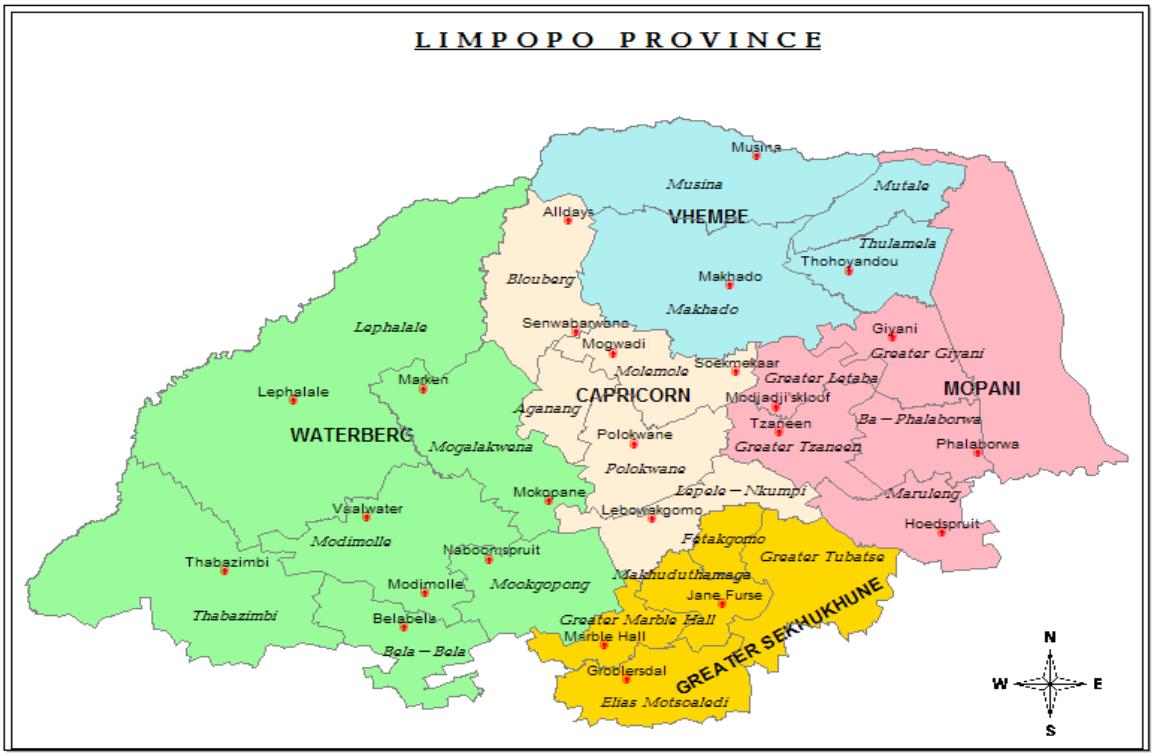


Figure 3.1: VHEMBE DISTRICT MUNICIPALITY MAP (Source: Municipalities of South Africa, 2024).

3.3 Research paradigm

According to Kwao (2023) a research paradigm is the preconceived notions that governs the way researchers comprehend, examine, and interpret research. The author added that paradigm is a framework which assists the researcher to be able to interpret and understand the world around them (Kwao, 2023). Turin, Raihan & Chowdhury (2024) stated that paradigm shapes the research process in terms of assisting the researcher to formulate research questions, identify the research problem, employ the relevant methods to address the questions and interpret of research data. In addition, Ugwu, Ekere & Onoh (2021) stipulated that research paradigm is categorized into four distinct types which is positivism, interpretivism, constructivism and critical theory. Interpretivism and constructivism are regarded as strategies which focuses on qualitative methods and are subjective to the experiences and social interactions of the humans while positivism is regarded as a strategy that focuses on the quantitative methods and believes that reality is independent from the perception of humans (Ugwu et al., 2021).

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Moreover, Turin et al. (2024) denoted that the paradigm influences the conclusions that are drawn from the research while ensuring that the integrity of the work is enhanced. It enables the researcher to effectively defend and articulate their study findings and their choice in methodologies (Turin et al., 2024). Interpretivism research paradigm aims to ensure that the researcher fully assess the research work to mitigate the biases and avoid errors thus embracing the value of research findings. Interpretivism paradigm allows adaptability and flexibility which makes it easier for the researcher to adjust their methodological approaches during collection of data (Junjie & Yingxin, 2022). Moreover, researcher chose to employ the interpretivism research paradigm in this study as this paradigm enabled the researcher to produce raw, rich, and thoroughly detailed data which revealed less complexities (Nickerson, 2022).

3.3.1 Justification of the interpretivism research paradigm

Interpretivism research paradigm was used in this study as this paradigm ascertains that the reality is constructed by individuals based on their perceptions and experiences (Junjie & Yingxin, 2022). This paradigm is flexible which made it easier for the researcher to draw comprehensive conclusion for the study through engaging and understanding the SMEs' preparedness towards the risk of natural disasters from the perspective of the affected owners. The researcher chose to employ this paradigm as it enabled the researcher to understand the disaster preparedness phenomena based on the participants experiences and social perceptions. It also enabled the researcher to explore the throughout experiences of participants through interviews and formal discussion hence not considering the generalised measurements.

3.4 Research Design

According to Wisenthige (2023) research design is defined as the blueprint which clearly indicates how the research study was conducted in terms of answering the research questions, methods used for analysing data as well as collection of data. This strategy was designed to assist the researcher to choose the methodological approaches correctly in order to get results which are desirable and accurate. The research design was used to identify the techniques and instruments which were employed in the study based on the research problem and specified objectives (Tisdell, Merriam & Stuckey-Peyrot, 2025). Wisenthige (2024) added that it is used to

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reflect the purpose of the research inquiry which assist the researcher to minimise the risk of errors while conducting the research.

In addition, research design is categorised into five types which is phenomenological design, diagnostic design, correlational design, exploratory design, and explanatory design. Phenomenological research design was adopted in this study as it prioritises understanding the experiences and opinions of the participants on a specific phenomenon. Maxwell (2023) affirmed that phenomenological research design is an approach which aims to gain insight about how individuals interpret and perceive the world in accordance with their point of view and experiences.

The research method that was adopted in this study is qualitative research approach. Tisdell et al. (2025) defines qualitative research approach as a method which explores, collect and analyse descriptive data to gain insight of things in their natural setting. Tenny (2022) added that this approach studies complex issues to generate accurate and rich in detail data on the social reality, beliefs, experiences and attitudes of the participants on a particular problem through interviews, observations and focus groups. Qualitative research approach was employed in this study as the researcher wanted to gain in depth understanding of the SMEs' preparedness to mitigate the risks that comes with natural disasters.

3.4.1 Justification of phenomenological research design

This study adopted the phenomenological research design. Phenomenological research design allowed the researcher to uncover the shared meanings and similarities among different participants' experiences on a subjective matter (Maxwell, 2023). This design enabled the researcher to identify and create themes and trends which influence the patterns that are social, psychological, or cultural. The selected research design was appropriate for this study as it provided a detailed exploration on SMEs owners' lived experiences on the preparation of mitigating the risk of natural disasters on their businesses thus noticing trends which brings meaning to studied research subject. This design also allowed the researcher to fully examine the studied research subject in attempt to propose new model or framework that will inform the future research.

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3.5 Research Methodology

Research methodology is a basic structured method employed by researchers to collect, interpret and analyse research data (Banerjee, Banerjee, Pooja, Kulhari, Jadhav, Saharan & Singh, 2024). The methodology denotes the techniques the researcher employed to describe, demonstrate, and predict the phenomena (Mishra & Alok, 2022). It seeks to provide significant understanding of how the research is going to work out and why the research is initiated. Thus, making it easy for the researcher to choose techniques relevant to solving the research problem.

3.6 Population and sample

According to Ahmad, Alias & Razak (2023) population is defined as a specific group of individuals who possess similar characteristics and are of interest of a research subject. It represents certain population or elements that the researchers intend to study and draw conclusion about for the purpose of the research subject. The population of this study was the Small, Medium Enterprises (SMEs)' owners in Thulamela Local Municipality and Makhado Local Municipality. A sample is a chosen proportion of population selected for the research purposes (Ahmad et al., 2023).

The sample allowed the researcher to gather information and draw conclusions about the research subject from the subset of the population without questioning the entire population who are of the study interest hence it becomes more cost effective and less time consuming (Satishprakash, 2020). The sample of the study consisted of Small, Medium Enterprises (SMEs)' owners who have been operating for more than Three (3) years within the Thulamela Local Municipality and Makhado Local Municipality. 10 SMEs owners within the two chosen Local Municipalities were used gather raw data.

3.7 Sampling and Sampling Technique

Sampling is a set of methods employed to select a sample from a specific group of population that are of the research interest (Satishprakash, 2020). Berndt (2020) added that sampling assists the researcher to choose a sampling technique relevant to their research interests and to avoid becoming bias when choosing the sample. It is crucial to note that sampling have two categories namely: non-probability sampling and probability sampling that can be utilised to select a sample (Gill, 2020). This study used purposive sampling. Purposive sampling is defined as the non-probability

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sampling used to select sample based on their similarity in characteristic, experience, and knowledge on a specific phenomenon (Gill, 2020).

Additionally, the researchers apply this sampling technique when they want to acquire in-depth understanding and information about the objectives of the research. It also allowed the selected sample to assist the researcher with referral of other hidden Small, Medium Enterprises (SMEs) that have been exposed to the risks of natural disasters. The purpose of using purposive sampling technique in this study was to acquire more insight about the preparedness of SMEs owners to overcome the risks of natural disasters within the Vhembe District Municipality from the specific population chosen for the study.

Moreover, the researcher selected the maximum variation sample for this study as it provides a wide range of cases or participants relevant to SMEs owners' preparedness towards natural disaster risks. The qualifying criteria of inclusion as the participant of the study was being an SMEs owner, operating a Small, Medium Enterprise (SME) within the Thulamela Local Municipality and Makhado Local Municipality, being a Small, Medium Enterprise (SME) that has been operating for more than 3 years and being over 18 years of age in accordance with the ethical considerations. The sample size was fifteen participants which needed to be interviewed for study. Data saturation point was reached after interviewing ten participants. This was determined when the researcher continued to interview additional participants and begin to realize that there was a repetition of data, and no additional information emerged.

3.8 Data collection and instrument

Data collection is process of gathering raw data that is appropriate to answering the research questions (Lobe, Morgan & Hoffman, 2020). This helped the researcher to gain much perception about the objectives and the trends of the research. Adeoye-Olatunde (2021) stated that different research instruments can be used to collect data such as interviews, surveys, observations, and experiments. In this study, the collection of data was done through interviews. Therefore, the researcher used a semi-structured interview guide to gather information during the interview with the selected SMEs owners. The in-depth face-to-face interviews were conducted with the SMEs owners within the Thulamela Local Municipality and Makhado Local Municipality.

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The in-depth face-to-face interview research instrument was chosen in this study because it allowed the researcher to get raw data based on the experiences, opinions, and values of the participants in relation to the research objective which is difficult to get when using other research instruments. Ten participants were used to collect data for the study. Data was collected until data saturation was met, this meant that researcher continued interviewing participants until no new information was discovered from the participants.

Interviews were conducted at the venues selected by the participants of the study. The interviews were conducted in English however where participants experience challenges with understanding the questions, their home language was used to translate what is being asked for them to be able to respond. Participants were also allowed to use their home language to answer the interview questionnaire, and the data was later transcribed in English.

The audio recorder was used to record the interviews conducted between the researcher and the participants of the study however the consent of the participants was obtained before recording the interviews. The participants' responses were also written down in hardcover during the interviews to make it easy for the researcher remember in case of follow-up questions. The follow-up questions were conducted through Microsoft teams and phone calls. The interviews lasted for a maximum of 45 minutes.

3.9 Trustworthiness

Kakar, Rasheed, Rashid & Akhter (2023) defines trustworthiness as the severity of trust in research findings employed to guarantee the study's accuracy, truthfulness, and quality. Ahmed (2024) concurred with Kakar et al. (2023) through emphasising that trustworthiness shows the level of confidence the researcher has when establishing the necessary procedures that are considered to ensure that the study is conducted correctly and the results are accurate and valid. In addition, Stahl & King (2020) added that trustworthiness can be ensured by corroborating the reliability and validity of the findings of a qualitative study. Trustworthiness comprises of four criteria namely credibility, transferability, dependability, and conformability.

Furthermore, credibility focuses on the correctness and authenticity of the study findings (Riazi, Rezvani & Ghanbar, 2023). The researcher ensured the credibility of

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the research findings through establishing triangulation and member checking thus reducing bias on the findings. The researcher was encouraged to reflect on personal views of the participants of the study based on the research subject and be free and open to the interpretation of the participants. Adler (2022) defined triangulation as employing various procedures to repeatedly demonstrate research patterns which are emerging hence this assist the research to be able to identify similar outcomes on a studied research subject. Moreover, the researcher enhanced the integrity and consistency in terms of how the researcher reported the results of the study.

Haq, Rasheed, Rashid & Akhter (2023) explains that dependability focuses on the reliability and consistency of how stable the findings of the study is interpreted and reported throughout the research process. Dependability enhanced the researcher's ability to uphold confidence and accuracy in their study – this was done through establishing audit trails, peer review and triangulation. The researcher confirmed that the same data collection method which is semi-structured interview guide was utilized to ensure that the data collected was valid and accurate which resulted in getting reliable results. It was vital for the researcher to enhance the consistency of the study as it assisted the researcher to strengthen the credibility of the research and its contribution to the field of academics. In addition, the researcher confirmed that the research results are trustworthy and dependable – this meant that the research results can be applied and used as future guidance by other researchers or policy makers for future research projects (Adler, 2022).

According to Riazi et al. (2023) defined transferability as the degree in which the findings of the study can be transferred to other settings or contexts. The researcher achieved transferability by conducting a thick description. Thick description is the degree in which the researcher careful observes the phenomenon and comprehensively discusses the trends and implications of social and cultural patterns or contexts (Cloutier & Ravasi, 2021). The researcher will achieve the thick description of the study through ensuring that the interview recordings are well transcribed and analysed to display the correct narrative of the participants' views and experiences.

In addition, conformability refers to the degree in which the results of the inquiry can be corroborated by the participants' perspectives and experiences and not of the other researchers' biases (Cloutier & Ravasi, 2021). The researcher clearly stipulated an

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audit trail in terms of how data was collected, recorded, transcribed, and analysed to draw conclusions and recommendations which were accurate enough for other academia, researchers, or policymakers to follow for further inquiry. Furthermore, the researcher constantly reflected on their background to mitigate the potential biases during the collection of data (Haq et al., 2023).

3.10 Data analysis

Salmona & Kaczynski (2024) stated that data analysis is a process of transcribing and interpreting raw data to make meaningful conclusions about the research subject. This assisted the researcher to avoid inefficiencies and errors when the collected data was transcribed and interpreted. The data was transcribed using Microsoft word and the transcribed data was analysed through Archive of technology, Life world and Language for text interpretation (ATLAS.ti) using thematic analysis. Thematic analysis is the process of identifying, developing, describing, and classifying themes or patterns in accordance with the collected data (Adeoye-Olatunde, 2021). Gupta (2024) described ATLAS.ti as a software for coding, categorizing, and analysing qualitative data transcripts. This ATLAS.ti software was convenient for researcher in terms of retrieving the transcripts easily and creating conceptual frameworks from the categorized themes or patterns.

Ten steps of analysing data using thematic analysis through ATLAS.ti:

a) Data Import: Upload the required data in the form of transcripts and documents into ATLAS.ti and read the documents properly to gain the grasp of the context.
b) Insert Comments or Memos: Make use either comment or memo notes to record significant ideas or link or relevance to research questions.
c) Create Initial Codes: Highlight the meaningful texts and label and name important ideas or topics with relevant, brief and descriptive codes.
d) Group Codes into Themes: Group codes together that have similarities into broader thematic categories to derive common pattern in the data.
e) Identify Major vs. Minor Themes: Eliminate narratives that have lesser importance so that only recurring powerful concepts remain.
f) Repeat for All Transcripts: Maintain same code and analysis methods for each transcript with to ensure consistency within the analysis.

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g) Review All Themes: Review all themes across the transcripts to ensure that they adequately capture the participants' opinions.
h) Refine and clarify Themes: Consolidate similar themes to improve the distinction of themes or split ones that are too broad.
i) Cross-Check with Transcripts: Double check all transcripts to ensure that all relevant content is properly coded.
j) Export and Report Findings: Use the tools within ATLAS.ti to extract and organize the data in the relevant themes to formulate for the final report.

3.11 Limitations of the study

The study was limited to the SMEs around Thohoyandou and Tshakhuma. The collection of data relied solely on what the participants of the study were willing to share on the research subject. The interviews were distracted as the owners had to constantly deal with their customers during the interview session. As the study area was narrowed to two Local Municipalities-Thulamela and Makhado, the other SMEs from other Local Municipalities were not able to participate and share valuable information which could have led to more productive research results. Some SMEs owners mistrusted the intention of the research even after the researcher clearly explained the purpose of study thus became reluctant to share certain information about their businesses.

3.12 Ethical considerations

This study adhered to the procedures and principles set by the University of Venda Research Ethical committee to ensure that all the participants of the study are aware of their rights towards their participation in this research study. The following procedures and guidelines were followed:

i. Permission to conduct research: the University of Venda Research Ethical Committee allowed the researcher to conduct the study, and a research registration certificate was granted as proof so that the researcher can be able to collect data from participants and show it to participants to see what the study is all about.

ii. Right to privacy: the researcher made sure that the identities of the participants remained protected, this was done by not asking them about their personal information such as their contact information, names and home addresses which

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may reveal their identities. The researcher assured the privacy of participants through giving them pseudo names, e.g. participant 10.

iii. Participation age group: participants who are 18 years old and above were allowed to participate in this study.

iv. Voluntary participation: the participants were informed that they are allowed to withdraw their participation from the study anytime. Thus, no participant was forced to participate in the study.

v. Informed consent: The participants were asked to fill and sign the consent forms which showed that they gave their consent before the commencement of the research interview. The researcher informed the participants about what the study is all about and outlined their rights and what was required from them.

vi. Honesty: the researcher confirmed that the research findings were reported honestly without misrepresenting the participants' views, experiences, and opinions even when the results turned out to be divergent from the expectations of the researcher.

3.13 Chapter summary

This chapter comprehensively laid out details about how the research data was collected, interpreted, and analysed. The appropriate data analysis instrument was chosen to acquire findings which were correct and dependable thus drawn conclusions and recommendations which were meaningful for future reference on the future research studies. The sampling techniques and population were clearly outlined to highlight the techniques undertaken to select the participants of the study within the research population. It was crucial to acknowledge that this was the most significant part of the study which could lead to inaccurate findings if the relevant techniques and instruments for the study were not chosen and applied correctly.

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CHAPTER 4

DATA ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

The previous chapter has provided the methodological dictates pertaining to the approach that was used in data collection as well as the analysis. It is crucial to note that the researcher collected data from 10 owners who were purposefully sampled. The data was transcribed using Microsoft Word and analyzed using ATLAS.ti version 8. The major themes and subthemes that emerged from the data analysis are provided in this chapter.

4.2 Demographics of participants

This section presented the number of participants who were interviewed to understand and have an overview of how the SMEs owners prepare to shield their businesses towards the unknown risks of natural disasters. The recommendations that these participants provided will benefit other small or large enterprises to implement to overcome such natural disasters in the future. The summary of demographics of the participants of this study are shown in Table 4.1 below.

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Table 4.1: Summary of demographics of Participants

Participant	Gender	Race	Age	Years of operation	Highest qualification	Type of business
1	Female	Black	45-50	8	Bachelors	Clothing boutique
2	Male	Black	35-40	9	Diploma	Small-scale farm
3	Male	Black	45-50	11	Bachelors	Spare parts shop
4	Male	Black	25-30	5	Bachelors	Fast food restaurant
5	Female	Indian	25-30	4	Bachelors	Beauty Parlour
6	Male	Indian	35-40	7	Diploma	Fast food restaurant
7	Male	Indian	45-50	10	Diploma	Guesthouses company
8	Female	Black	35-40	8	Diploma	Hair salon
9	Female	Black	35-40	9	Bachelors	Cleaning detergents retail
10	Female	Black	35-40	4	Diploma	Fitness company

4.2.1 Summary of demographics of the participants

The study comprised of 10 participants which included 5 females and 5 males. The participants interviewed were 3 Indians and 7 Black people. The participants were

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either young adults or middle-aged adults who have been operating in their respective areas for more than 3 years. All genders dominate in the SMEs sector which represented the level of their diverse expertise and experiences that they obtained from years of operation and showed solid educational background.

4.3 Results

This section provided the results that emerged from the analysis of data.

4.3.1 Forms of natural disasters posing risks to SMEs

This study focused on exploring the forms of natural disasters that pose risks to SMEs in Vhembe District Municipality. The results that emerged from analysis showed that the forms are floods, storms, extreme temperatures, and drought and these are explained in this section.

4.3.1.1 Floods

This study has shown that floods are amongst the forms of natural disasters that pose risks to SMEs. This was based on the views of Participants 1, 2, 3, 4 and 5 as shown in the following excerpts.

"The floods that normally happens in some areas in Vhembe like Manamani also affects the electrical poles as they damage them which affects the operations of businesses." ***(P1)***

"Heavy rains and overflowing rivers can flood business premises, damaging equipment and inventory due to poor infrastructure." ***(P2)***

"Floods can cause risk to SMEs business enterprise by damaging the electricity poll and that cause the building to get burned by the electricity." ***(P3)***

"Floods damage my property and equipment." ***(P4)***

"Thohoyandou has been experiencing high levels of rainfall recently, leaving most areas flooded. Floods pose a great risk to SMEs as they leave the areas which they operate in ruined or flooded up, destroying equipment used to run our business." ***(P5)***

The participants have shown that in Vhembe District Municipality floods are prevalent and they have an impact on damaging the business premises and the equipment as well as the inventory. These floods have an adverse impact on operations of SMEs

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and have been noted to be extensive. Hence floods are a natural disaster that pose risks to SMEs in Vhembe District Municipality. This aligns with the findings of Brown & Green (2021), who alluded that flooding is a natural disaster that poses risks and needs significant preparedness to ensure that businesses are a going concern. Such findings support the findings of Isa & Mardalis (2022) that the occurrence of floods is detrimental to SMEs business continuity as it causes substantial disruption in their business operations which will put them at the verge of incurring financial losses and closing their business.

4.3.1.2 Drought

The drought was noted as another natural disaster that poses risks to SMEs in Vhembe District. Drought as a natural disaster emerged from the expressions of Participants 1, 2, 4 and 7 shown in the following extracts.

"When there is drought the costs of operations increase as you find out that we are dependent on mealies in our operations, the costs of mealies increase affecting our profitability." ***(P1)***

"Long periods without rain can affect water supply, crucial for businesses relying on water for production, some SMEs do not have money to install boreholes." ***(P2)***

"When there's drought, we don't have water for watering our plants." ***(P4)***

"In Thohoyandou there are draughts that pose a great risk to SMEs. This plays a huge role in SMEs not providing the necessary services to be profitable." ***(P7)***

Considering the above evidence, the participants indicated that droughts are a natural disaster that poses a risk to SMEs. The participants further extended the lengthy periods without rain affects their water supply which is crucial for their operations. Thus, drought results in scarcity of water that negatively affects the operations of SMEs. This study corroborates with past studies such as Sarlak, Khodakarami, Hesarzadeh, Nazari and Taghimolla (2024) who posited that drought poses risks such as failure to control prices of raw materials which ultimately impact business operations. Das (2020) agrees with the study by stating that droughts result in constant power cuts which hinder the SMEs production process and destroy market competitiveness of these enterprises.

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4.1.3.3 Extreme temperatures

Extreme temperatures have been established to be another natural disaster that pose risks to SMEs in Vhembe District. This was based on the sentiments shared by Participants 1, 2, 5, 9 and 10 shown in the following extracts.

"Places where we operate like Thohoyandou have extreme hot temperatures most of the times and this affects even our equipment will be malfunctioning affecting operations." ***(P1)***

"Both heatwaves and cold breaks can strain energy resources and affect employee health and productivity and some goods that are sold by SMEs get spoilt by extreme temperatures." ***(P2)***

The extreme temperature can damage the business stock that stay in the fridge like frozen food as well farmers product." ***(P5)***

"Extreme temperatures the demand for some products that I sell for example I can't sell my watermelons when it's too hot." ***(P9)***

"Extreme temperatures such as a heatwave can affect productivity. When the temperature is extreme SMEs cannot get themselves to be as productive as they usually are when temperature is normal." ***(P10)***

Within the context of extreme temperatures, the participants indicated that the extreme weather conditions, for instance the heat wave results in machines malfunctioning. This means that the extreme temperatures influence the functioning of equipment which ultimately affects the productivity of the SMEs. Montero, Naimy, Abi Farraj and El Khoury (2024) concur with these findings alluding those extreme temperatures affect the sustainability of enterprises in the affected regions. Findings agree with Jones (2022) that extreme weather hinders the operations of SMEs by impeding the shipment of raw materials or resources needed to function thus leading to customers cancelling the orders - This results in SMEs losing revenue and trust of customers.

4.1.3.4 Storms

The results also showed that storms are another natural disaster that poses risks to SMEs. Storms as a natural disaster were evidenced by the views of Participants 1, 2, 3, 4 and 5 shown in the following extracts.

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"The storms owing to heavy rains also damage bridges and affects our supply chain as transportation of raw materials and the product will be difficult." ***(P1)***

"High winds and lightning can cause structural damage and power outages, pausing business activities which lead to loss." ***(P2)***

"Storms can cause the electricity damage to business infrastructure." ***(P3)***

"Storms once increases costs to repair for some equipment that are probably damaged." ***(P4)***

"Severe storms can impact SMEs by them blowing away and destroying infrastructure around the Vhembe area." ***(P5)***

Based on the above evidence, the participants indicated that the storms destroy the bridges or roads and affect or disrupt the supply chain. The participants further extended that storm result in structural damage and power outages that lead to affect the flow of the business activities. This corroborates Yin, Zhao, Zhou, & Li (2024), who alluded that storms pose risks and need significant preparedness to ensure that businesses are operating effectively. Such findings support the findings of Mackenzie & Brooks (2021) that articulate that the outbreak of Storms damages SMEs physical assets such stocks and equipments used to operate, this forces these enterprises to temporarily relocate to less disaster prone areas as repair costs become expensive.

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A summary of the natural disasters that pose risk to SMEs is provided in Figure 4.1 below.

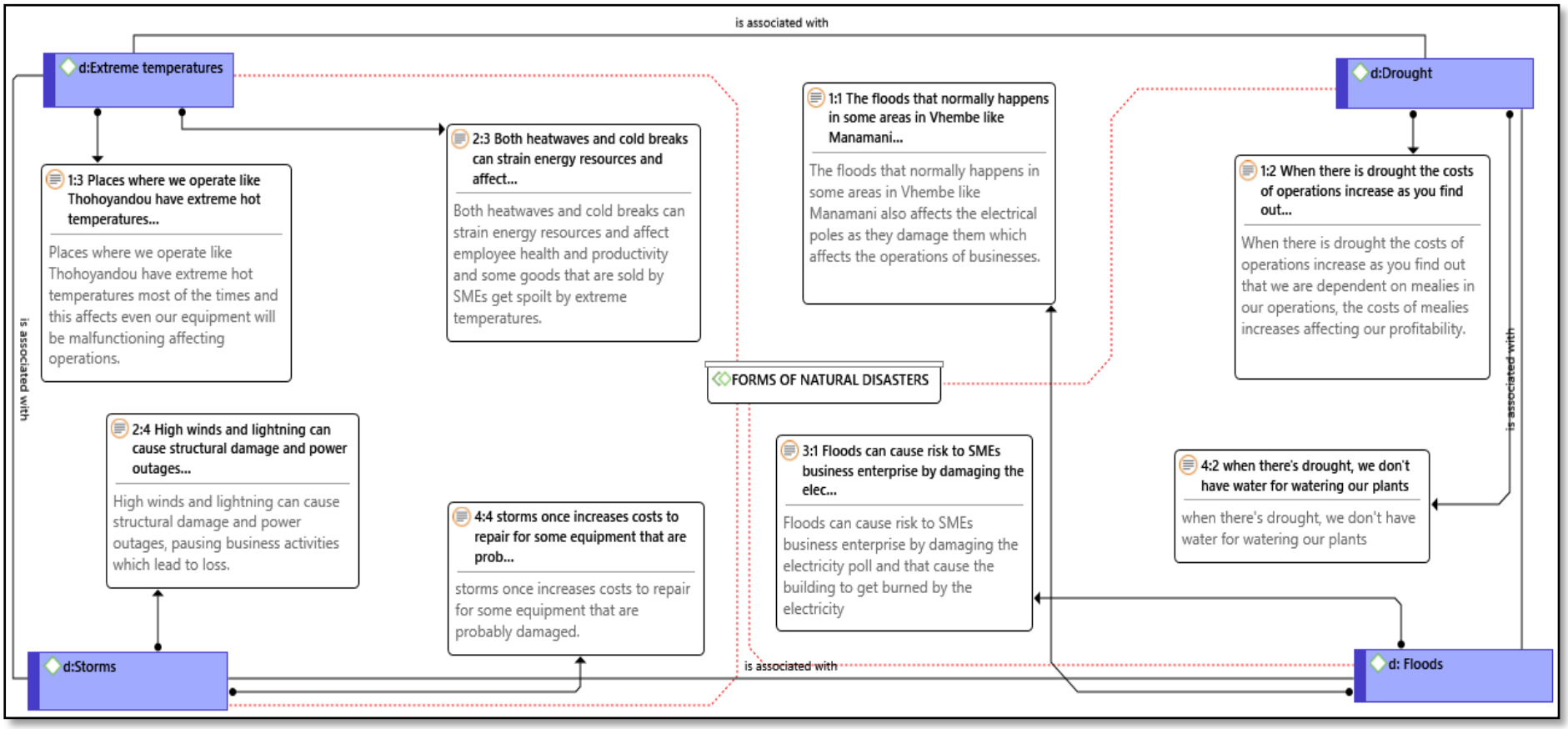


Figure 4.1: Forms of natural disasters network.

Source: Researcher's own construct

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4.3.2 Factors contributing to SMEs natural disaster preparedness

This study also focused on examining factors that contribute towards preparedness of SMEs in dealing with risks of natural disasters. The sub themes that emerged from the analysis of data are access to financial resources, emergency communication systems, government support, risk awareness and technology and data backup which were explained in this section.

4.3.2.1 Access to financial resources

Access to financial resources was established to be one of the factors contributing to SMEs natural disaster preparedness. This was based on the views of Participants 1, 2, 4 and 5 shown in the following extracts.

"We normally use our access to financial resources to prepare for the unexpected costs associated with disasters." ***(P1)***

"Having funds available can help in immediate recovery efforts SMEs can have a savings account." ***(P2)***

"Access to loan to recover from the natural disasters and government grants." ***(P4)***

"SMEs can be given access to different financial resources such as government grants or bank loans which will help them have the necessary resources to combat the natural disasters or rebuild after such a case has occurred." ***(P5)***

The participants extended that they take advantage of their access to resources that include government grants towards preparing for costs associated with disasters. The participants also indicated that the availability of emergency funds that they save also enables them to prepare for unforeseen natural disasters' impact. This means that access to financial resources is a factor that provides the basis for preparing the SMEs in dealing with disaster risks. Aligning with the findings of Seow, Choong, Low, Ismail and Choong (2024) who posited that access to financial resources is crucial towards the sustainability of entities during natural disasters as it provides the basis for preparing the SMEs in dealing with disaster risks. The findings of Smith & Thompson (2022) are substantiated by this study which indicates that having access to financial resources assists the SMEs to invest in the necessary resilience tools or measures that will help them to prepare and respond to the disaster quicker.

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4.3.2.2 Emergency communication systems

Emergency communication systems are another factor that contributes to the preparedness of SMEs in dealing with natural disaster risks. This was based on the expressions of Participants 1, 2, 3, 6 and 8 shown in the following extracts.

"We are also supported by the emergency communication like the weather report from the television and the radio and they give you an outlook of what is going to happen daily and weekly and also provide you with disasters that are going to happen." ***(P1)***

"A reliable system ensures that all employees are informed and can act quickly during a disaster SMEs can do drill to ensure the readiness." ***(P2)***

"Creating the emergency communication system in the workplace through smart devices in the office that notify employee on weather changes on daily basis." ***(P3)***

"Knowing beforehand that there's a possibility of flood." ***(P6)***

"Weather emergency communication system can be put around where they are easily accessible to SMEs so they can get reports on any severe change in weather approaching them." ***(P8)***

Considering the evidence above, the participants extended that the SMEs are provided support through emergency communication services such as the weather report from the radio and the television which enables them to have an outlook of the probable disasters. This means that the availability of emergency communication systems enhances the preparedness of the SMEs as they can make informed decisions in advance to ensure that their enterprises are a going concern. Corroborating with the sentiments of Hashim, Ng, Talib and Tamrin (2021) this study found that that the availability of emergency communication systems enhances the preparedness of the SMEs as they can make informed decisions in advance to ensure that their enterprises are a going concern. Such findings agree with Harrison & Quinn (2020) that SMEs establish communication system to ensure seamless transmission of disaster preparedness information for their business in order keep customers and employees informed.

4.3.2.3 Government support

The results also showed that government support is another factor that contributes to the preparedness of SMEs in dealing with natural disaster risks. The participants

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extended that the SMEs collaborate with government agencies such as Small Enterprise Development Agency (SEDA) and the National Youth Development Agency (NYDA) towards having additional support to enhance their preparedness for disaster risks. The participants further posited that government relief grants enabled them to be effectively prepared for the uncertainties associated with disasters. This aligns with Thekkoote (2024) who elucidated that the government relief programmes provided the basis for resilience of the enterprises during the outbreak of COVID-19. Government support as another factor is evidenced by the views of Participants 1, 2, 5 and 8 shown in the following excerpts.

"We also collaborate with the local government agencies such as SEDA and NYDA for additional support towards disaster preparedness." ***(P1)***

"Assistance from local and national governments can provide resources and guidance." ***(P2)***

"Government should be willing to give some sort of government support to SMEs who receive or make a certain amount of profit, which wouldn't be enough to take out Insurance cover." ***(P5)***

"Government grants like relieve funds help owners be able survive after the natural disasters." ***(P8)***

4.3.2.4 Risk awareness

The results revealed that risk awareness is another factor that contributes towards the preparedness of SMEs in dealing with natural disaster risks. This emanated from the views shared by Participants 1, 2, 4 and 6 shown in the following extracts.

"When you are aware of the risks that are posed by the natural disasters you definitely have a contingency plan to address them." ***(P1)***

"Understanding the specific risks your business faces can help in planning and mitigation and having a plan." ***(P2)***

"I am aware of the risks of natural resources pose on my business; I am able to create emergency response plans." ***(P4)***

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"Natural disaster enthusiasts can hold seminars to educate unexperienced owners measures to take when different natural disasters hit their area. This can be by way of demonstration or giving lectures." ***(P6)***

Within the context of risk awareness, based on the above evidence, the participants indicated that the awareness of risks that are posed by natural disasters provides the basis for the SMEs to fully prepare for them. This awareness is attained through various efforts such as seminars on disaster risks. This awareness provides the basis for the owners to have contingency plans to deal with disaster risk.

4.3.2.5 Technology and data backup

Technology and data backup was established as another factor that contributes to the preparedness of SMEs pertaining disaster risks. This was based on the views of Participants 1 and 3 shown in the following extracts.

"We now also rely on technology to ensure that we back up our crucial information in the cloud in case of disasters." ***(P1)***

"As well create business data backup in iCloud for future references in case the business files get damage." ***(P3)***

Considering the evidence above, the participants extended that they now rely on technology to ensure that they back up the information in platforms such as iCloud. This means that the availability of platforms for data backup and allowing remote access of files is a factor that enhances the preparedness of the SMEs towards disaster risks. Such findings substantiate the findings of Torrence & Lee (2019) that SMEs establishes data backup to minimize the risk of losing business vital data and softwares needed to ensure smooth sailing operation after disaster. Cohen & Hines (2021) supports the study findings that technology enables them to access data remotely to continue operating effectively.

A summary of the factors contributing to the preparedness of SMEs towards disaster risks is provided in Figure 4.2 below.

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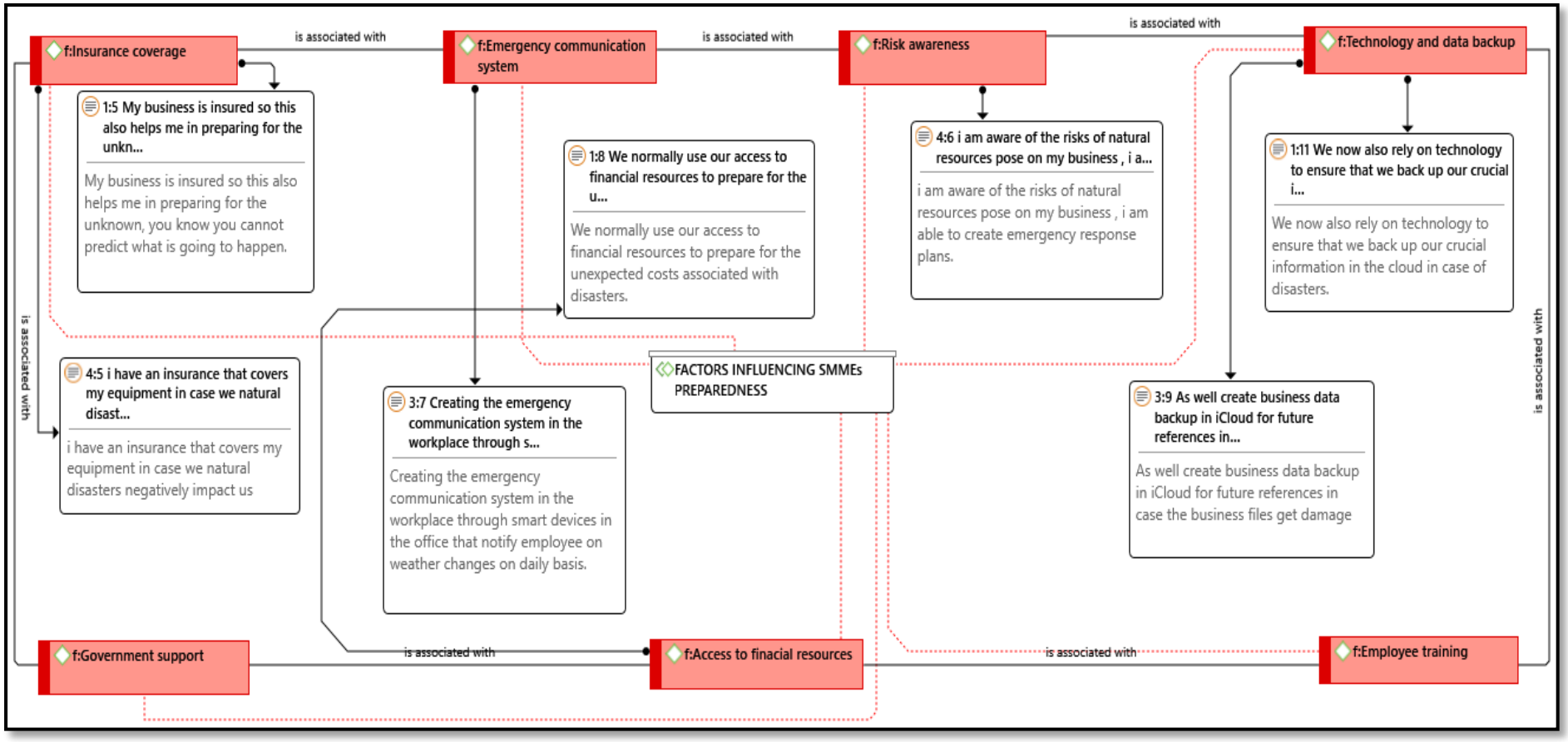


Figure 4.2: Factors contributing to SMEs natural disaster preparedness network

Source: Researcher's own construct

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4.3.3 Strategies to overcome natural disasters

This study focused on identifying the strategies or coping mechanisms that SMEs owners use to overcome natural disasters risks. The sub themes that originated from the analysis are employee training, establishment of emergency funds, investing in insurance, strengthening physical infrastructure, and using digital solutions and these strategies were explained in this section.

4.3.3.1 Employee training

Employee training one noted as one of the strategies that SMEs owners use to overcome natural disaster risks. This was evidenced by the views of Participants 1, 2, 4 and 5 shown in the following extracts.

"We ensure that the employees are trained about disaster preparedness through workshops on disaster management." ***(P1)***

"Regular training ensures that employees know how to respond during a disaster." ***(P2)***

"I have well prepared my employees to be effective in times of emergency." ***(P4)***

"With employees trained on how to combat severe weather conditions, this can help the business as they will have the proper knowledge on how to keep the infrastructure safe." ***(P5)***

Considering the above evidence, the participants stated that they ensure that employees are trained in disaster preparedness through workshops on disaster management. This training of employees puts them in a better position to respond effectively when the disaster occurs. This means that it enhances their capabilities or abilities to craft effective contingency plans to address disaster risks. Thus, employee training is SMEs adopting a strategy to deal with disaster risks. These results are supported by Skouloudis et al. (2023) who indicated that when the employees are capacitated with disaster preparedness their businesses are likely to survive in the unlikely occurrence of the disaster. The study findings agree with findings of Barker & Holt (2020) that SMEs thoroughly equip their employees with necessary tools and knowledge to respond faster to a disaster thus ensuring the business continuity of these enterprises.

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4.3.3.2 Establishment of emergency fund

Establishment of an emergency fund is noted as another strategy that the SMEs use towards dealing with disaster risks. This was evidenced by the views of Participants 1, 2, 3 and 5 shown in the following extracts.

"I have also insured that we have an investment account which is a financial reserve for the business in case of emergencies." ***(P1)***

"Having a standby of funds specifically for emergencies can speed up recovery." ***(P2)***

"The strategies that we reply on or use as the business owner is investing into insurance coverage, creating of emergency fund." ***(P3)***

"An emergency fund can be held or created by SMEs where they save up or deposit a sum of money which they use on occasions where they face emergency situations." ***(P5)***

The participants extended that they have ensured that they have an investment account which is a financial reserve for the business in case of emergencies. This means that the establishment of an emergency fund provides the basis for the SMEs to effectively respond to the disaster risks hence enhanced preparedness. This aligns with Seow et al. (2024) who indicated that access to emergency funds is crucial towards the sustainability of entities during natural disasters as it provides the basis for preparing the SMEs in dealing with disaster risks. The findings of McGinnis (2020) support the study that SMEs that have saved funds for emergencies are able to cover the rebuilding or repairing costs which are vital for these enterprises to resume their operations quicker after a disaster.

4.3.3.3 Investing in insurance

Investing in insurance was noted as another strategy that the SMEs are adopting towards addressing disaster risks. This was based on the views of Participants 1, 3, and 5 shown in the following extracts.

"The major strategy which I use for my business is to ensure that I invest on insurance every month to cover for the unknown including natural disasters." ***(P1)***

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"The strategies that we reply on or use as the business owner is investing into insurance coverage, creating of emergency fund." ***(P3)***

"Owners are investing into insurances by insuring their businesses against any natural disaster. This is a strategy that will help them whenever they experience any natural disaster." ***(P5)***

Based on the above evidence, the SMEs alluded that they invest in insurance to cover the unknown including natural disasters. In alignment with Pathak and Olmo (2021), this study found that the investment of SMEs in insurance coverage provides the basis for risk transference and enables the businesses to continue operating even if they are unavoidable disasters. Such findings concur with the findings of Smith & Thompson (2022) that investing in insurance ensures that SMEs financial stability is not jeopardized due to unexpected hazard or event.

4.3.3.4 Strengthening physical infrastructure

The results showed that strengthening physical infrastructure is the SMEs adopting another strategy to deal with disaster risks. This was evidenced by the views of Participants 1, 2, 4 and 5 shown in the following extracts.

"When we are building, we ensure that the material that we use as well as the reinforcement of the building can also withstand certain disasters such as storms and floods." ***(P1)***

"Making buildings and facilities more resilient to withstand disasters." ***(P2)***

"Our company has flood resisted materials e.g. polystyrene materials." ***(P4)***

"Improving or strengthening the physical infrastructures that the owners occupy is also another form of strategy which will strength the infrastructure that they don't lose it through storms and other forms of natural disasters." ***(P5)***

Considering the above evidence, the participants indicated that when building they ensure that the material that they use as well as the reinforcement of the building can also withstand certain disasters such as storms and floods. This means that they use materials that can withstand other disasters such as floods. This means that strengthening the physical infrastructure with natural disasters in mind provides the basis for disaster preparedness. Corroborating with the findings of Veeravalli, Chereni,

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Sliuzas, Flacke and Maarseveen (2022), this study found that strengthening the physical infrastructure with natural disasters in mind provides the basis for disaster preparedness.

4.3.3.5 Using digital solutions

Using digital solutions was noted as another strategy that SMEs are/can adopt towards dealing with natural disasters risks. This was evidenced by the views of Participants 1, 4 and 5 shown in the following extracts.

"We have also a digital working platform and every manager has a dashboard which they also monitor workers remotely and enables remote working." ***(P1)***

"My company has supply chain management software to ensure that even during natural disaster we are okay." ***(P4)***

"The use of digital software such as the Weather app, which can alert the SMEs if there are severe storms or severe weather conditions approaching, is another form of strategy that owners can do." ***(P5)***

The participants in this study extended that the use of digital efforts such as backing up data in the cloud and the use of software to manage the supply chain as well as application for disaster alerts are crucial towards dealing with disaster risks. This means that the utilization of digital solutions provides the basis of dealing with disasters risks. This aligns with Poh-Ling, Hassim and Mohammad-Bashir (2024) who indicated that technological adoption is crucial towards effective disaster preparedness of businesses.

A summary of the strategies that the SMEs can adopt towards addressing disaster risks is provided in Figure 4.3 below.

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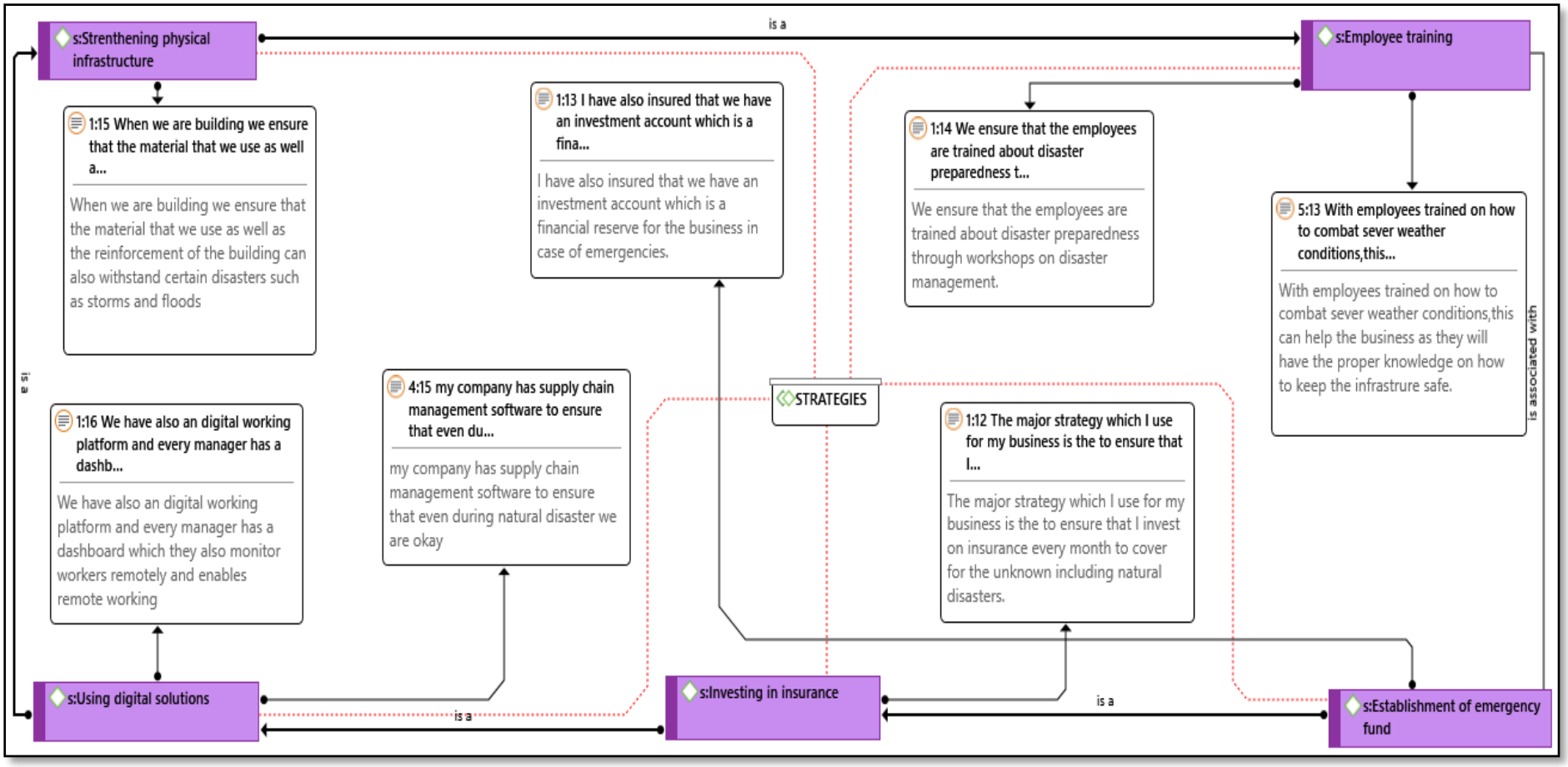


Figure 4.3: Strategies to overcome natural disasters network

Source: Researcher's own construct.

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4.4 Chapter summary

This chapter has provided the results that emerged from that analysis of data and discussion of the results which either disagree or correlate with existing academic literature. These results assisted the researcher to draw conclusions and recommendations which will be used by stakeholders, academia, and policymakers for future references. The next chapter provides conclusions from the findings and recommendations that can be used for further research.

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CHAPTER 5
CONCLUSION, RECOMMENDATIONS AND DIRECTIONS FOR FUTURE RESEARCH

5.1 Introduction

The previous chapter has provided the results that emerged from the data analysis. The chapter has also provided discussions of the results. This chapter provides the conclusion on the research objectives, recommendations, and direction for future research. As shown in chapter 1, the study aims to investigate the SMEs prepared towards the risks of natural disasters. The gap from the research resulted in the formulation of the problem statement as follows:

Natural disasters have caused havoc on the sustainability and development of businesses worldwide. This means that during these natural disasters, businesses' performance, sales, and market share decreased drastically (Patankar, 2019). Natural disasters are considered the most expensive crisis, as its survey indicates that small, medium enterprises lost their infrastructure and trading income (Agarwal, Fan, Klapper & Lee, 2021). The Small, medium enterprises' sustainability has become challenging to maintain due to the high risks natural disasters imposed on their businesses. Natural disasters and the coping strategies used by SMEs have not been debated or researched fully in the SMEs owners need to be prepared for the risks imposed on their businesses by natural disasters. Hence, it becomes extremely hard for SMEs to remain competitive in the market. Thus, the SMEs owners' preparedness towards overcoming the risk of natural disasters has not been investigated in the South African context including Vhembe District Municipality (Munawar, 2020). Therefore, there is need to establish the coping mechanisms utilized to prepare for the risks imposed by natural disasters on their businesses.

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Consequently, the objectives of the study are as follows:

Objective 1: To explore the forms of natural disasters that pose risks to SMEs owners in Vhembe District Municipality.

Objective 2: To examine factors that contribute towards preparedness of SMEs owners in dealing with natural disasters risks.

Objective 3: To identify the strategies or coping mechanisms that SMEs owners use to overcome natural disasters risks.

Subsequently, the research questions were as follows:

RQ1: What are the forms of natural disasters that pose risks to SMEs owners?

RQ2: What are factors that contribute towards the preparedness of SMEs owners in dealing with risks of natural disasters?

RQ3: Which strategies or coping mechanisms are being used by SMEs' owners to overcome natural disasters risks?

The conclusion on the research objectives was provided in the following sections.

5.2 Conclusion on the research objectives

This section provides a discourse on the conclusion of the research objectives.

5.2.1 Conclusion on the forms of natural disasters posing risks to SMEs

With regards to Objective 1: To explore the forms of natural disasters that pose risks to SMEs in Vhembe District Municipality, this study found that the forms are floods, storms, extreme temperatures, and drought. This study found that flooding was prevalent in some areas within Vhembe District Municipality, and it has an impact on damaging the business premises and the equipment as well as the inventory. This means that flooding has a negative effect on the operations of the SMEs. This study revealed that drought was another form of natural disaster that poses risks to the operations of the SMEs in Vhembe District. Drought as a natural disaster that poses risk is evidenced by the extended periods without rain affects their water supply which is crucial for their operations. This means

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that the disruption of the water supply negatively affects the sustainability of the smooth running of these enterprises.

Furthermore, this study also found that Vhembe District Municipality was also characterized with extreme temperatures, and these have an adverse effect on the operations of the enterprises. For instance, extreme weather conditions such as heat waves results in machines malfunctioning. Ultimately the malfunction of the equipment results in bottlenecks that have a negative effect even in the profitability of the SMEs. Storms were also found as another form of natural disaster that poses risks to the operations of SMEs. This study revealed that storms destroy bridges or roads and affect or disrupt the supply chain which has a detrimental impact on the operations of these businesses. These storms also result in power outages that also affect production or service offering of SMEs and negatively affect operations. Hence this study found that indeed there are forms of natural disasters that pose risks to SMEs in Vhembe District Municipality and these are floods, storms, extreme temperatures, and drought.

5.2.2 Conclusion on factors contributing to SMEs natural disaster preparedness

With regards to Objective 2: To examine factors that contribute towards the preparedness of SMEs in dealing with natural disaster risks, this study found that these are access to financial resources, emergency communication systems, employee training, government support, insurance coverage, risk awareness and technology and data backup. Within the context of access to financial resources, this study found that SMEs often capitalizes on their access to resources that includes government grants towards enhancing their preparedness for costs associated with disasters. The findings also showed that the availability of emergency funds that the SMEs save, or the financial reserves provides the basis for preparedness for unforeseen effect of natural disasters amongst SMEs.

Furthermore, in terms of emergency communications systems, this study found that that the SMEs are provided support through emergency communication services such as the weather report from the radio and the television which enables them to have an outlook of the possible disasters. This results with the SMEs making proactive and sound decisions towards their operations. In this study, employee training was found to be another factor that contributes to the preparedness of SMEs towards natural disasters.

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This is evident through the provision of training to employees by SMEs to be well acquainted with the disaster dictates which subsequently enables them to be prepared for the disaster risks.

Moreover, government support as another factor, is evidenced by SMEs collaborating with government agencies such as SEDA and the NYDA towards having additional support to enhance their preparedness for disaster risks. Government support is also evidenced by the government relief grants that enable the SMEs to be effectively prepared for the uncertainties associated with disasters. Hence government support is a crucial factor towards the preparedness of SMEs. With regards to insurance coverage, this study has found that SMEs take insurance to cover the unknown which also provides the basis for enhancing their position in preparing for disaster risks. Thus, insurance cover is a factor that depicts the preparedness of the SMEs towards unforeseen disasters, boosting their preparedness.

Furthermore, this research revealed that risk awareness is another factor that contributes to the disaster preparedness of the SMEs. Thus, the awareness of risks that are posed by the natural disasters attained through seminars and workshops provides the basis for the SMEs' preparedness. Technology and data backup as another factor denotes that the availability of platforms for data backup and allowing remote access of files is a factor that enhances the preparedness of the SMEs towards disaster risks. Hence this study has achieved this objective as it has found that factors that contribute towards the preparedness of SMEs in dealing with natural disaster risks are access to financial resources, emergency communication systems, employee training, government support, insurance coverage, risk awareness and technology and data backup.

5.2.3 Conclusion on strategies to overcome natural disasters

With regards to Objective 3: To identify the strategies or coping mechanisms that SMEs owners use to overcome natural disasters risks, this study found that the strategies are employee training, establishment of emergency fund, investing in insurance, strengthening physical infrastructure, and using digital solutions. With regards to employee training, this study found that this strategy places SMEs employees in a better position to respond effectively when the disaster occurs enhancing their capabilities or

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abilities to craft effective contingency plans to address disaster risks. This study found that establishment of an emergency is another strategy that can be used to overcome natural disasters. Thus, the establishment of an emergency fund provides the basis for the SMEs to effectively respond to the disaster risks hence enhanced preparedness.

Furthermore, another strategy that was established in this study is investing in insurance. This means that the investment of SMEs in insurance cover provides the basis for risk transference and enables the businesses to continue operating even if they are unavoidable disasters. In the context of strengthening physical infrastructure, this study found that when SMEs are built they ensure that the material that they use as well as the reinforcement of the building are compliant with the government standards set and can also withstand certain disasters such as storms and floods. This enhances disaster preparedness amongst the SMEs.

Moreover, this study found that in the use of digital solutions there is another strategy the SMEs use towards enhancing their disaster preparedness. This implies that the use of digital efforts such as backing up data in the cloud and the use of software to manage the supply chain as well as application for disaster alerts are crucial towards dealing with disaster risks and enhancing preparedness. Thus, the objective on identifying the strategies or coping mechanisms that SMEs owners use to overcome natural disasters risks was achieved as it was found that the strategies being employed are employee training, establishment of emergency fund, investing in insurance, strengthening physical infrastructure, and using digital solutions.

5.3 Contribution to theory

This study is amongst the first that has contributed within the context of SMEs preparedness towards the risks of natural disasters. This study found that there are forms of natural disasters that pose risks to SMEs in Vhembe District Municipality and these are floods, storms, extreme temperatures, and drought. This study has also unraveled the factors that contribute towards the preparedness of SMEs in dealing with natural disaster risks which are access to financial resources, emergency communication systems, employee training, government support, insurance coverage, risk awareness and technology and data backup. This study also established the strategies or coping

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mechanisms that SMEs owners use to overcome natural disaster risks which are employee training, establishment of emergency funds, investing in insurance, strengthening physical infrastructure, and using digital solutions.

5.4 Recommendations

The recommendations of the study were as follows:

a) Disaster preparedness is crucial towards effective business operations hence there must be awareness workshops that must be conducted by universities and government agencies towards raising awareness of the importance of disaster risk preparedness.

b) Entrepreneurs and not only SMEs owners must be provided with training support towards preparing for risks associated with disasters.

c) Vhembe District Disaster Management Centre and SEDA must should collaborate to educate the SMEs on the importance of investing in reliable early warning systems, flood barriers and drainage systems to enable faster responses to disasters.

d) Tools such as risk assessments, business continuity strategies and emergency plans should be included in SMEs training provided by the departments like SEDA, Limpopo Economic Development Environment and Tourism (LEBET) and Department of Small Business Development (DSBD).

e) The Vhembe Community Services Department should ensure that SMEs are educated about basic disaster risk reduction and planning using local languages to improve effectiveness and understanding.

5.5 Study limitations

This study was also associated with some limitations including its focus on the Vhembe District Municipality hence the findings may not be generalizable to other municipalities due to variations in disasters as well as settings. This study followed a qualitative approach so only a limited number and relatively small sample was included. The researcher also faced the interviewer bias as the interpretation of the data was influenced

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by how participants understood the questions and how they responded. Furthermore, the study relied on single-time data collection which often does not capture changing perceptions or experiences of participants over time. Lastly, distortions from language translation during interview sessions impacted the accuracy and meanings of participants' responses.

5.6 Directions for future research

A similar study on SMEs owners' preparedness towards the risks of natural disasters may be conducted in other districts or municipalities to understand the differences or similarities that exist. Also, a quantitative or mixed methods approach may also be followed to gain an in-depth understanding of the subject matter and statistical conclusions. It is hoped that future research may explore disaster preparedness among businesses such as family-owned enterprises or informal businesses in other provinces of South Africa.

5.7 Chapter summary

This chapter has noted that there are forms of natural disasters that pose risks to SMEs in Vhembe District Municipality and these are floods, storms, extreme temperatures, and drought. This study has also unraveled the factors that contribute towards the preparedness of SMEs in dealing with natural disaster risks which are access to financial resources, emergency communication systems, employee training, government support, insurance coverage, risk awareness and technology and data backup. This study also established the strategies or coping mechanisms that SMEs owners use to overcome natural disaster risks which are employee training, establishment of emergency funds, investing in insurance, strengthening physical infrastructure, and using digital solutions. This chapter marks the conclusion of the study.

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References

Adeoye-Olatunde, O. A., & Olenik, N. L. (2021). Research and scholarly methods: Semi-structured interviews. Journal of the American college of clinical pharmacy, 4(10), 1358-1367

Adler, R. H. (2022). Trustworthiness in qualitative research. Journal of Human Lactation, 38(4), 598-602.

Agarwal, S., Fan, M., Klapper, L. F., & Lee, E. (2021). The impact of an extreme weather event on business performance. Available at SSRN 3957868.

Aharanwa, C. C. (2021). Business Sustainability Strategies of Small and Medium Enterprises in South Africa (Doctoral dissertation, Walden University).

Ahmad, N., Alias, F. A., & Razak, N. (2023). Understanding population and sample in research: key concepts for valid conclusions. Sigcs: E-Learning, 6, 19-24.

Ahmed, S. K. (2024). The pillars of trustworthiness in qualitative research. Journal of Medicine, Surgery, and Public Health, 2, 100051.

Al-Herwi S. (2019). What are SMEs? Retrieved from: https://www.researchgate.net/publication/332539278_What_are_SMEs. Date: 04 July 2022.

Akinboye, A. K., & Morrish, S. C. (2022). Conceptualizing post-disaster entrepreneurial decision-making: Prediction and control under extreme environmental uncertainty. International Journal of Disaster Risk Reduction, 68, 102703.

Algan, N. (2019, June). The importance of SMEs on world economies. In International Conference on Eurasian Economies (pp. 56-61).

Arend, R. J. (2023). Knight and day: when theoretical uncertainty gets real. Journal of Small Business & Entrepreneurship, 35(6), 819-827.

Asgary, A., Ozdemir, A. I., & Özyürek, H. (2020). Small and medium enterprises and global risks: evidence from manufacturing SMEs in Turkey. International Journal of Disaster Risk Science, 11(1), 59-73.

© University of Venda

Auzzir, Z., Haigh, R., & Amaratunga, D. (2018). Impacts of disaster to SMEs in Malaysia. Procedia engineering, 212, 1131-1138.

Azmi, S. N., Khalique, M., Noor, A. B. M., Yaacob, M. R. B., & Hina, K. (2021). Identifying the challenges of small business and business recovery during turmoil business environment. Academy of Strategic Management Journal, 20(6), 1-8.

Baltas, K., Fiordelisi, F., & Mare, D. S. (2022). Alternative Finance after Natural Disasters. British Journal of Management, 33(1), 117-137.

Banerjee, S., Banerjee, D., Pooja, D., Kulhari, H., Jadhav, H., Saharan, V. A., & Singh, A. (2024). CHAPTER OBJECTIVES. Principles of Research Methodology and Ethics in Pharmaceutical Sciences: An Application Guide for Students and Researchers, 47.

Berndt, A. E. (2020). Sampling methods. Journal of Human Lactation, 36(2), 224-226.

Bharadwaj, S., Sharma, P., & Gupta, R. (2020). Enhancing disaster resilience in urban centers: A strategic approach. Journal of Urban Disaster Management, 29(3), 105-120.

Brown, L., & Green, R. (2021). Flood preparedness and resilience in small businesses: Challenges and strategies. International Journal of Disaster Risk Reduction, 15(2), 98-112.

Chang, S. E., Brown, C., Handmer, J., Helgeson, J., Kajitani, Y., Keating, A., ... & Roa-Henriquez, A. (2022). Business recovery from disasters: Lessons from natural hazards and the COVID-19 pandemic. International Journal of Disaster Risk Reduction, 80, 103191.

Chang, X., Brown, A., Handmer, J., Helgeson, L., Kaijani, R., Keating, R., & Roa-Henriquez, L. (2022). Disaster risk management in urban areas: A global perspective. Journal of Environmental Disaster Management, 58(3), 145-160.

Cloutier, C., & Ravasi, D. (2021). Using tables to enhance trustworthiness in qualitative research. Strategic Organization, 19(1), 113-133.

© University of Venda

Cloutier, C., & Ravasi, D. (2021). Using tables to enhance trustworthiness in qualitative research. Strategic Organization, 19(1), 113-133.

Das, R. (2018). Disaster preparedness for better response: Logistics perspectives. International journal of disaster risk reduction, 31, 153-159.

De Matteis, J., Elia, G., & Del Vecchio, P. (2023). Business continuity management and organizational resilience: A small and medium enterprises (SMEs) perspective. Journal of Contingencies and Crisis Management, 31(4), 670-682.

Du, L., Feng, Y., Tang, L. Y., Kang, W., & Lu, W. (2020). Networks in disaster emergency management: a systematic review. Natural Hazards, 103, 1-27.

Dube, S., & Lee, J. (2019). The role of community-based disaster management in rural areas. Journal of Disaster Risk Management, 27(4), 145-160.

Egbelakin, T., Poshdar, M., Walsh, K. Q., Ingham, J., Johnston, D., Becker, J., ... & Rasheed, E. (2018). Preparation of small to medium-sized enterprises to earthquake disaster: Napier and Dunedin case studies. Bulletin of the New Zealand Society for Earthquake Engineering, 51(4), 171-182.

Eggers, F. (2020). Master of disasters? Challenges and opportunities for SMEs in times of crisis. Journal of business Research, 116, 199-208.

Farisani, T. R. (2022). The impact of social and institutional networks in sustaining South African rural small, medium, and micro enterprises during the crisis. Acta Commercii, 22(1), 1-14.

Fubah, C. N., & Moos, M. (2022). Exploring COVID-19 challenges and coping mechanisms for SMEs in the South African entrepreneurial ecosystem. Sustainability, 14(4), 1944.

Gamage, S. K. N., Ekanayake, E. M. S., Abeyrathne, G. A. K. N. J., Prasanna, R. P. I. R., Jayasundara, J. M. S. B., & Rajapakshe, P. S. K. (2020). The survival strategies of small and medium enterprises (SMEs) in the global competitive environment.

© University of Venda

Gill, S. L. (2020). Qualitative sampling methods. Journal of Human Lactation, 36(4), 579-581.

GIZ. (2019). Managing climate risk with extreme weather insurance. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Godfrey, L. L. (2019). Small business responses to reduce impacts from natural disasters. Walden University.

Goh, L., & Heng, T. (2021). The impact of disaster preparedness on urban resilience. Journal of Urban Studies, 34(4), 200-215.

Grab, S. W., & Nash, D. J. (2023). A new flood chronology for KwaZulu-Natal (1836–2022): The April 2022 Durban floods in historical context. South African Geographical Journal, 1-22.

Gupta, A. (2024). Survey Data Analysis. In Qualitative Methods and Data Analysis Using ATLAS. ti: A Comprehensive Researchers' Manual (pp. 271-298). Cham: Springer International Publishing.

Haq, Z. U., Rasheed, R., Rashid, A., & Akhter, S. (2023). Criteria for assessing and ensuring the trustworthiness in qualitative research. International Journal of Business Reflections, 4(2).

Haq, Z. U., Rasheed, R., Rashid, A., & Akhter, S. (2023). Criteria for assessing and ensuring the trustworthiness in qualitative research. International Journal of Business Reflections, 4(2).

Harries, T. (2021). Understanding small business adaptation to natural hazards: A critical review. International Journal of Disaster Risk Reduction, 63, 102403.

Hashim, H. M., Ng, Y. G., Talib, O., & Tamrin, S. B. M. (2021). Factors influencing flood disaster preparedness initiatives among small and medium enterprises located at flood-prone area. International Journal of Disaster Risk Reduction, 60, 102302.

© University of Venda

Helgeson, J., Fung, L., Zhang, K., Roa-Henriquez, L., Zycherman, A., Nierenbeng, J., Butry, D., & Ramkissoon, S. (2020). Analyzing disaster resilience: Lessons from recent events. Journal of Disaster Studies, 43(1), 22-40.

Hossain, M., Rahman, M., & Islam, R. (2021). The role of technology in disaster risk reduction: A systematic review. Journal of Disaster Studies, 48(2), 175-190.

Ingirige, B., & Wedawatta, G. (2019). An SME-driven approach to adopting measures of flood resilience: A UK-based perspective. International Journal of Disaster Risk Reduction, 34, 1-10.

Johnson, M. R. (2021). The effects of climate change on the frequency of natural disasters. Environmental Studies Journal, 45(3), 123-136.

Junjie, M., & Yingxin, M. (2022). The Discussions of Positivism and Interpretivism. Online Submission, 4(1), 10-14.

Katare, B., Marshall, M. I., & Valdivia, C. B. (2021). Bend or break? Small business survival and strategies during the COVID-19 shock. International Journal of Disaster Risk Reduction, 61, 102332.

Kativhu, S., Iwara, I. O., & Mwale, M. (2021). Exploring threats to youth enterprise resilience in selected areas in Thulamela Local Municipality, South Africa. African Journal of Development Studies (formerly AFFRIKA Journal of Politics, Economics and Society), 2021(si1), 119-144.

Katz, J., Harwood, E., & Nielsen, O. Building resilient workplaces: Prioritizing safety and disaster risk reduction for the global workforce. In Routledge Handbook on Labour in Construction and Human Settlements (pp. 275-296). Routledge.

Kimura, N., Hoshino, S., & Onitsuka, K. (2019). Analyzing the association between disaster risk preparedness and environmental consciousness of small and medium-sized enterprises: The case of Sukagawa City, Fukushima Prefecture, Japan. Journal of Disaster Research, 14(8), 1047-1058.

Knight, G., Moen, Ø., & Madsen, T. K. (2020). Antecedents to differentiation strategy in the exporting SME. International Business Review, 29(6), 101740.

© University of Venda

Kousky, C. (2019). The role of natural disaster insurance in recovery and risk reduction. Annual Review of Resource Economics, 11(1), 399-418.

Kunze, S. P. (2021). Geospatial Analyses of Natural Disasters: Economic Impacts, Societal Responses, and Political Bias (Doctoral dissertation).

Kusumastuti, R. D., Arviansyah, A., Nurmala, N., & Wibowo, S. S. (2021). Knowledge management and natural disaster preparedness: A systematic literature review and a case study of East Lombok, Indonesia. International journal of disaster risk reduction, 58, 102223.

Kyngäs, H., Kääriäinen, M., & Elo, S. (2020). The trustworthiness of content analysis. The application of content analysis in nursing science research, 41-48.

Lenzen, M., Malik, A., Kenway, S., Daniels, P., Lam, K. L., & Geschke, A. (2019). Economic damage and spillovers from a tropical cyclone. Natural Hazards and Earth System Sciences, 19(1), 137-151.

Lobe, B., Morgan, D., & Hoffman, K. A. (2020). Qualitative data collection in an era of social distancing. International journal of qualitative methods, 19, 1609406920937875.

Mahmood, A., Hamdan, A., Tahoo, L. A., & Akeel, H. (2022, March). Managing small and medium enterprises (SMEs) during unexpected situations: strategies for overcoming challenges. In International Conference on Business and Technology (pp. 183-192). Cham: Springer International Publishing.

Mahmoud, A., Hamdan, M., Tahoo, K., & Akeel, S. (2022). Innovative strategies in disaster preparedness: A multi-regional study. International Journal of Disaster Management, 40(3), 122-138.

Makhaye, T., & Subban, V. (2022). Enhancing community resilience through disaster risk management. Journal of Disaster Research, 38(3), 215-229.

Malgas, M., & Zondi, W. B. (2020). Challenges facing small business retailers in selected South African townships. The Southern African Journal of Entrepreneurship and Small Business Management, 12(1).

© University of Venda

Maxwell, J. A. (2023). Qualitative Research Design. Retrieved from: https://www.sciencedirect.com/topics/social-sciences/research-design. Date: 28 December 2024.

Mehdi Riazi, A., Rezvani, R., & Ghanbar, H. (2023). Trustworthiness in L2 writing research: A review and analysis of qualitative articles in the Journal of Second Language Writing.

Mendoza, R. U., Lau, A., & Castillejos, M. T. Y. (2018). Can SMEs survive natural disasters? Eva Marie Arts and Crafts versus Typhoon Yolanda. International Journal of Disaster risk Reduction.

Meyer, A., & Wang, J. (2022). Disaster preparedness strategies in urban areas: A case study. International Journal of Emergency Management, 56(4), 233-245.

Mishra, S. B., & Alok, S. (2022). Handbook of research methodology.

Mncube, S., & Mthembu, L. (2023). Disaster preparedness strategies in rural areas: A case study. Journal of Disaster Risk Reduction, 45(2), 121-135.

Montero, J. M., Naimy, V., Abi Farraj, N., & El Khoury, R. (2024). Natural disasters, stock price volatility in the property-liability insurance market and sustainability: An unexplored link. Socio-Economic Planning Sciences, 91, 101791.

Montmasson-Clair, G., Mudombi, S., & Patel, M. (2019). Small business development in the climate change adaptation space in South Africa. Trade and Industrial Policy Strategies (TIPS) South Africa https://wwwtipsorgza/research-archive/sustainable-growth/green-economy-2/item/3621-small-business-development-in-the-climate-change-adaptation-spacein-south-africa Accessed, 3.

Moyo, R. (2021). An appraisal of online teaching and learning in and post COVID-19 era. South African Journal of Higher Education, 35(5), 1-19. https://doi.org/10.20853/35-5-4410

© University of Venda

Mpekiaris, I., Tsiotras, G., Moschidis, O., & Gotzamani, K. (2020). Natural disaster preparedness and continuity planning of Greek enterprises. International Journal of Disaster Risk Reduction, 47, 101555.

Msomi, T. S., & Olarewaju, O. M. (2021). Climate change and the sustainability of small businesses in Africa. In Handbook of research on climate change and the sustainable financial sector (pp. 252-266). IGI Global.

Munawar, H. S. (2020). Flood disaster management: Risks, technologies, and future directions. Machine Vision Inspection Systems: Image Processing, Concepts, Methodologies and Applications, 1, 115-146.

Munongo, S., & Pooe, D. (2022). Small and medium enterprises' adoption of 4IR technologies for supply chain resilience during the COVID-19 pandemic. Journal of Transport and Supply Chain Management, 16, 747.

Muriithi, S. M. (2021). The Impact of COVID-19 on African SMEs, possible remedies, and source of funding.

Natow, R. S. (2020). The use of triangulation in qualitative studies employing elite interviews. Qualitative research, 20(2), 160-173.

Ngin, C., Chhom, C., & Neef, A. (2020). Climate change impacts and disaster resilience among micro businesses in the tourism and hospitality sector: The case of Kratie, Cambodia. Environmental research, 186, 109557.

Nickerson, C. (2022). Interpretivism paradigm & research philosophy. Simply Sociology, 5.

Ogujiuba, K. K., & Boshoff, E. (2020). SMEs and sustainable entrepreneurship in South Africa: impact analysis of contextual factors in the services sector. Business Administration and Business Economics.

Ogutu, C. O. (2021). Strategies to Mitigate Natural Disaster Impact in the Auto Maintenance Business (Doctoral dissertation, Walden University).

© University of Venda

Owusu, S. A., Appiah-Kubi, C., Obeng, F. A., & Baa-Poku, F. (2021). Impact of flood disaster on small businesses in Ghana: a case study. International Journal of Emergency Management, 17(2), 122-137.

Patankar, A. (2019). Impacts of natural disasters on households and small businesses in India. Asian Development Bank Economics Working Paper Series, (603).

Pathak, H. (2023). Impact, adaptation, and mitigation of climate change in Indian agriculture. Environmental Monitoring and Assessment, 195(1), 52.

Pathak, S., & Olmo, J. C. (2021). Analysing spatial interdependence among the 2011 Thailand flood-affected small and medium enterprises for reduction of disaster recovery time period. Geoenvironmental Disasters, 8, 1-12.

Pitt, A., & Galloway, B. (2021). Addressing the challenges in disaster risk management. Journal of Environmental Hazards, 33(2), 85-99.

Poh Ling, T., Hassim, N., & Mohammad Bashir, N. N. B. (2024). SME Preparedness in Surviving the Health Pandemic in Malaysia. SAGE Open, 14(2), 21582440241251727.

Poh Ling, T., Hassim, N., & Mohammad Bashir, N. N. B. (2024). SME Preparedness in Surviving the Health Pandemic in Malaysia. SAGE Open, 14(2), 21582440241251727.

Pulhin, J. M. (2021). Climate Change and Disaster Risks in an Unsecured World. In Climate Change, Disaster Risks, and Human Security (pp. 1-19). Springer, Singapore.

Rayadurgam, H. M., & Rao, P. (2023). Analysing the determinants of heatwave risk for small and medium enterprises: a case study. International Journal of Global Warming, 30(4), 430-450.

Reddy, J. J. (2021). Resourcing decisions that influenced the survival of SMEs post crisis (Master's thesis, University of Pretoria (South Africa)).

© University of Venda

Saban, K. A., Rau, S., & Wood, C. A. (2021). SME executives' perceptions and the information security preparedness model. Information & Computer Security, 29(2), 263-282.

Sadeghi, N. (2022). Continuity of small businesses when facing increased flood risk due to global climate change impacts: A systematic literature review. International Journal of Disaster Risk Reduction, 82, 103316.

Sahu, A. (2022). Impact of hurricanes on small construction business and their recovery (Doctoral dissertation).

Salmona, M., & Kaczynski, D. (2024). Qualitative data analysis strategies. In How to conduct qualitative research in finance (pp. 80-96). Edward Elgar Publishing.

Samantha, G. (2018). The impact of natural disasters on micro, small and medium enterprises (MSMEs): A case study on 2016 flood event in Western Sri Lanka. Procedia engineering, 212, 744-751.

Sarlak, A., Khodakarami, M., Hesarzadeh, R., Nazari, J. A., & Taghimolla, F. (2024). Drought risk and audit pricing: a mixed-methods study. Asian Review of Accounting.

Satishprakash, S. (2020). Concept of population and sample. Gujarat University. Research Gate.

Scuderi, R., Tesoriere, G., & Fasone, V. (2019). Natural events and performance of micro firms: the impact of floods on shops in Uganda. Economia Politica, 36(2), 609-627.

Sedibe, D. A. (2020). Crisis Response Strategies of Established SMEs in a Resource Constraints Environment. University of Pretoria (South Africa).

Seitz, B. M., Polack, C. W., & Miller, R. R. (2020). Adaptive memory: Generality of the parent processing effect and effects of biological relatedness on recall. Evolutionary psychological science, 6(3), 246-260.

© University of Venda

Seow, A. N., Choong, Y. O., Low, M. P., Ismail, N. H., & Choong, C. K. (2024). Building tourism SMEs' business resilience through adaptive capability, supply chain collaboration and strategic human resource. Journal of Contingencies and Crisis Management, 32(2), e12564.

Sharif, M. B. A. (2021). The impact of natural disasters on small and medium enterprises (SME) in Bangladesh. Open Access Library Journal, 8(6), 1-15.

Shikalepo, E. E. (2020). Defining a Conceptual Framework in Educational Research.

Shikwambana, S., Malaza, N., & Ncube, B. (2022). Enhancing the resilience and adaptive capacity of smallholder farmers to drought in the Limpopo Province, South Africa. Conservation, 2(3).

Shilomboleni, H., Recha, J., Radeny, M., & Osumba, J. (2023). Scaling climate resilient seed systems through SMEs in Eastern and Southern Africa: challenges and opportunities. Climate and Development, 15(3), 177-187.

Siwedza, S., & Shava, S. (2020). Insurance, increasing natural disaster risks and the SDGs: a focus on Southern Africa. Scaling up SDGs implementation: Emerging cases from state, development and private sectors, 129-138.

Skouloudis, A., Leal Filho, W., Deligiannakis, G., Vouros, P., Nikolaou, I., & Evangelinos, K. (2023). Coping with floods: impacts, preparedness, and resilience capacity of Greek micro-, small-and medium-sized enterprises in flood-affected areas. International Journal of Climate Change Strategies and Management, 15(1), 81-103.

Skouloudis, A., Leal Filho, W., Deligiannakis, G., Vouros, P., Nikolaou, I., & Evangelinos, K. (2023). Coping with floods: impacts, preparedness, and resilience capacity of Greek micro-, small-and medium-sized enterprises in flood-affected areas. International Journal of Climate Change Strategies and Management, 15(1), 81-103.

Sofyan, S., Arifin, S., Sofyan, A. S., Syamsu, N., Mansyur, A., Fauz, A., & Waluya, A. H. (2021). Understanding the Impact of Natural Disaster in Micro, Small, and

© University of Venda

Medium Enterprises in Halal Food Sector. Indonesian Journal of Islamic Literature and Muslim Society, 6(2).

Stahl, N. A., & King, J. R. (2020). Expanding approaches for research: Understanding and using trustworthiness in qualitative research. Journal of developmental education, 44(1), 26-28.

Stahl, N. A., & King, J. R. (2020). Expanding approaches for research: Understanding and using trustworthiness in qualitative research. Journal of developmental education, 44(1), 26-28.

Statssa, (2023). Vhembe District Municipality: Retrieved from: https://municipalities.co.za/. Date: 20 January 2025.

Tavares, P. G. P. D. S. (2024). The impact of drought on firms' borrowing costs (Doctoral dissertation).

Thekkoote, R. (2024). Factors influencing small and medium-sized enterprise (SME) resilience during the COVID-19 outbreak. The TQM Journal, 36(2), 523-545.

Theofanidis, D., & Fountouki, A. (2018). Limitations and delimitations in the research process. Perioperative Nursing-Quarterly scientific, online official journal of GORNA, 7(3 September-December 2018), 155-163.

Tisdell, E. J., Merriam, S. B., & Stuckey-Peyrot, H. L. (2025). Qualitative research: A guide to design and implementation. John Wiley & Sons.

Turin, T. C., Raihan, M., & Chowdhury, N. (2024). Paradigms of approaches to research. Bangabandhu Sheikh Mujib Medical University Journal, 17(2), e73973-e73973.

Ugwu, C. I., Ekere, J. N., & Onoh, C. (2021). Research paradigms and methodological choices in the research process. Journal of Applied Information Science and Technology, 14(2), 116-124.

Utami, I., Santosa, I., Mardiana, A., & Basuki, A. (2019, November). Resilience Measurement of SMEs Batik Sampang in Dealing with Natural Disasters. In

© University of Venda

2019 1st International Conference on Engineering and Management in Industrial System (ICOEMIS 2019) (pp. 220-227). Atlantis Press.

Van Zyl, P., & Botha, D. (2019). Exploring strategies for improving disaster preparedness in coastal communities. International Journal of Disaster Management, 39(2), 101-115.

Veeravalli, S. G., Chereni, S., Sliuzas, R. V., Flacke, J., & Maarseveen, M. (2022). Factors influencing flood damage mitigation among micro and small businesses in Kampala, Uganda. International Journal of Disaster Risk Reduction, 82, 103315.

Venkataraman, S., & Sarasvathy, S. D. (2021). The promise of entrepreneurship as a field of research. Academy of Management Review, 46(3), 471-491.

Wang, A., & Liu, B. (2020). Disaster preparedness and response strategies: A global perspective. Journal of Disaster Management, 38(2), 123-145.

Wisenthige, K. (2023). Research design. Retrieved from: https://www.researchgate.net/publication/369157621_Research_Design/references. Date: 07 January 2025.

Yin, K., Zhao, Y., Zhou, S., & Li, X. (2024). How do storm surge disaster losses affect economic development?: Perspectives from disaster prevention and mitigation capacity. Science of the Total Environment, 951, 175526.

Zhang, X., Chen, Y., & Zhao, Z. (2023). The role of early warning systems in disaster risk reduction. International Journal of Disaster Management, 50(2), 98-113.

Zhou, N., & Sun, R. (2024). Coping with the storm: The role of fintech in SME survival. International Review of Financial Analysis, 103157.

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ANNEXURE 1: Interview Guide

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INTERVIEW GUIDE

For the

Research Project entitled:

AN EXPLORATION OF SMALL, MEDIUM ENTERPRISES (SMEs) OWNERS' PREPAREDNESS TOWARDS THE RISK OF NATURAL DISASTERS WITHIN THE LIMPOPO PROVINCE: A CASE OF VHEMBE DISTRICT MUNICIPALITY

COMPILED BY: Mapitsi Paulinah Masenya

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Dear Participant,

My name is Mapitsi Paulinah Masenya and I am a student (Master of Commerce in Business Management) at the University of Venda. In order to complete my project, I am inviting you to participate in the research titled: ***"An exploration of small, medium enterprises (SMEs) owners' preparedness towards the risk of natural disasters within the Limpopo Province: A case of Vhembe District Municipality."***

The research questions formulated for the study are:

RQ1: What are the forms of natural disasters that pose risks to SMEs owners?

RQ2: What are factors that contribute towards the preparedness of SMEs owners in dealing with natural disasters risks?

RQ3: Which strategies or coping mechanisms are being used by SMEs owners to overcome natural disasters risks?

The following ethical considerations will be followed throughout the research process:

i. Participation is voluntary and Participants are free to withdraw from the study anytime without prejudice.
ii. The study is anonymous and all information gathered remains confidential.
iii. Only participants above 18 years are allowed to participate in this study.
iv. The research adheres to University of Venda research rules, guidelines and regulations and the researcher won't misuse her position to harm any business or participants for personal power or gain.
v. Information obtained will be treated as group data and no individual will be reported on.

Be assured that all the information gathered from you will remain confidential.

Thank you for taking the time to participate

Yours sincerely,

Mapitsi Paulinah Masenya

Email: masenyamapitsi@gmail.com Cell phone number: +27792187408

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CONSENT FORM

I, Mapitsi Paulinah Masenya would like to interview you about the research titled: ***"An exploration of small, medium enterprises (SMEs) owners' preparedness towards the risk of natural disasters within the Limpopo Province: A case of Vhembe District Municipality."*** while recording the interview and taking notes for key points. As the researcher, I assure you that I will not ask you anything relating to your personal details so that your identity remains anonymous and all the information gathered will remain confidential.

Please note that participation is voluntary and honesty, confidentiality and privacy are highly assured.

If you are willing to participate in this interview, please sign below:

Signature: _____

Date : _____

Your participation in this study will be highly appreciated

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SECTION A: Demographics

Gender	
Race	
Age	
Years of operation	
Highest qualification	
Type of business	

SECTION B: Natural disasters forms conceptualisation

1. Based on your own understanding, what do you understand by natural disasters?

2. What is your view on the forms of natural disasters that pose risks to SMEs?

SECTION C: Factors contributing to SMEs preparedness

3. Comment on the factors that contribute towards the preparedness of SMEs in dealing with natural disasters risks?

4. Do you think these factors enhances preparedness towards disaster risk? Please elaborate your answer?

SECTION D: Strategies conceptualisation

5. In your view, which strategies or coping mechanisms are being used or are you using to overcome natural disasters risks?

6. To what extent do you think these strategies can be effective? Please elaborate your answer.

THANK YOU FOR YOUR PARTICIPATION!!!!

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Creating Future Leaders

ETHICS APPROVAL CERTIFICATE

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Ms MP Masenya

STUDENT NO:
18014047

PROJECT TITLE: An exploration of small, medium enterprises (SMES) entrepreneurs' preparedness towards the risk of natural disasters within the Limpopo province: a case of Vhembe district.

ETHICAL CLEARANCE NO: FMCL/24/ECO/01/0705

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Dr LG Nkondo	UNIVEN, Business Management	Supervisor
MS N Khohomela	UNIVEN, Business Management	Co-Supervisor
Ms MP Masenya	UNIVEN, Business Management	Investigator – Student

Type: **Masters Research**
Risk: ***Straightforward research without ethical problems (Category 1)***
Approval Period: **May 2024 – May 2025**

The Research Ethics Social Sciences Committee (RESSC) hereby approves your project as indicated above.

General Conditions
While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following.

- The project leader (principal investigator) must report in the prescribed format to the REC:
  - Annually (or as otherwise requested) on the progress of the project, and upon completion of the project.
  - Within 48hrs in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.
  - Annually a number of projects may be randomly selected for an external audit.
- The approval applies strictly to the protocol as stipulated in the application form. Would any changes to the protocol be deemed necessary during the course of the project, the project leader must apply for approval of these changes at the REC. Would there be deviated from the project protocol without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.
- The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date; a new application must be made to the REC and new approval received before or on the expiry date.
- In the interest of ethical responsibility, the REC retains the right to:
  - Request access to any information or data at any time during the course or after completion of the project,
  - To ask further questions; Seek additional information; Require further modification or monitor the conduct of your research or the informed consent process.
  - withdraw or postpone approval if:
  - Any unethical principles or practices of the project are revealed or suspected.
  - It becomes apparent that any relevant information was withheld from the REC or that information has been false or misrepresented.
  - The required annual report and reporting of adverse events was not done timely and accurately,
  - New institutional rules, national legislation or international conventions A it necessary

ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE
Date Considered: April 2024

Name of the RESSC Chairperson of the Committee: Prof TS Mashau

Signature

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